



Advancing  
our shared  
values for  
**a safer, more  
connected  
world.**

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# Letter from the Chairman and CEO



Each day I have the privilege to witness the talent, dedication and innovative spirit of Raytheon Technologies' employees around the world. The team of 174,000 collaborates to deliver solutions that solve our customers' toughest challenges, but that's not enough. They also fulfill our responsibility to do the right thing for our colleagues, our communities and our planet.

We are not strangers to engineering history-making, era-defining moments. It is our pioneering spirit that permeates through our company today, guiding us as we define a new era and collaborate to build a more sustainable future.

As we look to the future, the long-term environmental issues posed by climate change are a concern for us all. We are collectively innovating and seeking ways to reduce greenhouse gas emissions in our operations and our products, including actively supporting the civil aviation industry's drive to decarbonize by 2050. Our efforts include groundbreaking work to create new engine technologies, lighter and more efficient materials and more intelligent technology solutions that will work together to help the industry achieve its goal.

We are also investing \$500 million over this decade to drive transformative, generational impact in our communities, including closing the talent and diversity gap in STEM by partnering with leading nonprofit organizations. With these efforts, we aim to advance lifelong learning and to build a more work-ready, diverse talent pipeline for jobs of the future.

Our enterprisewide environmental, social and governance (ESG) strategy maps our aspirations to our business strategy. The strategy centers on three broad objectives:

**People.** We are committed to fostering diversity in our workforce and supply chain, cultivating an inclusive culture, prioritizing employee health and safety, and supporting the communities where we live and work.

**Planet.** We have the ingenuity, the scale and the team to make a positive impact on the global environment by driving greater efficiency with the products we develop, manufacture and maintain – and to do so in a way that prioritizes sustainability across our own operations.

**Principles.** We uphold the highest ethical standards guided by our core values: trust, respect, accountability, collaboration and innovation.

Our ESG strategy is centered around individual dignity, communal support and global sustainability, and this ESG Report sets forth our goals, as well as the programs and milestones we are using to initiate progress and change. I'm proud that these priorities will guide us into the future as we drive technology breakthroughs for a safer, more connected world.

**Gregory J. Hayes**

Chairman and Chief Executive Officer

# About Raytheon Technologies

Raytheon Technologies is a global company dedicated to redefining the aerospace and defense industries. We've been solving our customers' most complex problems and making breakthroughs that help protect and connect our world for more than 100 years.

Our company comprises four business units, each developing innovative products in its area of specialty:

- **Collins Aerospace** specializes in aerostructure and mechanical, avionics, interiors, mission and power and control systems and digital solutions that serve customers across the civil aviation and military sectors.
- **Pratt & Whitney** designs, manufactures and services the world's most advanced aircraft and helicopter engines, and auxiliary power units for commercial and military aviation.
- **Raytheon Intelligence & Space** develops advanced sensors, cyber services and software solutions – delivering the disruptive technologies customers need to succeed in any domain, against any challenge.
- **Raytheon Missiles & Defense** provides the industry's most advanced end-to-end solutions to detect, track and engage threats.

Everything we do is rooted in our values of trust, respect, accountability, collaboration and innovation. These values guide the work of our employees as they help build a sustainable future for our business, our customers and our planet.

## Trust

We act with integrity and do the right thing.

## Accountability

We honor our commitments, expect excellence and take pride in our work.

## Innovation

We experiment, design, build and transform with speed and agility.

## Respect

We embrace diverse perspectives and treat others the way they want to be treated.

## Collaboration

We share insights, learn together and perform as a team.

### At a glance

**174K**

employees

**58K**

engineers

**235**

manufacturing, production and overhaul facilities

**\$64.4B**

in 2021 net sales

**\$7.2B**

in research and development\*

**66%**

of the world's airspace is managed using Raytheon Technologies systems

\* Total includes company- and customer-funded research and development.



# | Commitment

# Advancing our ESG capabilities

Our ESG strategy sets forth aspirations aligned with our impact areas and business strategy to support the advancement of people, lift up underserved communities and address the global challenges of climate change. We recognize that our greatest potential for positive impact is driving greater energy efficiency and lower emissions through sustainable technology and disruptive innovations. We can only achieve this by aligning our expertise and aspirations through a world-class, diverse team.

Advancement toward our ESG ambitions and goals requires discipline and focus. Our goals reflect our intent to drive reductions in greenhouse gas emissions (GHGs), advance our talented and diverse workforce, support the communities where we live and work, and protect the health and safety of our employees and our planet.

## I By 2030 we aspire to...

**Decarbonize our operations** by reducing our greenhouse gas emissions by 46% from 2019 levels, in line with the Paris Agreement.

**Achieve our Workforce 2030** goals with focused talent and community investments, ensuring all current and future employees have equitable opportunity to work, grow and belong.

## I By 2050 we aspire to...

**Partner to achieve industrywide net-zero carbon emissions in civil aviation.** To support the industry's goals, we aim to directly address 30% of air transport carbon dioxide (CO<sub>2</sub>) emissions through the engines, aircraft systems and services in our 2050 civil fleet, relative to 2015 technology levels and the associated emissions baseline.

We will continue to grow and evolve our ESG responsibilities, rising to the opportunities and meeting the challenges that our company, our industry, our planet and our society face, all while transparently disclosing our efforts, performance and global commitments. We are confident that the work we put in today – and our long-term vision for the future – will drive progress toward a safer, more connected and sustainable world.

## ESG governance and accountability

Our commitment to ESG starts at the top of our organization with our Board of Directors, who oversee our ESG efforts, and our CEO, who is ultimately responsible for our ESG strategy and performance.

Our Board provides active and independent oversight and guidance to management. Given the importance of ESG to our values and strategy, the Board is also increasingly focused on our ESG positions, risks and initiatives.

In 2021, the Board amended the charters of the Governance and Public Policy Committee (GPPC) and the Human Capital & Compensation Committee (HCCC) to clarify and enhance oversight responsibility for certain ESG topics. As a result, the GPPC has primary oversight responsibility for several important ESG topics, including:

- Sustainability.
- Community investment.
- Health and safety.
- Human rights.

The HCCC has primary oversight for:

- Human capital management, including recruiting, retention and career development.
- Employee diversity, equity and inclusion.

In addition, the Audit Committee and the Special Activities Committee regularly review ESG topics for which they have responsibility, such as ethics and compliance, and data security and privacy.

To accelerate the pace of our progress in our

strategic focus areas, and to ensure management accountability, the HCCC approved the addition of a Corporate Responsibility Scorecard (CRS) to our Executive Annual Incentive Plan – incentivizing leaders across the company to work strategically toward our ESG priorities.

The CRS comprises two categories, “People & Culture” and “Sustainability & Safety,” that incorporate various objectives that are intended to reinforce the company’s commitment to our long-term goals, including diverse representation and greenhouse gas emissions. The People & Culture and Sustainability & Safety categories are each weighted at 10%, with our financial metrics – earnings and free cash flow – each weighted at 40%. Following the end of the performance year, the HCCC evaluates progress toward these CRS objectives and uses its discretion to assign a performance factor for each category for the company overall and each business unit.

### ESG leadership

The ESG Steering Committee, which is made up of executives representing our ESG focus areas, is responsible for driving and monitoring our ESG strategy and performance. The ESG Steering Committee oversees teams implementing the ESG strategy, including the ESG Council and several ESG working groups. The ESG Steering Committee includes the senior vice president of operations and supply chain; the chief communications officer; the chief human resources officer; the chief financial officer and the general counsel.

The ESG Council develops our ESG strategy and takes action to improve ESG performance to meet our goals. The ESG Council, which meets monthly, includes senior leaders from each of our business units and enterprise functions who are accountable for implementing the ESG strategy in their respective business units and functions.

The ESG Council partners with working groups of subject matter experts to develop programs, initiatives and metrics to meet our ESG strategy objectives. For example, the Human Rights Council led the development of our new enterprise Human Rights Policy, while another group focuses on our commitment to diversity, equity and inclusion.

# ESG prioritization and stakeholder engagement

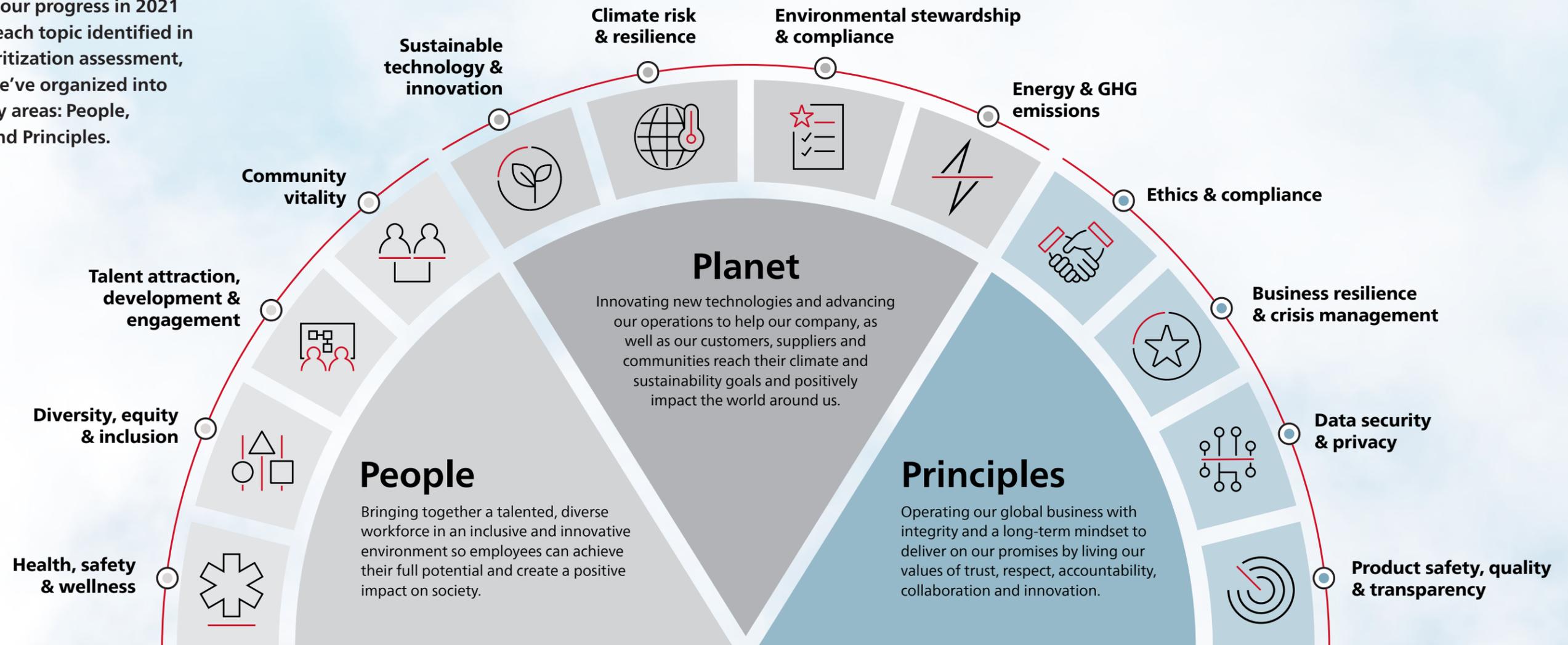
In 2021, we conducted a comprehensive ESG prioritization assessment. We sought to understand the ESG issues that are most relevant for our stakeholders and our business, including both civil aviation and defense. As part of this process, we interviewed more than 70 internal and external stakeholders representing our employees, our customers, our communities, our investors, our regulators, our industry groups and our business units. We also surveyed hundreds of members of our employee resource groups.

In addition, we included key factors based on guidance from leading ESG disclosure standards from the Sustainability Accounting Standards Board (SASB), the Global Reporting Initiative (GRI) and the Task Force on Climate-Related Financial Disclosures (TCFD), among others. More information on how we map our progress and compliance to these standards can be found [in the appendix](#).

After engaging with stakeholders, the ESG Council considered the perspectives shared and aligned on:

- Relative priorities for our stakeholders and our business units among the ESG topics identified, which are summarized in the graphic below.
- The rationale for each topic’s importance to stakeholders and the business, which is summarized at the beginning of each topic’s discussion in this report.
- A shared definition of each ESG topic, so we can use a common taxonomy throughout our organization to address these important issues.

The report that follows outlines our progress in 2021 against each topic identified in our prioritization assessment, which we’ve organized into three key areas: People, Planet and Principles.



### 2021 ESG progress highlights

#### People

**\$70M+**  
investment

9,400+ participants in our Employee Scholar Program, an investment of \$70 million+, bringing our total investment to \$1.4 billion.

**\$500M**  
commitment

Launched Connect Up, our 10-year, \$500 million commitment to drive transformative, generational impact across lifelong learning, honoring service and supporting communities.

**12%**  
reduction

Achieved a 12% reduction in total recordable injury rate as we drive toward our zero-incident ambition.\*



Created a Global Diversity, Equity & Inclusion (DE&I) Advisory Board of senior leaders across business units.



Launched our first annual Global Month of Service in April 2021, connecting employees with purpose-driven volunteer opportunities.

#### Planet



Joined Air Transport Action Group's (ATAG's) "Fly Net-zero" commitment to achieve industrywide net-zero carbon emissions in civil aviation by 2050 and developed our technology roadmap to achieve that ambition.

**17%**  
reduction

Launched the Pratt & Whitney GTF Advantage™ engine—a geared turbofan engine—reducing fuel consumption and CO<sub>2</sub> emissions by 17% compared to prior-generation best-in-class engines, namely the IAE V2500™ turbofans.

**46%**  
emissions reduction

Set a goal to reduce Scope 1 and Scope 2 GHG emissions 46% by 2030, aligned with 1.5 degree Celsius pathway.\*

**19%** reduction in water consumption.\*

**24%** reduction in waste sent to landfill or incineration.\*

**51%** of best management practices implemented across waste, water and energy.

**A-**  
CDP score

Achieved an A- climate CDP score, the best in our industry.

#### Principles

**100%**

of Raytheon Technologies facilities and sites that provide product and services have a certified QMS or have a plan to achieve certification.

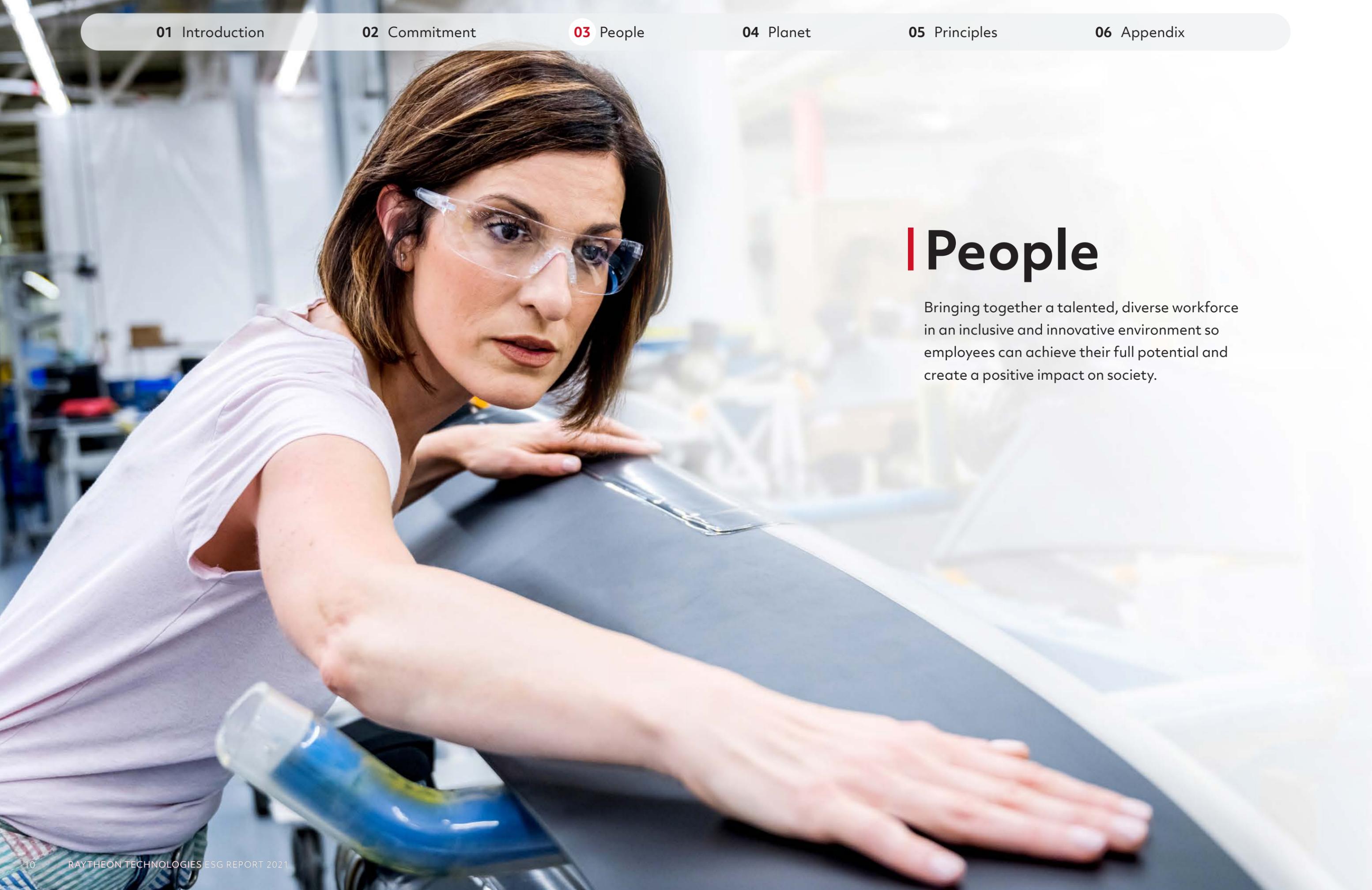
**100%**

of employees are required to complete global ethics and compliance training annually.



Launched our Human Rights Council, composed of leaders across multiple functions and business units, and developed a new enterprise Human Rights Policy based on legacy companies' policies and practices.

\* Compared to 2019 baseline.



# | People

Bringing together a talented, diverse workforce in an inclusive and innovative environment so employees can achieve their full potential and create a positive impact on society.

# People. Our business is built upon the human spirit of exploration – to connect, to create, to discover.

To continue our legacy of era-defining breakthroughs, we foster the talents of inventive people from a broad range of backgrounds and perspectives and ensure their safety on the job. We work in close collaboration with a diverse array of suppliers who partner with us to stretch the boundaries of what is possible. And we invest in the communities where we operate, clear in our belief that we can build a better future together.

## 2021 progress highlights

# \$50.1

million donated to community groups

# 13

leadership development programs with 6,200+ participants

# 85%

decrease in high and elevated ergonomic risks since 2015

# EEO-1

published with comprehensive workforce race and gender data

## We focus on four key areas to foster human potential:

### Attracting, developing and retaining world-class talent

Our strategy to build the technology workforce of the future starts by supporting the educational and career aspirations of promising high school and college students. Within our own business, we recruit widely, seeking talented people of every identity. We're also intently focused on helping our employees thrive, with professional development opportunities, educational support and an inclusive culture that gives everyone an equitable opportunity to work, grow and belong.

### Protecting employee well-being and safety

On the manufacturing floor, at remote worksites and everywhere we do business, we prioritize employees' physical well-being with an array of programs and training to protect individuals' health and safety and ensure their ability to advance innovation and meet our customers' needs. We also support employees' efforts to reduce stress, manage their finances and improve their work-life balance.

### Prioritizing diversity, equity and inclusion

Diversity, equity and inclusion fuel innovation. We strive for the greatest possible workforce diversity – of race, gender, age, sexual orientation, gender identity, ethnicity, veteran status, ability, experience and perspective – while creating a workplace that enables people to show up as their full selves. We also know there is work to do within our walls, within our industry and throughout our local communities when it comes to ensuring equity and inclusion for all.

### Supporting our communities

As we engage in the local communities where we live and work, we target financial investments to select charitable organizations and direct the skills and reach of our employee volunteers to achieve measurable positive impacts. Our strategy prioritizes lifelong learning and STEM education, support for military veterans and their families and local community efforts to improve equity and vitality.

# Workforce 2030 Skilled | Diverse | Engaged

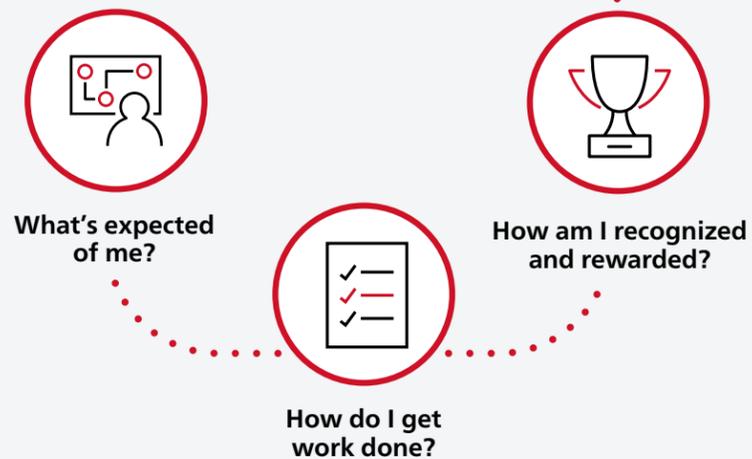
All current and future employees have an equitable opportunity to **work, grow and belong.**

## Work

**Continue to adjust our hiring strategy** to address critical talent needs, further diversify our workplace and ensure we have the right talent with the right skills ready at the right time.

**Build on the success of proven early career development programs**, fielding summer interns across our business units and functions and developing hundreds of college hires through our nine rotational programs across key disciplines – one of which launched over 60 years ago.

**Drive an engaged and diverse talent pool** through successful conversion of high performing interns into full-time employment.



## Grow

**Embed DE&I learning into our corporate leadership programs at all levels**; assess our programs for new and enhanced content on an annual basis.

**Increase the internal mobility of talent** through capitalizing on skills-based and lifelong learning programs.

**Systematically ensure all new people leaders** are certified in leader effectiveness within 90 days of hire.



## Belong

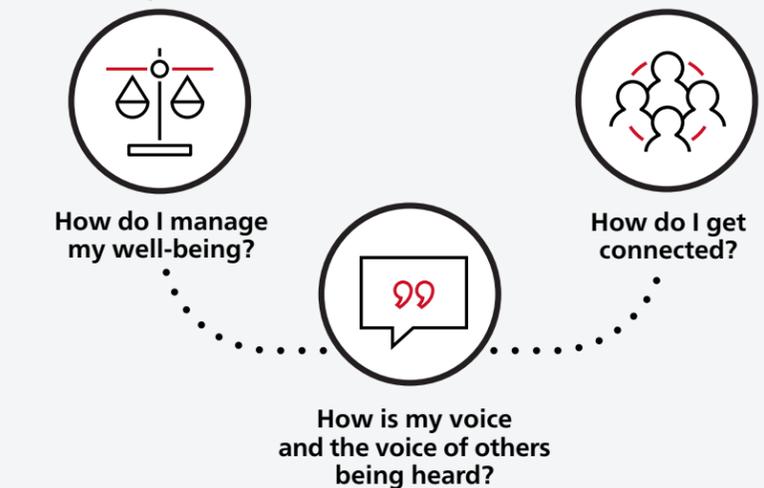
**By 2030, achieve executive gender parity** with a goal of 50% global female executives.

**Double representation of people of color in executive roles** from 2020 baseline.\*

**Establish an ERG program** that drives momentum toward business and DE&I goals.

**Develop a comprehensive strategy** to actively measure and manage employees' experience across how they work, grow and belong.

\*Employee diversity data first available after 2020 merger.



# Attracting, developing and engaging world-class talent

We are working to define the future of aerospace and defense through technologies that inspire progress and transform industries. This mission requires a workforce that can execute our business strategy and innovate to tackle our customers' greatest challenges. In addition, the current business environment requires that aerospace and defense companies be nimble and flexible, as well as responsive to stakeholder concerns such as human rights and climate change.

We are meeting these challenges at a time when there is an intense global competition for talent across industries. Our ability to drive progress toward our vision for a safer, more connected world depends on having the right people with the right skills in the right roles at the right time, aligned to the same mission.

Our chief human resources officer is ultimately responsible for our talent attraction, development, engagement and retention efforts. In addition, business leaders enterprisewide are accountable for ensuring they have people with the right skills, modeling the right behaviors and living our core values to deliver on our customer commitments and drive the company's performance.



## 2021 hiring highlights

19,955

new hires

116

new associates hired through our functional accelerated development rotational programs

109

recruiting focus schools\*

### Uniquely experienced: Our military veteran workforce

Raytheon Technologies is proud to support our military veterans and draw upon their unique experiences and skills. The self-identified 15,000+ U.S. veterans we employ are more than just part of the fabric of our culture; they are the drivers of some of the company's critical customer solutions. Their transferable skills, from leadership to project management to systems development – coupled with their end-user knowledge – bring a meaningful depth of experience to colleagues and customers alike.

These talented team members work in factories and engineering labs, travel to remote test sites and embed in military installations around the world. They draw from their unique real-world experiences to create technologies that help customers accomplish their most critical missions.

Every quarter, the senior leadership team and the Board of Directors review data that summarizes our hiring, development and retention of strong and diverse talent across the organization.

Under the guidance of the senior leadership team, we continue to evolve the programs, processes and tools we use across our human capital pipelines. We're leveraging programs that align with job seeker preferences and trends. The candidate experience is a top priority as we design and evolve our offerings. We aim to hire people who model our values and leadership behaviors, knowing they'll be well equipped to deliver on current and future customer commitments.

\* As of July 31, 2021; this does not include business unit- and/or location-specific community college partnerships.

## Compensation and benefits

We regularly review the components of our compensation and benefits programs to ensure external market competitiveness and internal equity. We use third-party industry benchmarking tools and surveys to assess the positioning of our rewards program, as well as the impact of any potential changes. We inventory widely available, aggregated data regarding different types of compensation and benefits offered by similar companies and assess against our portfolio of offerings to determine if our diverse workforce has any specific needs that are not being met.

Our compensation and benefits programs are designed to deliver fair and equitable pay to employees of comparable experience and who perform similar work, regardless of race, gender or ethnicity. We continuously review pay to ensure that our employees are compensated fairly and equitably throughout their careers.



**As part of our effort to attract the highest quality applicants, we offer an industry-competitive comprehensive total rewards package to ensure the overall health and well-being of our employees and their families. Eligibility for specific programs may vary, but our total rewards package generally includes:**

- Competitive compensation.
- Health care coverage including company contributions toward health savings accounts and pay-graded premiums to maximize affordability.
- Comprehensive coverage for autism treatment, gender reassignment and infertility.
- Tax-favored spending accounts and commuter benefits.
- Menu of voluntary insurance benefits (pet, ID theft, critical illness/accident, legal).
- Paid time off and disability insurance coverage.
- Parental leave of four weeks or 12 weeks of maternity leave.
- Backup daycare, tutoring and childcare resource benefit.
- Health coverage for domestic partnerships.
- Retirement benefits, including employer match and company-automatic contributions.
- Tuition prepayment for employees and tuition discounts for family members.
- Student loan repayment feature with the 401(k) retirement plan.
- Incentive compensation plans.
- Paid and unpaid leave options and flexible work arrangements.
- Personal day allotment for employees to address a diverse spectrum of personal and family needs.
- Part-time and flex-time arrangement options.

# Fostering employee **well-being**

We strive to support employees' overall well-being – mind, body, finances and family. Each of these are important components of overall well-being that can influence work satisfaction and performance.

Our chief human resources officer leads our comprehensive efforts to support employee well-being, aided by the enterprisewide HR leadership team and the vice president of global benefits. In addition, our Well-being Champion Network includes EH&S, HR and other representatives from across the corporate office and all four business units.

Every year, we conduct a strategic review of our benefits programs, assessing costs, participation and engagement, as well as actions and enrollment in programs and tools encouraging overall well-being. We also use periodic surveys to understand employees' satisfaction with the programs and tools. As a result of these assessments, we are transitioning to a new digital platform, aiming to increase engagement with tools that help employees manage their holistic well-being more easily and efficiently. Early results are positive. Engagement, as measured by percent of participants who not only registered on the platform but who also engage on a regular basis, increased in a pilot of the new platform.

The COVID-19 crisis further emphasized the critical linkages between all forms of well-being and workplace satisfaction and performance, as well as the important role organizations can play in supporting their employees.

We have worked diligently to reduce the pandemic's impact on our employees, continuing to enforce stringent workplace safety measures, including social distancing and mandatory face coverings, and offering remote and flexible work schedules to employees as appropriate given their roles and expanding our employees' access to caregiver benefits including child, adult, and elder care services as well as homework help and college coaching. Once vaccinations became available, we coordinated vaccination clinics to assist over 26,000 employees and their family members in becoming protected against the virus. In addition, to protect the health of our employees and their families, we now mandate that all Raytheon Technologies employees be vaccinated against the coronavirus.

**In May 2021, we sponsored our first annual Well-being Day for employees to participate in a variety of curated, emotional, physical and financial well-being programs, including a Burnout & Resiliency Fireside chat with our chief human resources officer and an award-winning psychologist, author and speaker, 12 hours of virtual fitness center classes, and the re-launch of our RTX Healthy You well-being and social website.**



## Healthy You – Supporting employee and family well-being

Our Healthy You philosophy goes beyond the fundamentals of health insurance and retirement plans by offering employees a wide range of resources. In conjunction with our first Well-being Day in 2021, we highlighted the many resources and social platform available on [RTX Healthy You](#) to support employees with their mental, physical and financial health.

Following Well-being Day, new visitors to the site doubled and overall page views increased more than 400%. Individuals can choose the area they would like to work in, or take a self-assessment on the Healthy You Incentives platform, and then be delivered curated content.

Through Healthy You, we hosted 35 podcasts on mind, body, wallet and family topics, that were streamed over 100,000 times throughout 2021.

On the social page, employees share success stories and examples of involvement with company programs to improve their well-being. We also had participants from 45 states and 19 countries engage in the Virtual Fitness Center.

Through market research and Healthy You, we have identified stress, anxiety, burnout and sleep difficulties as some of the leading challenges employees are facing. To address these issues, in 2021 we rolled out meQuilibrium, an AI driven program-based digital coaching tool that leverages neuroscience and behavioral psychology to help employees with challenges such as burnout and stress to improve performance and holistic well-being. In addition, two digital cognitive behavioral therapy (dCBT) solutions were rolled out to assist with issues employees are experiencing with anxiety and sleep issues. All three of these solutions have been expanded in 2022 as part of Healthy You Incentives.

# Engaging and retaining our talent

We empower our people to play an active role in driving a diverse, equitable and inclusive experience through a simple motto: every employee, every interaction, every time. Every employee contributes to the experience and culture across Raytheon Technologies. Every employee has an opportunity to affect the experience of others every time an interaction occurs – ensuring that the people they are interacting with feel respected, included and valued.

As of June 2021, we have mapped all roles to a common job catalog, which allows us to conduct enterprisewide compensation assessments. These assessments help us to ensure our pay strategies are competitive with the external market and equitable internally.

We pay close attention to employee retention. In 2022, we will be rolling out a program that helps predict an individual's retention risk, along with a

toolkit managers can use to improve retention. Our employee development programs support our retention efforts, particularly when it comes to retaining high-potential and high-performing employees from underrepresented communities. We also regularly use employee surveys to solicit feedback on a broad range of topics.

We've earned multiple awards and recognitions as a notable workplace, thanks to our employment practices. In 2021, Raytheon Technologies was recognized among LinkedIn's Top Companies in the United States, Universum's 2021 Most Attractive Employers in the United States, DiversityInc's 2021 Top 50 Companies for Diversity and Forbes' 2021 World's Best Employers.

**We measure the effectiveness of our retention strategies via the following metrics:**

## 72

Our enterprisewide employee engagement scores averaged 72 out of 100 in 2021.

## 6.1%

Our annualized global voluntary controllable employee turnover rate in 2021 was 6.1%.

## Employee and labor relations

We are committed to honoring the mutual rights and obligations inherent in the employment relationship. We treat our employees fairly and with respect, and encourage all employees to report through multiple available channels any unfair workplace treatment. We thoroughly investigate and address all reports of mistreatment.

We support our employees' right to choose whether to be collectively represented or not. Where our employees choose to be represented, we engage with their representatives in good faith and at appropriate levels to discuss terms and conditions of employment that are both fair to our employees and allow us to remain competitive. Globally, approximately 30,000 employees are represented by labor unions and other employee representative bodies, and many of our employees are represented by trade unions, as well as local and regional works councils, including two European works councils covering over 18,000 of our European employees. We follow a robust system to ensure the fair treatment of our employees relating to labor rights. As a result of this constructive dialogue, we had no work stoppages in 2021.

Our corporate vice president of employee and labor relations, who reports directly to the chief human resources officer, governs our employee and labor relations practices through the employee and labor relations Community of Expertise, a team of expert functional leaders and practitioners embedded across our four business units.



# Deepening learning and development

Raytheon Technologies employees receive informal coaching and feedback, as well as focused performance discussions at least twice a year. By setting goals aligned to our mission and values and promoting frequent, meaningful connections between employees and managers, we drive clear priorities, mutual accountability and employee development.

## Employee training in 2021

Our comprehensive career development offerings help employees develop their skills and capabilities, with in-depth libraries of self-paced, on-demand training and resources, as well as live learning experiences. In addition, we require employees to complete specific types of training depending on their role and responsibilities.

We encourage leadership development for all employees, whether they are pursuing personal development or leading a team. STRIDE, our career development framework, gives employees guidance on managing their development and career aspirations over time.

We also offer a portfolio of development programs, including:

- **Accelerating Leadership Impact:** Leadership training for executives.
- **Leadership Excellence Program:** Training for senior managers and directors.
- **Go Lead:** Training for early career managers and individual contributors.
- **Leadership Development Program:** Training for high-potential individual contributors and new college hires.
- **Women in Line Leadership (WILLRise):** Training for women at the director level for general management roles.

We also engage and sponsor several prominent external DE&I leadership development programs. These programs, which include the Hispanic Association of Corporate Responsibility Leadership Pipeline Program and the McKinsey Black Executive Leadership Program, support underrepresented talent at all levels so they can optimize their performance and maximize their potential.

In 2021, we also offered eight additional enterprisewide leadership accelerator programs for high-potential employees, with more than 3,800 participants. These programs used a comprehensive nomination process to identify high-potential talent and provide targeted support for their growth and development.

Our employees will also be able to participate in a structured mentoring program, using resources that will be rolled out in 2022.

In addition to Raytheon Technologies-facilitated learning, we support employees pursuing learning opportunities through accredited universities. Our Employee Scholar Program offers tuition pre-payment for programs and certifications that help employees build the skills needed to advance in their careers. This program applies to certificate programs and degree programs from associate through doctorate degrees. The Employee Scholar Program has been available to employees in the U.S. and Canada for over two decades. As of 2022, it will be available to employees globally.

## Employee Scholar Program

From its 1996 inception through 2021:

**45K+**  
employees have received degrees

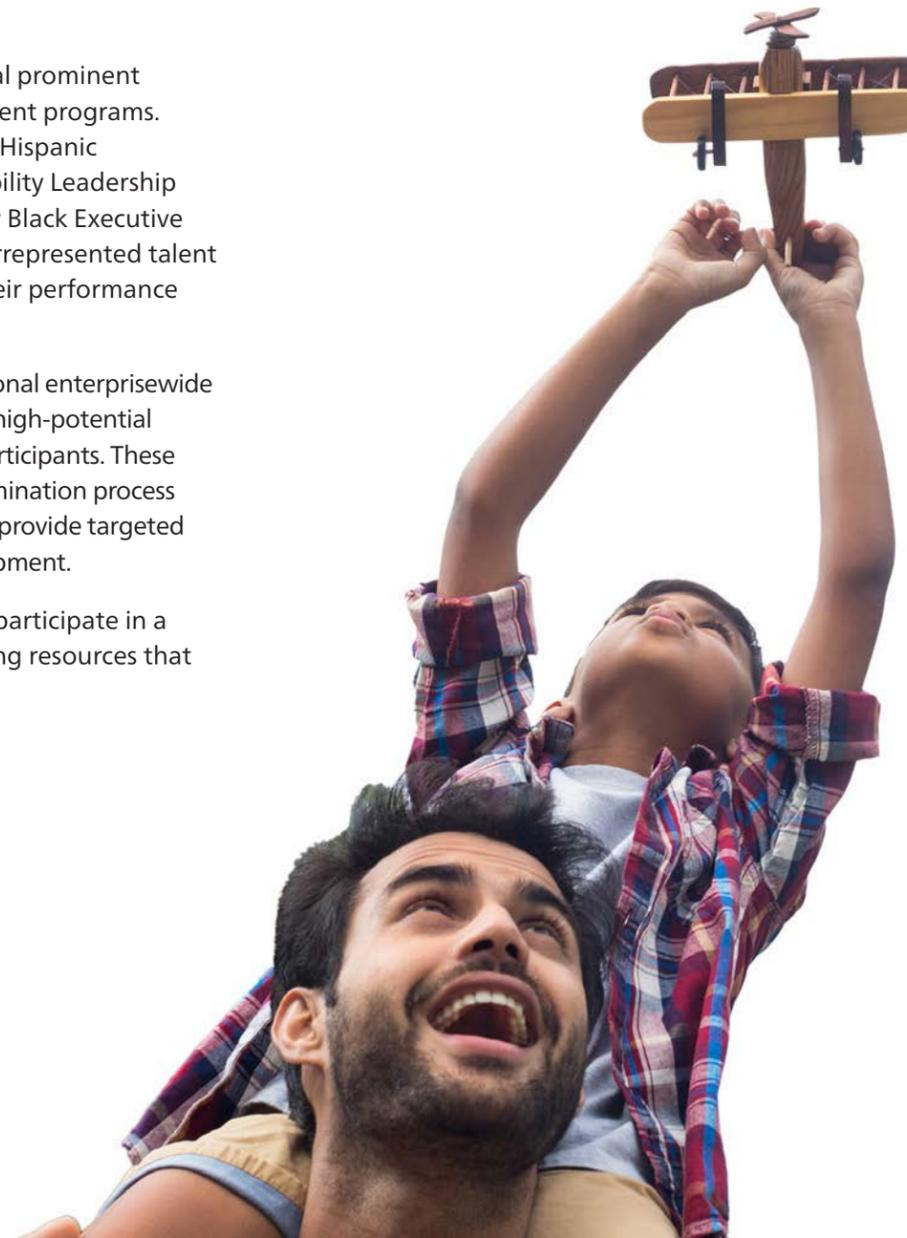
**3K+**  
employees have earned non-degree certificates

**\$1.4B**  
Raytheon Technologies investment

In 2021:

**9,400+**  
participants\*

**\$70M+**  
Raytheon Technologies investment



\* Participants who signed up for the program in 2021, inclusive of whether they have completed a degree or non-degree to date.



# Protecting employee health and safety

We prioritize our employees' health and safety above all else. Our goal is to send our employees home safely, every day. Our efforts start with our proactive safety culture. Every employee, from workers on the manufacturing floor to senior leaders, shares responsibility for our collective health and safety. This shared goal and responsibility is a major contributor to our continued growth and success.

Our actions have led to a 12% reduction in our total recordable incident rate since the 2019 baseline. Our ambitious 2025 goals center on leading indicators of workplace safety, so we can identify issues before they become incidents.

## 2025 workplace safety goals



**100% | 50%**  
reduction in high and elevated/  
medium ergonomic risks\*

Ergonomic injuries (including injuries relating to lifting, lowering, pushing or pulling objects and from repetitive motion) are a leading type of workplace injury. Our ergonomic goal focuses on reducing risk in order to proactively prevent injuries from occurring.



**50%**  
reduction in high chemical  
and noise exposure risks\*\*

Chemicals and noise have the potential to cause future illnesses. Our goal proactively targets reducing potential exposure – well beyond what is required by regulation – to further protect employee health.



**100%**  
implementation of near-miss  
reporting best management  
practices

We have set a goal to ensure that all operations implement a robust near-miss reporting system that encourages reporting hazards before they can result in an employee illness or injury. Identifying near-miss events is an essential part of a mature, proactive safety culture, resulting in a workplace that is safe from hazards and employees who are injury free.

\* We use the 2015 baseline for high ergonomic risk, as both of our heritage organizations, Raytheon and United Technologies, had 2020 goals to reduce high ergonomic risk from that baseline. Our 2025 goal is a continuation of their original goals. The baseline for medium risk was set in 2020 after the merger when the 2025 goals were established.

\*\* We conducted a complete analysis of chemical and noise risks in 2021 to establish this baseline.

### 2021 progress toward our workplace safety 2025 goals

# 85%

decrease in high and elevated ergonomic risks\*

# 16%

decrease in medium ergonomic risks\*\*

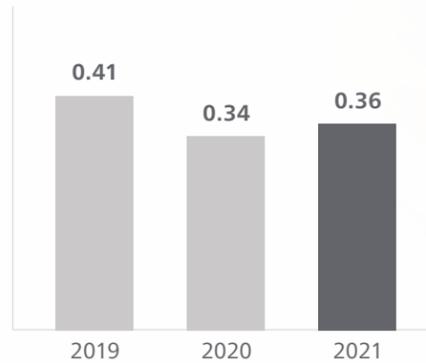
# 34%

of applicable sites have met requirements to ensure robust near-miss reporting

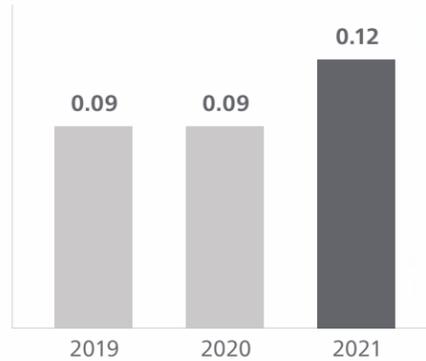
# 12%

reduction in total recordable incident rate (TRIR) since 2019

Annual total recordable incident rate\*\*\*



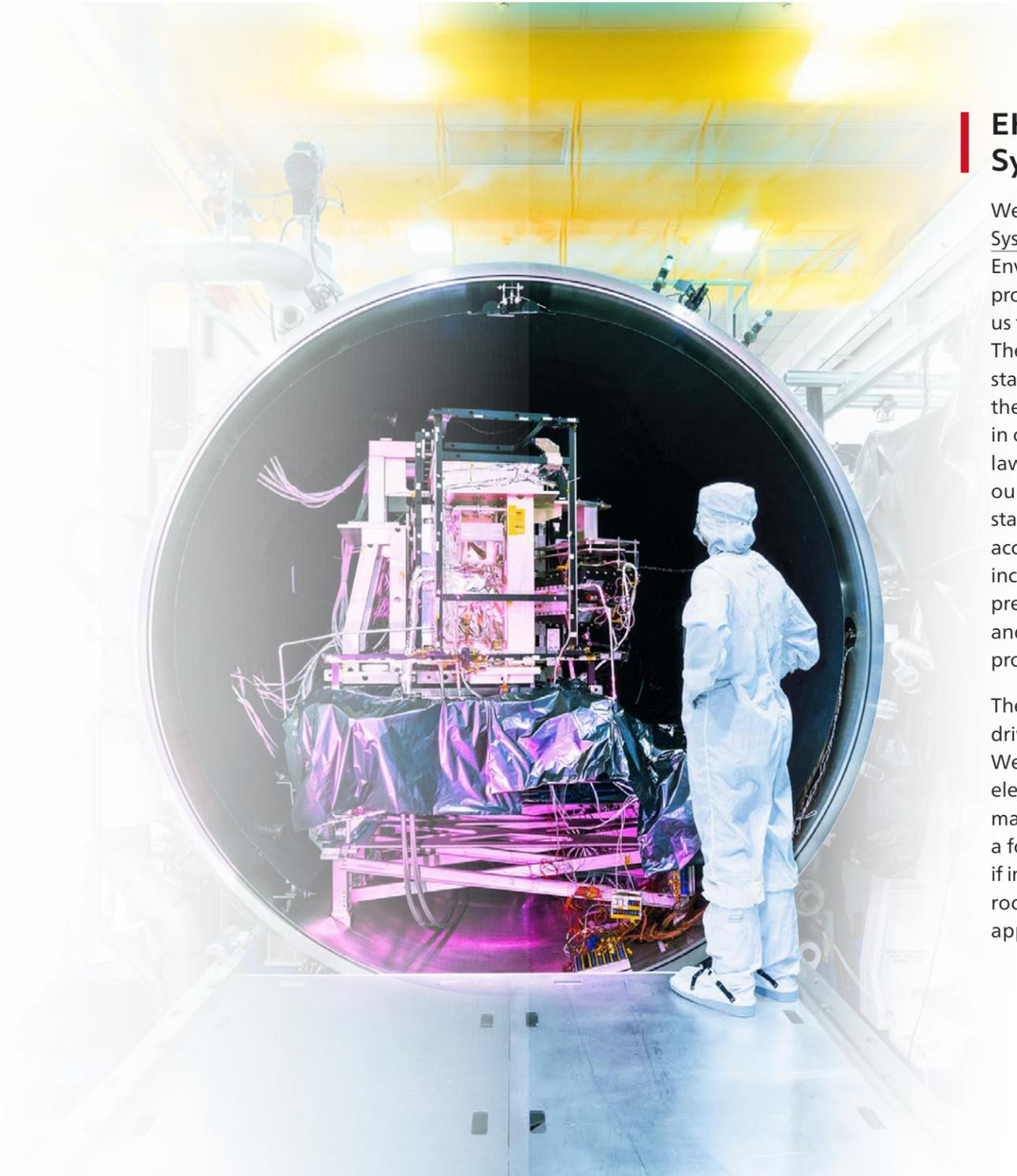
Annual lost day incident rate (LDIR)\*\*\*



## EH&S Management System

We employ our EH&S Management System, the cornerstone of our Environment, Health & Safety (EH&S) program, as the roadmap for driving us toward our zero-injury ambition. The EH&S Management System starts with an understanding of the health and safety risks present in our organization and the EH&S laws and regulations governing our operations. It documents a standard to which we hold ourselves accountable for key EH&S practices including, for example, emergency preparedness, working at heights and wearing appropriate personal protective equipment.

The EH&S Management System also drives us to continually improve. We developed the system using key elements from established external management system standards, with a focus on preventing incidents and, if incidents do occur, identifying root causes and implementing appropriate remedial actions.



\* Since 2015.  
 \*\* Since 2020.  
 \*\*\* TRIR is a workplace safety metric measuring recordable incidents as defined by OSHA; LDIR is a workplace safety metric measuring incidents that resulted in lost work days.



## 57

### OSHA VPP Star certified sites

The Occupational Safety and Health Administration's Voluntary Protection Program recognizes organizations that maintain injury and illness rates lower than national Bureau of Labor Statistics averages for their industry, and that have implemented effective health and safety management systems.

## 75

Raytheon Technologies sites received Liberty Mutual safety awards in 2021.

## Our path to achieving our goals

To reach our goals, we rely on our culture of continuous improvement and our robust health and safety programs, including:

- Data management and reporting.** We manage and report safety data in the EH&S Sustainability Management and Reporting Toolkit. The modules assist EH&S professionals and site EH&S committees in identifying opportunities to improve site-level risk management and positively impact employee safety. In addition, we offer tools – “Report It, Don’t Ignore It” and “Safety Concern/Near Miss” – that allow employees to report items that could potentially cause an injury.
- Training.** Our employees receive regular training in workplace health and safety policies and procedures based on their role and responsibilities, ensuring they have the knowledge they need to protect themselves, their peers and our customers. We completed approximately one million EH&S training units in 2021.
- Policies and practices.** We apply job hazard analysis, industrial hygiene assessments, chemical approval processes, machine guarding evaluations and many other methods of reducing risk and preventing injuries. For all serious and lost workday incidents, we strive to implement level 1 mistake proofing, which requires robust corrective actions (beyond administrative controls), such as engineering changes, task redesign or hazard isolation to prevent recurrence. When we identify opportunities for level 1 mistake proofing, we hold ourselves accountable for completing those corrective actions on schedule.
- Audits.** We conduct tiered safety audits and inspections (daily, weekly, monthly, annual, etc.), engage outside auditors, mine our data to identify opportunities for improvement and conduct root-cause investigations to identify corrective actions.



## Enhancing employee health and safety: The Ergo Cup

For the last eight years, Raytheon Missiles & Defense (RMD) has sponsored the Ergo Cup, a competition aimed at identifying the best ergonomics improvements across the business unit. Entries are judged on risk reduction, return on investment, ease of use and innovation.

The 2021 Ergo Cup had a record number of entries, ranging from a harness assist lacing tool to winch pulley improvements and cleanroom workbench modernization. Winning entries that have been implemented include:

- A way to use pneumatics to remove a spring pin that otherwise required at least a dozen manual pulls of 80+ pounds on a slide hammer.
- A method of lifting metal banding material that reduced the task's Ergo Risk Score from High to Negligible, reducing the likelihood of injuries and lost time.
- A way to use a lift fixture to move a container lid that had previously required four people to move, reducing the Ergo Risk Score from High to Negligible.
- A solution that streamlined a task from an hour of repetitive motion to about 10 minutes of limited physical exertion.

# Prioritizing diversity, equity and inclusion

We believe that creating technology that inspires, progresses and transforms the industry requires expansive thinking and bold innovation – which, in turn, requires a culture that is diverse, equitable and inclusive. In particular, fostering an authentic and transparent culture helps us build a sense of belonging among our employees, which leads to innovation and growth.

As a global company, we do business in more than 100 countries. We know we have both the opportunity and responsibility to make a significant impact in our increasingly global society. We embrace the richness of our global workforce in a way that fuels opportunities and drives bold innovation for our colleagues, customers and communities.

Within our U.S. workforce, nearly one-third identifies as people of color and close to a quarter as women, making us comparable to our peers. We are proud of our diverse talent, but we have more work to do. The commitment to do this work comes from the top: Our CEO, chief human resources officer and Board of Directors set the organization's DE&I priorities and place this issue among their top focus areas. As we believe that education and understanding are the foundation of an inclusive culture, we have dedicated significant resources and efforts to integrating DE&I training into our senior and high-potential leadership programs, and we look forward to continuing to broaden and deepen DE&I learning in 2022.



We have charted our DE&I journey in line with how we address our customers' most difficult technical challenges, applying comprehensive and disciplined thinking to tackle complex cultural and societal issues.

Our DE&I strategy is focused on four areas:

## Workforce representation

Cultivating an environment of inclusion and innovation.

## Community engagement

Investing strategically in our global communities.

## Supplier diversity

Driving economic empowerment and opportunity.

## Public policy advocacy

Championing equality for all.

To drive accountability for our strategy, we have tied our DE&I aspirations to our Executive Annual Incentive Plan through our Corporate Responsibility Scorecard – an important step toward ensuring inclusivity at all levels of the company. Our Corporate Responsibility Scorecard includes a variety of objectives designed to reinforce our commitment to make meaningful progress toward our long-term goals. We also made a commitment to Paradigm for Parity, a coalition of business leaders dedicated to addressing the leadership gender gap in corporate America. Along with this commitment, we have set a goal that 50% of our executive-level talent will be women by 2030.

## Employee demographics

**174K**

Total employees

**58K**

Total engineers

**43K+**

Women

**15K+**

U.S. veterans  
(self-identified)



### Employees by age

- Over 50 years of age: 33.7%
- 30-50 years of age: 50.1%
- Under 30 years of age: 16.2%



### Total gender diversity

- Women: 25.2%
- Men: 74.8%

### U.S. workforce diversity

- American Indian – AK\*: 0.6%
- Asian\*: 9.8%
- Black/African American\*: 7.9%
- Hawaiian/Pacific Islander\*: 0.2%
- Hispanic or Latino: 10.4%
- Two or more races\*: 2.0%
- White: 69.1%

### Executive diversity

- Global female executives: 30.1%
- U.S. people of color (POC) executives: 16.6%

### Board diversity

**30.8%**

Women

**15.4%**

POC

\* Not Hispanic or Latino.



## Raytheon Technologies DE&I 2030 aspirations

Workforce 2030 encompasses the commitments made for our 2030 DE&I aspirations. DE&I is embedded across how Raytheon Technologies wants to address how employees work, grow, and belong.

**Achieve 50% women in executive-level talent**

**Double the representation of U.S. people of color in executive ranks from 2020 baseline**

**Embed DE&I training into leadership programs at all levels**

**Drive tangible outcomes in underserved communities**

**Increase spending with diverse suppliers**

**Advance equity, social justice reform and economic policy**

### In 2021, we made progress toward these aspirations by:

- Creating a Global DE&I Advisory Board of senior leaders from across business units who offer oversight and governance of our DE&I strategy and activities.
- Transforming our Employee Resource Groups (ERGs), which have long been a vital part of our culture, into nine global ERGs that give voice to the diverse communities that make up our workforce, create a more inclusive workplace and help employees grow their careers.
- Releasing our employee population's diversity statistics and EEO-1 disclosure.
- Signing the CEO Action for Diversity & Inclusion™ pledge, the largest CEO-driven business commitment to advance diversity and inclusion in the workplace. With the pledge, Raytheon Technologies CEO Greg Hayes joins nearly 2,000 CEOs worldwide who have committed to a specific set of actions aimed at creating more inclusive and equitable workplaces.
- Signing Catalyst's CEO Champions for Change pledge to advance more women into all levels of leadership.

**Delivering products and services at the cutting edge of innovation and technological advancement requires a world-class workforce.**



### Championing DE&I in the UK

We embed DE&I into our business and community partnerships across the globe and across the universe of important issues society is addressing. In 2021, these efforts included two new partnerships in the UK.

- We became a partner of the **Business Disability Forum (BDF)**, which exists to remove barriers in business structures and government that prevent disabled people from thriving and contributing. Raytheon Technologies employees worldwide now have access to BDF's disability inclusion resources, and line managers and HR employees can use BDF's Advice Service for support on reasonable accommodations and general disability inclusion information, among other topics.
- We partnered with **Hey Girls**, which addresses period poverty across the UK. Through this partnership, all of our UK facilities will be supplied with free period products available to all employees. Hey Girls will match every Raytheon Technologies product purchase with a donation of period products to a community group, school or charitable organization – helping address the problem of period poverty nationwide.

### Empowering an inclusive environment: Raytheon Technologies' employee resource groups

Our nine ERGs give voice to the diverse communities that make up our workforce. As the heartbeat of our employee population, they represent what we stand for, who we are and who we strive to become. A strong ERG program improves the employee experience, influences professional development and cultivates a diverse talent pipeline of leaders with global experience and an inclusive mindset.

Our ERGs are employee-led, voluntary groups focused on driving an inclusive culture and creating positive change for our employees and the communities where we live and work. ERGs offer unique leadership and talent development opportunities for employees, creating a pipeline of diverse leaders. We leverage our ERGs as thoughtful employee advocates, strong business resources and genuine community connectors. Our ERGs also give employees the opportunity to engage in a safe, inclusive space, having courageous conversations and voicing ideas or concerns they might not feel comfortable sharing otherwise.



#### We're driving the success of our ERGs via:

- **Investments in technology.** We recently deployed an online tool to support elevated collaboration and communication within our ERGs, as well as aiding their governance.
- **Investments in our people.** We view ERGs as communities to build and enable increased belonging. Our new ERG model will be a leadership incubator. As such, we're investing in unique development experiences for our ERG leadership community to support even greater effectiveness in managing change, leading through influence and managing cross-functional projects and initiatives. We're also aligning our executive team as sponsors to provide increased visibility and exposure to our ERG leadership community.
- **Investments in our overarching ERG program.** A successful ERG program requires strong leadership and it needs to be well-resourced from a funding standpoint.

All Raytheon Technologies employees are welcome to join any ERG, as a member with a shared affinity or as an ally or advocate. We encourage all employees to join multiple ERGs.

#### Raytheon Technologies Employee Resource Groups

- Ability/Disability
- Asian/Pacific Islander
- Black/African American
- Connections, bridging the gap between early career and experienced employees
- Hispanic
- Indigenous/Aboriginal Peoples
- LGBTQIA+
- Military/Veterans
- Women

# Public policy: Championing equality for all

As we advocate for issues that are important to our company and our stakeholders, we believe we can use our scale to advance education equity, encourage social justice reform and elevate economic policies that support equality in the communities where we live and work.

## Our actions include:

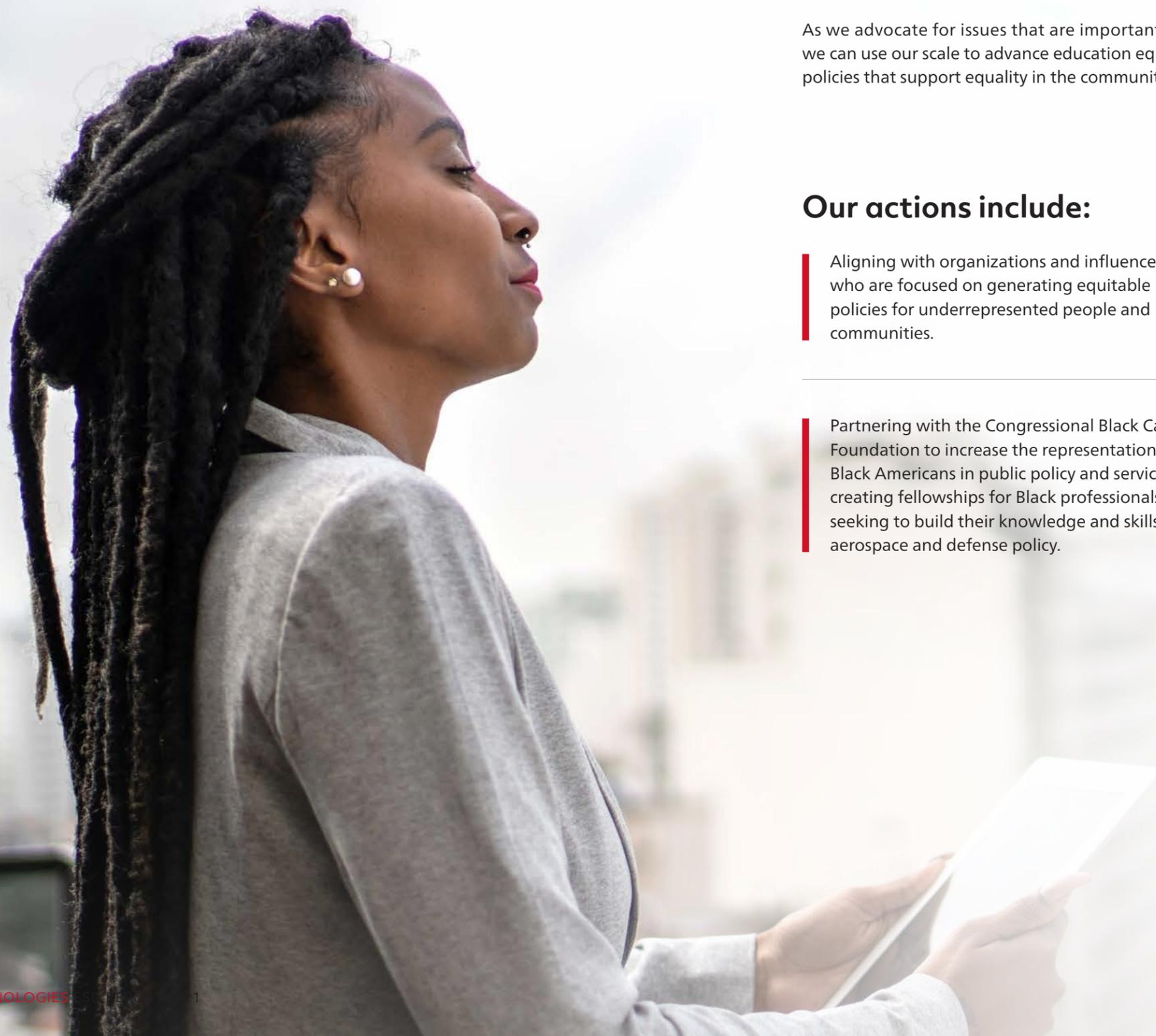
Aligning with organizations and influencers who are focused on generating equitable policies for underrepresented people and communities.

Using data about underrepresented communities to inform where we choose to locate our business operations.

Partnering with the Congressional Black Caucus Foundation to increase the representation of Black Americans in public policy and service by creating fellowships for Black professionals seeking to build their knowledge and skills in aerospace and defense policy.

Integrating societal impact factors into our business processes and decisions.

Supporting the Faith & Politics Institute, which leads annual Congressional Civil Rights Pilgrimages to five southern states, offering opportunities for reflective dialogue that transcends politics.



# Engaging diverse suppliers

Just as a diverse workforce spurs innovation, diversity among suppliers strengthens our ability to address our customers' complex challenges with novel solutions. Our supplier spend is one of our most important tools in supporting diverse entrepreneurs and therefore bolstering our communities. We are committed to maintaining a diverse supply base that reflects the values and demographics of our company, our customers and the communities in which we operate because we know diversity must go beyond the four walls of our business and into our value chain.

To that end, we provide what the federal government describes as "maximum practicable" procurement opportunities for small and diverse businesses, including those that are:

- **Minority-owned**
- **Women-owned**
- **Veteran-owned**
- **Located in a Historically Underutilized Business Zone (HUBZone)**
- **LGBTQ+-owned**
- **Disability-owned**
- **Disadvantage-owned**



In 2021, we expanded our active network of diverse suppliers and established new partnerships with diverse suppliers and organizations. We also launched an internal mentoring program for a select group of small and diverse suppliers, helping them grow their capabilities and maximize their potential.

## \$6.7B

spent with small and diverse suppliers in 2021 in the U.S.

**Payments to small and diverse suppliers made up**

## 28%

of overall 2021 spending in the U.S.

These efforts have earned awards and recognition from multiple organizations, including Women's Enterprise, Black EOE Journal and U.S. Veterans Magazine. Our participation in the U.S. Department of Defense's (DOD's) Mentor-Protégé program, which encourages large prime contractors to provide mutually beneficial developmental assistance to small and diverse businesses, has merited 25 DOD Nunn-Perry Awards for excellence.



# Building community vitality

Our responsibility to address the world’s challenges extends beyond our business operations. As a global industry leader, we continue to dedicate our resources and talent to help meet the needs of our communities and to build a better future together. We have made a 10-year, \$500 million commitment via Connect Up, which combines intentional programmatic investments in select nonprofit organizations with the skills and talents of our global employee volunteer network. We remain on track to reach this goal, with \$50.1 million donated to community groups in 2021, making a transformative impact in three critical areas: lifelong learning, honoring service and supporting communities.

This work is led by our chief communications officer (CCO); vice president of global corporate social responsibility; and subject matter professionals from each business unit and our corporate office. The CCO briefs the Board of Directors on our corporate social responsibility efforts at least annually.



Distribution of total corporate contributions

- Lifelong learning: 60%
- Supporting communities: 30.1%
- Honoring service: 9.9%

Note: The \$50.1 million in 2021 corporate giving is comprised of \$33.7 million in corporate grants and \$16.4 million in corporate gifts which match employee donations. The corporate matching gifts program is primarily available to U.S. employees.

## Our 2021 community impact

**\$50.1M**

donated to community groups

**\$12.2M**

contributed by Raytheon Technologies employees

**888,000+**

beneficiaries reached through social impact investments\*

**76%**

of programs demonstrated an efficacy rate within or above sector benchmark ranges\*

**65%**

of programs demonstrated a cost per outcome within or below sector benchmark ranges\*

**117,000**

students developed an interest in STEM, through the work of Raytheon Technologies’ signature partner\*

**1,500+**

total volunteer opportunities

**650+**

total volunteer causes

**8,000+**

causes supported through employee giving

**11,500+**

employees who participated in employee giving

### Lifelong learning.

We partner with STEM education leaders to build skills, inspire innovation and grow diverse thinking, as we connect with students to expand their view of what’s possible and build a career-ready, diverse talent pipeline for the workforce of the future. In 2021 we awarded \$1.5 million in fellowships and college scholarships to students from historically underrepresented groups.

### Honoring service.

We invest in programs that help veterans identify career opportunities as they transition to the civilian workforce, keep military families connected and inspire their children to become the innovators of the future.

### Supporting communities.

We seek to connect deeply with the places where we live and work to prioritize basic social welfare issues, improve equity and security for future generations and enable local community institutions to thrive.

- For each pillar, we have identified a set of priority outcomes that define what we intend to achieve with our financial and skills-based contributions, helping guide our strategy and grantee objectives. We are continuing to refine these priorities with an eye toward creating outcomes that align with our strategy. Establishing this accountability for ourselves and our nonprofit partners ensures that our intentions result in impact.

\* Impact data was collected from Raytheon Technologies’ signature partners via an online survey and verified by the Impact Genome ([www.impactgenome.org](http://www.impactgenome.org)) between September 2021 and February 2022.

## Employees making an impact

Our employees play a crucial role in Connect Up, helping us drive impact in the communities where we live and work. We have employee-led working groups establishing an enterprise volunteerism framework and policy, as well as plans to publicly recognize employees' use of their time and talents for the benefit of their communities.

As part of these efforts, we are connecting our ERGs with relevant volunteer opportunities, harnessing their skills and expertise in ways that align with their interests. We emphasize school-based volunteerism, including mentoring students who are interested in pursuing STEM careers via our partnerships with leading nonprofit organizations. In addition, our employees use their engineering skills to build infrastructure systems that help communities in the U.S. and abroad meet their basic needs.

**58,200**

employee volunteer hours

**1,200+**

U.S. employees tracked their volunteer hours in a platform launched by Raytheon Technologies in 2021

As with our corporate giving, we track the impact of employees' volunteer time, helping us better align volunteerism with our priority social outcomes and target opportunities where our employees can create the biggest impact. In 2021, we launched a technology platform for U.S. employees to track their volunteer time; we will roll this platform out globally in 2022.

We also launched our first annual Global Month of Service in April 2021. We connected employees to purpose-driven volunteer opportunities, an initiative that resulted in nearly 3,400 volunteer hours from employees. Over the course of the year, 1,221 employees volunteered 58,200 hours, serving 678 causes. As a company, we sponsored more than 100 volunteer opportunities.

Employees have also been crucial in our response to the COVID-19 pandemic. In East Hartford, Connecticut, one of our retired runways was transformed into the state's largest COVID-19 mass vaccination site – a 10-lane drive-through clinic through which the state ultimately administered more than 160,000 shots.

Throughout the pandemic, Raytheon Technologies has dedicated resources, time and financial support to COVID-19 relief efforts in communities around the world. For example, in India, we worked with the United Way and regional governments to vaccinate more than four million residents of two districts, Belagavi and Bagalkote. We have also donated mobile oxygen trucks and more than one million pieces of personal protective equipment in India.



## Developing the STEM talent of tomorrow

As a company with a global footprint, we deploy our resources around the world to cultivate STEM skills, diverse thinking and leadership abilities, helping ensure a diverse talent pool for the future. In 2021 we spent \$20.2 million on lifelong learning grants.\*

Some of our global partners and initiatives include:

Raytheon Technologies is the title sponsor of *FIRST*® Tech Challenge, the world's leading youth-serving nonprofit advancing STEM education. *FIRST* has engaged more than 679,000 students in 110 countries and provided over 3,000 scholarship opportunities.

In 2021, our enterprisewide summer work experience programs focused on creating pathways for historically underrepresented groups in STEM, in partnership with leading nonprofit organizations SMASH, Girls Who Code, and NAF. Over the course of the summer, 600 high school and early-college age students took engineering and technology courses, as well as workshops facilitated by Raytheon Technologies employees on topics including space suit technology, biometrics and jet propulsion.

**In France**, we offer job readiness training to disadvantaged groups and encourage youth to embrace aviation and engineering careers through partnerships with nonprofit organizations including Elles Bougent, FACE, La Cravate Solidaire, L'École de la deuxième chance and Champs d'actions.

**In United Arab Emirates**, we run an annual internship program to develop highly skilled Emirati talent. The internship offers 18 students on-the-job training to equip them with skills to support their future careers and ambitions.

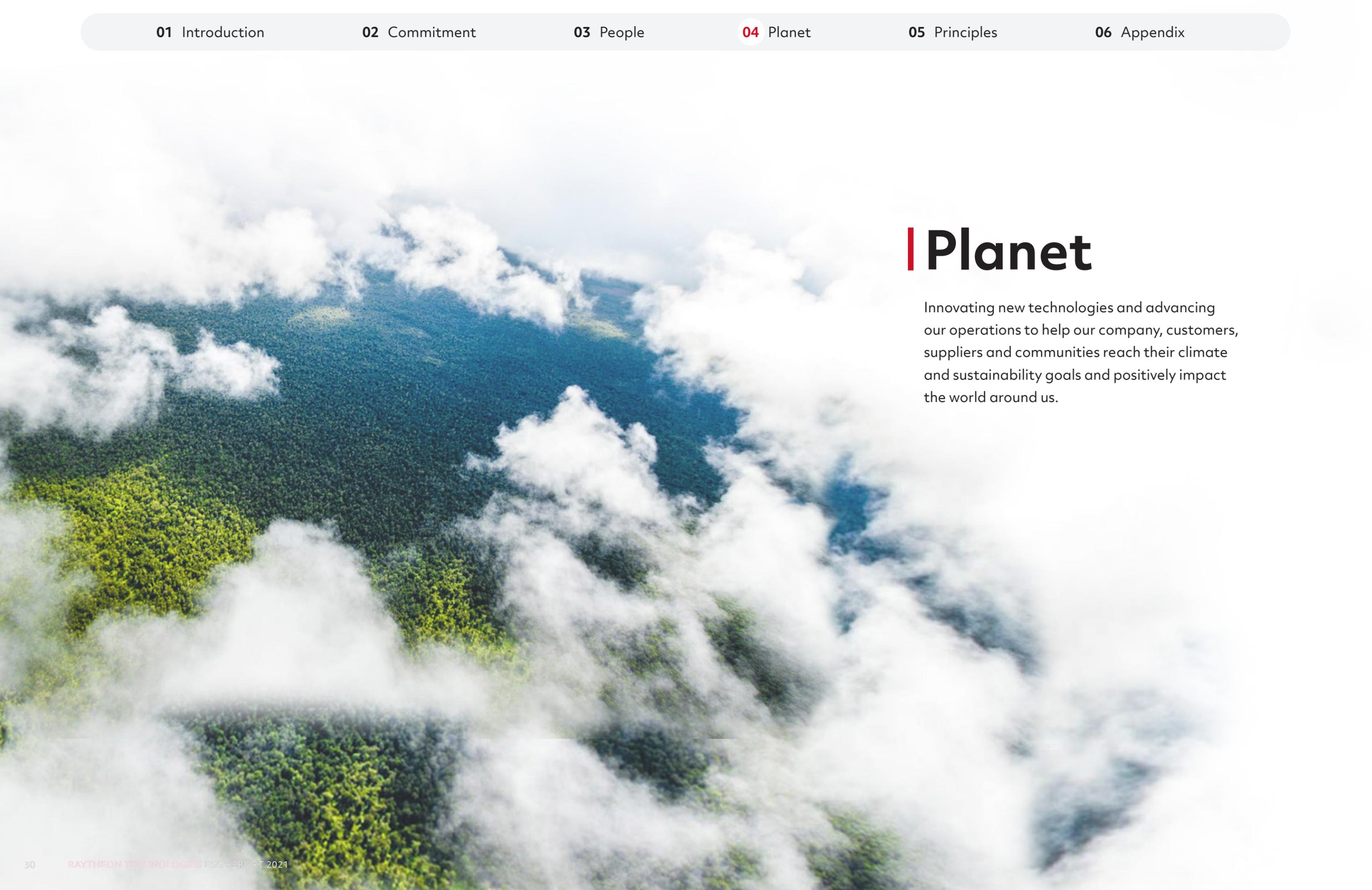
**In Poland**, as strategic partners of the Foundation for Education Support at the Aviation Valley Association, we inspire youth interest in science via STEM events like the Children's University of Technology, Super Cool Physics, Festival of Science and RoboLab STEM incubator, benefiting more than 100,000 participants. We also partner with the Copernicus Science Center, the largest science museum in Poland.

**In the UK**, we run several robust STEM engagement programs, including its annual Quadcopter Challenge Competition, the Science Museum Group's Top Secret exhibition and the Royal Air Force Engineering Competition.

**In Australia**, we support the Australian Academy of Science's Women in STEM Decadal Plan and other programs that develop female engineers and leaders.

\* Excluding matching gifts to STEM-related organizations.





# | Planet

Innovating new technologies and advancing our operations to help our company, customers, suppliers and communities reach their climate and sustainability goals and positively impact the world around us.

# Planet. We are innovating sustainable technologies in support of the air transport industry's commitment to reach net-zero CO<sub>2</sub> emissions by 2050.

We recognize we have an important role to play in addressing the climate challenges associated with our industry, and we are committed to improving environmental performance of our products and business. Climate change is at the forefront of the long-term environmental issues we face today. In 2018, the Intergovernmental Panel on Climate Change reported the importance of the ambition of limiting global temperature rise to no more than 1.5 degrees Celsius above pre-industrial levels. There is no silver bullet that can singularly resolve the climate change problem; instead, the challenge demands a collective response at a global scale. We are well positioned to help address this crisis thanks to the scale of our company, the ingenuity of our people and our history of rising to meet generational challenges.

We focus on four key areas to combat climate change and preserve natural resources:

## Progressing toward decarbonizing aviation

We are developing a broad portfolio of solutions, based on a number of different technologies, to help advance the air transport industry's commitment to reach net-zero by 2050. In addition, we have been collaborating with stakeholders across the value chain to support the development and use of sustainable aviation fuels (SAFs) and other technologies that improve overall aircraft fuel economy.

## Decarbonizing our operations

The increased urgency of the climate crisis demands that we work diligently to reduce GHG emissions from our operations. We focus on reducing energy consumption and improving energy efficiency in our operations worldwide, including involvement in renewable electricity projects and contracts.

## Minimizing resource usage

We track, and aim to reduce, the water we use and the waste we produce. We're especially focused on reducing waste disposed via the most environmentally harmful disposal methods. We also monitor the chemicals we use throughout our manufacturing processes and strive to reduce adverse effects to human health and the environment.

## Collaborating with suppliers

Our supplier relationships are critical to the continued success of our business. We work closely with all areas of our supply chain to ensure we use quality, responsibly sourced materials in our products. We also require our suppliers to both comply with environmental, health and safety laws and operate in a way that conserves natural resources and prevents pollution.

## 2021 progress highlights\*

### 23%

reduction in greenhouse gas (GHG) emissions over the last two years

### 51%

of best management practices implemented across water, waste and energy

### 19%

reduction in water usage over the last two years

### 17%

reduction in fuel consumption and CO<sub>2</sub> emissions from 2015 levels for aircraft powered by the Pratt & Whitney GTF™ engine\*\*

Our leadership role in the aerospace industry provides a critical platform, given that aviation is one of the hardest-to-abate sectors in terms of cutting GHG emissions – and that traffic volume is poised to double roughly every 20 years to further connect the world and advance global development. As an aerospace and defense manufacturer, we recognize that our greatest potential impact on addressing climate change is reducing emissions through the products we design, develop, manufacture and support.

We've made a number of new commitments focused on reducing GHG emissions from our operations (Scope 1 and 2 emissions) as well as emissions outside of our operations in our value chain (Scope 3 emissions), including but not limited to emissions from the use of our products, the total of which are significantly larger than emissions from our operations. In this section, we will discuss in detail our progress and commitments in addressing environmental issues, with a particular focus on GHG emissions. We also discuss our longstanding commitment to environmental matters, including significant progress on our waste and water performance.

\* All performance data in the Planet section represents December 2020 through November 2021, unless otherwise stated.

\*\* Compared to prior-generation IAE V2500 engines.

# Advancing sustainable technology and innovation globally

We take a one-company approach to innovation, which includes driving and harmonizing sustainable technology projects across our organization. Our chief technology officer (CTO) works closely with the sustainability organizations embedded in our business units, and in particular with the chief sustainability officers of [Collins Aerospace](#) and [Pratt & Whitney](#). These functions shape the sustainability strategy of their business units to best support the needs of their customers, and each business unit customizes its research and development (R&D) investments according to the business strategy. In 2021, across Raytheon Technologies we spent a total of \$7.2 billion in customer- and company-funded R&D. A significant amount of this funding goes toward sustainable technology and innovation for both civil aviation and defense sectors.

In addition to the four business units' investments in sustainable technology and innovation, the Raytheon Technologies Research Center (RTRC) is a key resource to drive innovation across our business units. This dedicated innovation center, staffed by 300 engineers and scientists, develops solutions for our customers' toughest challenges, conceives and matures breakthrough technologies and partners with universities and laboratories on groundbreaking research. Sustainability is one of the RTRC's key pillars of innovation.



## Supporting U.S. DOD sustainability plans

In December 2021, U.S. President Joseph Biden announced the [Federal Sustainability Plan](#), outlining a path to achieve net-zero emissions from federal procurement and across federal operations by 2050. The Department of Defense (DOD) is integrating this ambition across its strategies and plans, for example as in the newly released [Army Climate Strategy](#). Raytheon Technologies is supporting this ambition by advancing our technical readiness and seeking opportunities for innovations. Our strategic technology thrusts and near-term examples include:

- In support of DOD sustainability plans, Pratt & Whitney has conducted extensive testing of military engines with both blended and 100% SAF, which enabled Pratt & Whitney to gain approval on the use of up to 50% AAF blends, as defined by NATO F-24, for all our military engine products.
- Pratt & Whitney is also investing in the development of enhanced engine packages for the F135 engine that powers the F-35 Lightning II, providing options to save over 2.6 million gallons of fuel and reduces CO<sub>2</sub> emissions by 43 million tons over the engine life with increased mission capability.
- We are making enhancements in product energy efficiency, such as fielding of gallium nitride (GaN) in radars. We have fielded, and Raytheon Intelligence & Space (RI&S) and Raytheon Missiles & Defense (RMD) are developing, GaN radars for the U.S. Army, Navy and Air Force. These radars are approximately five to 10 times more efficient than previous gallium arsenide (GaAs) radars.
- Collins, RI&S, and RMD have been developing electrification technologies for defense applications across different domains, including operationally proved hydrogen fuel cells for marine applications, with the potential for other domains, and microgrid technologies and energy storage to enable the use of solar and wind power.

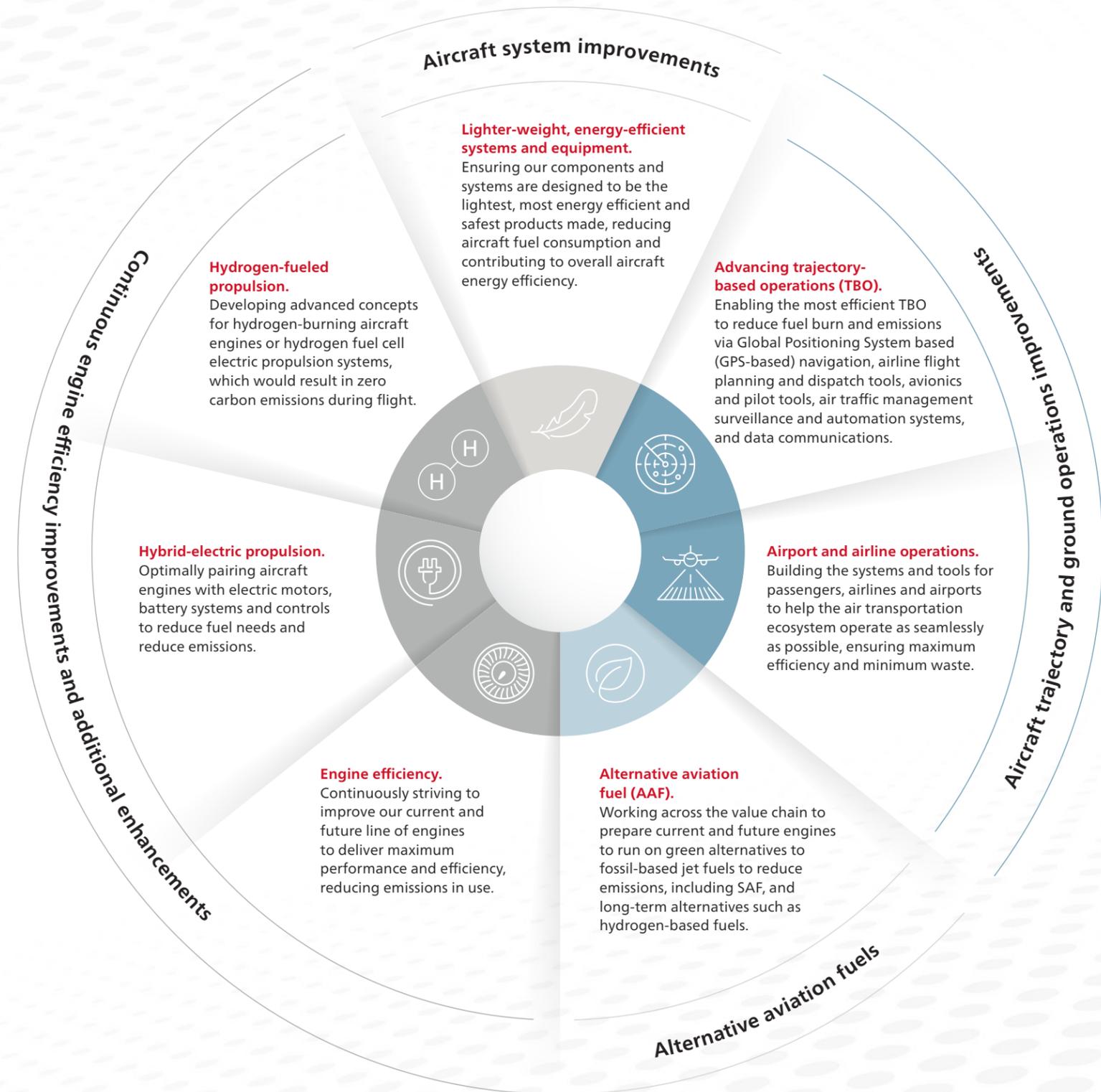
# On the path to decarbonize aviation

Raytheon Technologies takes pride in the role it plays in connecting people and cultures. As a longtime aerospace manufacturer, we take seriously our responsibility to provide safe, fast, efficient and economically viable ways for people to fly to meet one another. Our storied tradition of innovation in aviation began with Pratt & Whitney's inception in 1925, followed by Collins in 1933. Just as our founders sought to bring life to a new industry with cutting-edge technologies, today Raytheon Technologies is creating the future with higher performing and more sustainable aerospace solutions.

Sustainable development is vital for the future of the aviation industry. Key aviation industry organizations such as the International Air Transport Association (IATA) and the Air Transport Action Group (ATAG) fully recognize that the aerospace industry must play a critical role in ensuring global temperatures do not increase more than 1.5 degrees Celsius. The aerospace industry faces many complex challenges to meet this goal. As ATAG's [Waypoint 2050 report](#) outlines, air transport is one of the hardest sectors to decarbonize due to a lack of off-the-shelf technologies that provide energy solutions meeting the speed and distance requirements for aviation.

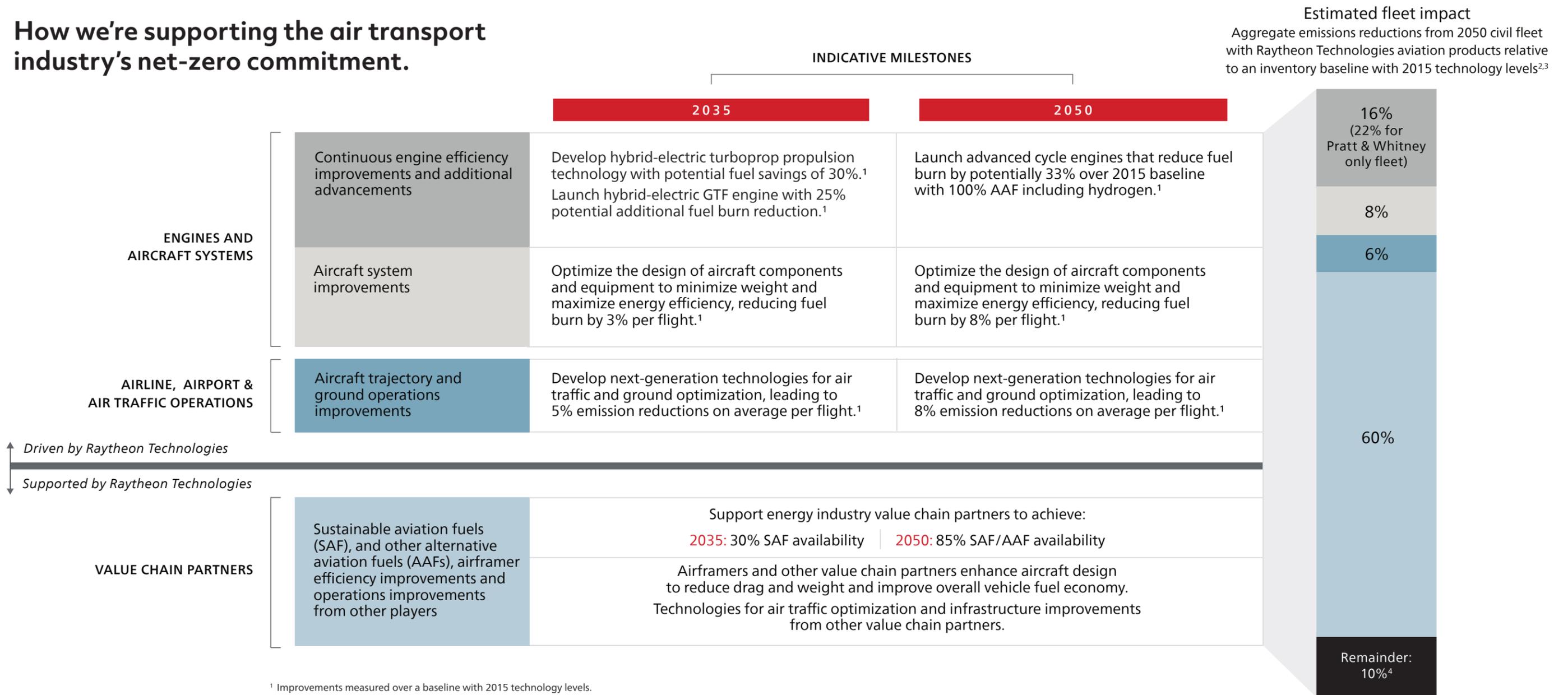
The aerospace industry currently contributes around 2% of global carbon dioxide (CO<sub>2</sub>) emissions. However, given the projected growth of air traffic demand, the industry predicts its carbon emissions will more than double by 2050 relative to 2019 levels if technology does not improve and get adopted. Raytheon Technologies and our business units Pratt & Whitney and Collins support the ATAG "Fly Net-zero" commitment to achieve industrywide net-zero carbon emissions in civil aviation by 2050.

The future of sustainable aerospace hinges on multiple, distinct technologies – some of which are just emerging. As breakthrough aerospace technologies are developed, their safety must be rigorously tested before they enter into service. This maturation process will take time, which is why Raytheon Technologies has a broad portfolio of solutions at varying levels of maturity to help reduce GHG emissions in the aerospace sector now and in the future.



# Our roadmap to 2050

How we're supporting the air transport industry's net-zero commitment.



<sup>1</sup> Improvements measured over a baseline with 2015 technology levels.

<sup>2</sup> Values represent Raytheon Technologies' estimates for civil fleet net CO<sub>2</sub> emissions relative to a 2015 technology baseline using GHG Protocol for Project Accounting methods for our fleet of engines and systems. We adopted a 2015 technology baseline consistent with [ATAG Waypoint 2050](#), which is a vision of net-zero aviation that is widely adopted by the industry. Several new, significantly fuel efficient aircraft, including Airbus A320neo and Boeing 737 MAX, were introduced after 2015 and have been and continue to be adopted by airlines to replace older aircraft as well as to grow their fleet to serve traffic demand.

<sup>3</sup> Forecasting method adds direct emissions from aircraft engines to indirect emissions from non-engine related equipment mass, aerodynamic drag and secondary power extraction. As detailed guidelines for fully analyzing emissions for the aviation industry do not yet exist, the methodology used in the future may evolve with industry standards.

<sup>4</sup> Potential solutions for reducing the remainder include further enhancing the advancements noted above to further reduce emissions or employing market-based mechanisms.



# Engine and aircraft systems

## Continuous engine efficiency improvements and additional advancements

### 2035 milestones

Develop a hybrid-electric turboprop propulsion technology with potential fuel savings of 30% compared to the 2015 baseline.

Launch hybrid-electric GTF engine with 25% potential additional fuel burn reduction over 2015 baseline.

### 2050 milestones

Launch advanced cycle engines that reduce fuel burn by potentially 33% over the 2015 baseline with 100% AAF including hydrogen.

## Aircraft system improvements

### 2035 milestones

Optimize the design of aircraft components and equipment to minimize weight and maximize energy efficiency, reducing fuel burn by 3% per flight compared to the 2015 baseline.

### 2050 milestones

Optimize the design of aircraft components and equipment to minimize weight and maximize energy efficiency, reducing fuel burn by 8% per flight compared to the 2015 baseline.

## Improving engine efficiency

Every 20 seconds, a Pratt & Whitney GTF™ engine powered aircraft takes off from one of our 58 airline customers, producing 16% lower CO<sub>2</sub> emissions and delivering 50% less nitrogen-oxide (NO<sub>x</sub>) emissions compared to prior-generation best-in-class engines, namely the IAE V2500 turbofans from 2015 levels. The GTF engine builds on a long track record of innovation and efficiency gains at Pratt & Whitney – a 70% improvement in fuel efficiency since we introduced the JT8D in the 1960s. This engine is the industry's best-in-class for single-aisle applications. Our engineers revolutionized the traditional jet engine architecture, adding a gear system in between the fan in the front and the turbine in the back, so that the fan and the turbine can spin at their optimal speeds for improved efficiency. This geared architecture enables reduction in the number of engine stages and airfoils, providing industry-leading efficiency, weight and environmental benefits to the engine. The GTF engine is the only geared propulsion system in service that is delivering industry-leading sustainability benefits.

Since entering into service in 2016, this technology has saved operators 600 million gallons of fuel and avoided nearly 6 million metric tons of CO<sub>2</sub>. Our engineers are determined to drive additional incremental emissions reductions. To that end, this past December we announced a newer model that will be available in 2024, the GTF Advantage™ engine, that will improve the reduction in fuel consumption and CO<sub>2</sub> emissions to 17% versus the 2015 baseline. We are also ensuring that the GTF engine will be compatible with 100% SAF, to further reduce engine emissions.\*

At the same time, Collins is improving the efficiency of turboprop aircraft propulsion with advanced propeller systems. In 2019, Collins announced a new center in France to develop enhancements for existing propellers, new systems for future turboprop, and disruptive technologies for next-generation aircraft, while also helping to reduce cycle times for customers through increased automation.

The center optimizes propeller designs that improve aerodynamics and reduce weight, fuel consumption and noise.

**Further improving the efficiency of aircraft engines will require innovation across several areas, including:**

Enhancing P&W's geared turbofan architecture, with higher gear ratios that enable larger diameter fans and smaller diameter, higher pressure ratio turbomachinery to further increase engine efficiency.

Introducing materials that can operate at higher temperatures, such as ceramic matrix composites (CMCs) that operate beyond the melting point of today's best nickel superalloys.

Using advanced manufacturing to produce more effective cooling circuits that can keep key parts of the engine hot section below critical temperature thresholds.

Reducing propulsion systems weight through the use of advanced materials such as composites to produce lighter-weight fan blades, fan cases and nacelles.

Adopting advanced nacelle and exhaust technologies and design methods that reduce noise, weight and drag.

Additionally, we have previously established and fully developed comprehensive processes that ensure emissions (GHG and non-GHG) from our aircraft engines comply with both current and future requirements issued by the governing International Civil Aviation Organization.



\* Sea-level validation for SAF compatibility successfully completed in March 2022.

## Introducing hybrid-electric propulsion

Hybrid-electric aircraft propulsion systems pair a conventional aircraft engine with an electric motor and drivetrain. The engine and motor power balance is coordinated by advanced control systems to work together in parallel to optimize the efficiency of the propulsion system throughout the flight envelope. We estimate that our advanced GTF with hybrid-electric technology will provide efficiency improvements that enable a 25% reduction in CO<sub>2</sub> emissions by 2035, relative to 2015 baseline technology.

We are working across our business units and innovation teams to make hybrid-electric propulsion a reality for the next generation of commercial engines. We are uniquely positioned to lead aerospace in electrification in commercial aviation through the combination of Collins' expertise in aviation electrical systems and Pratt & Whitney's propulsion system manufacturing and integration capabilities.

Initiatives within the hybrid-electric space include:

- The Collins, Pratt & Whitney and RTRC partnership with NASA, Penn State University, Georgia Tech and Howard University to develop hybrid-electric propulsion technologies.
- A \$163 million Canadian Dollars Pratt & Whitney project supported by the governments of Canada and Quebec to develop a regional aircraft-scale hybrid-electric demonstrator, together with Collins and De Havilland Aircraft of Canada. With this demonstrator, we are targeting a 30% fuel efficiency improvement compared to today's best turboprops, with flight testing planned for 2024. (See "From gas to hybrid-electric: A demonstrator collaboration.")



## From gas to hybrid-electric: a demonstrator collaboration

Stakeholder collaborations are a key ingredient in the sustainable aerospace future. Consider the work Pratt & Whitney and Collins have undertaken in collaboration with De Havilland Aircraft of Canada Limited, the Canadian government and the government of Quebec. Together, these organizations are working on a hybrid-electric demonstrator with a De Havilland Dash 8 regional aircraft that could significantly reduce emissions from fuel consumption.



The demonstrator will replace one of the aircraft's conventional gas turbine engines with a hybrid-electric propulsion system that pairs a 1MW electric motor with a 1MW internal combustion engine, for a total of 2MW propulsive power. A production aircraft with two hybrid-electric engines has the potential to reduce fuel consumption by 30% for short haul flights. The project will target testing a demo engine in 2022 and flight testing a full hybrid-electric flight demonstrator in 2024. This demonstrator is a key milestone on the path to development of a commercially viable hybrid-electric aircraft.

## Developing hydrogen-fueled propulsion

While significant innovation and infrastructure investments must occur before hydrogen-powered aircraft become a reality, a hydrogen-powered engine could be game changing for sustainable aviation, as it produces zero carbon emissions during the combustion process. **Raytheon Technologies has the full portfolio of technologies needed to enable hydrogen-based propulsion solutions, including:**

- Electrical systems and fuel and thermal management systems from Collins.
- Gas turbine, combustion and advanced materials expertise from Pratt & Whitney.
- Advanced architecture concepts and fuel cell technologies being studied at the RTRC.

Hydrogen-burning engine concepts are not new for Pratt & Whitney, which first demonstrated a hydrogen-burning aircraft engine in the 1950s. Current concepts are more advanced, bringing meaningful improvements in overall engine efficiency through various means, including leveraging the cryogenic temperatures of the fuel as a heat sink for the aircraft. We also have collaborated with our partners in Japan to undertake low-NOx combustion of hydrogen, a critical step toward ensuring this technology has an important role to play in aviation decarbonization.

Pratt & Whitney has been selected by the U.S. Department of Energy (DOE) to develop novel, high-efficiency hydrogen-fueled propulsion technology for commercial aviation, as part of DOE's Advanced Research Projects Agency-Energy (ARPA-E). The Hydrogen Steam Injected Intercooled Turbine Engine (HySIITE) uses liquid hydrogen combustion and water vapor recovery to achieve zero in-flight CO<sub>2</sub> emissions, while reducing NOx emissions by up to 80% and reducing fuel consumption by up to 35%. The HySIITE engine will burn hydrogen in a Brayton (thermodynamic) cycle and use steam injection to dramatically reduce NOx. Via an innovative semi-closed system architecture, HySIITE aims to achieve thermal efficiency greater than fuel cells and reduce total operating cost to be comparable with "drop in" SAF.

Additionally, as an alternate to cryogenic hydrogen fuels, our team at RTRC is working on engine concepts that are powered by intermediate hydrogen fuels such as ammonia, which bring the benefits of hydrogen propulsion in a more transportable fuel. (See "Ammonia could fuel the future of sustainable flight.") For fuel cell propulsion architectures, we are leveraging Collins' strong expertise in fuel cells for space and sea applications and RTRC's background in fuel cell research to develop fuel cells for power generation.

We see the potential for these advanced cycles to improve engine efficiency another 10%, which could contribute to address the industry's gap to net-zero carbon dioxide emissions by 2050.



### Ammonia could fuel the future of sustainable flight

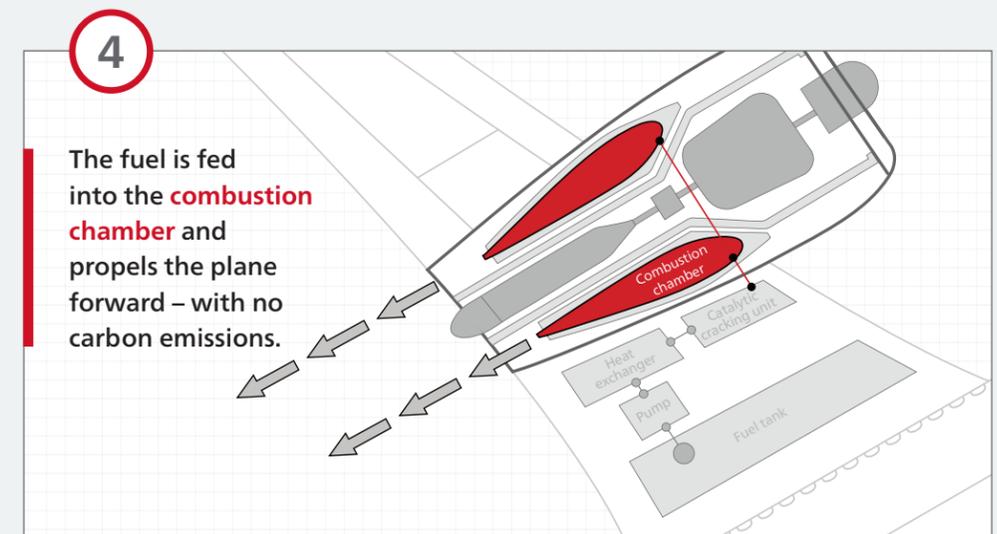
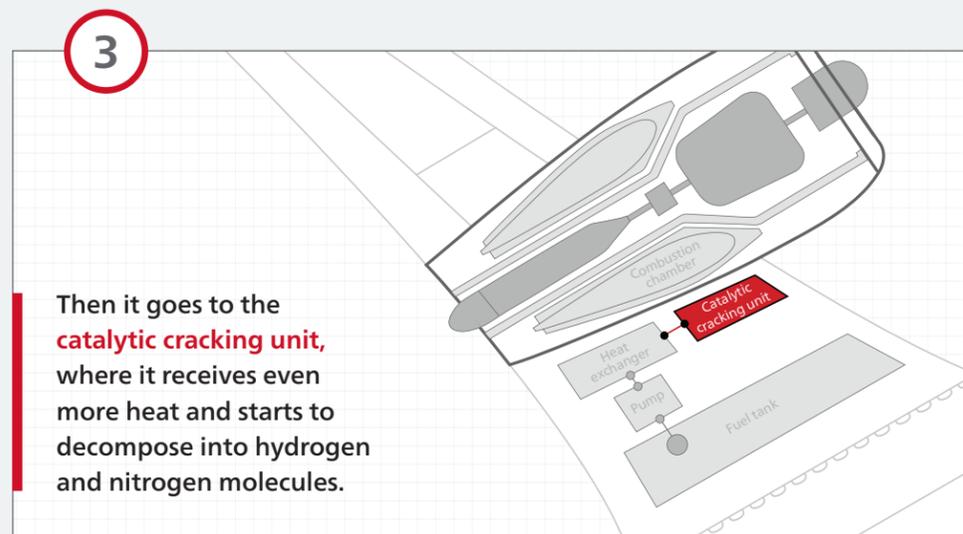
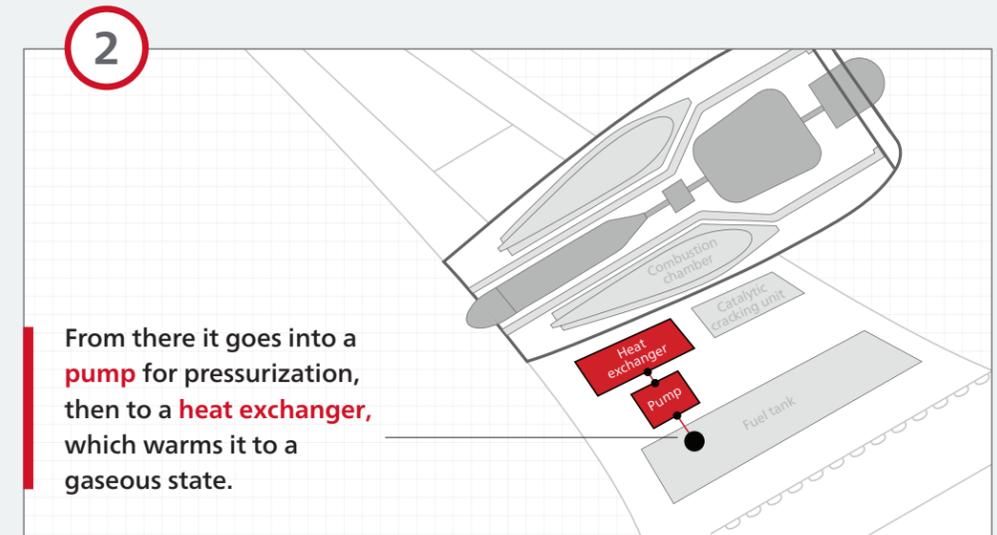
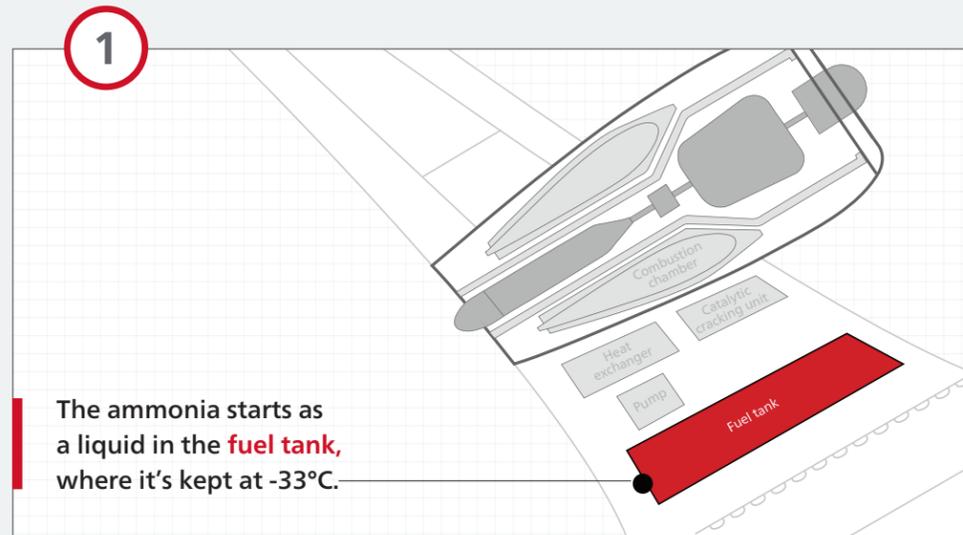
The RTRC is developing a carbon-free propulsion system through a U.S. Department of Energy program.

Under a \$2.6 million research grant from ARPA-E, Raytheon Technologies is developing a turboelectric aviation propulsion system that would use ammonia as both a fuel and a coolant – potentially paving the way for the decarbonized future of flight.

Ammonia is a compound of nitrogen and hydrogen, and can be used as a fuel that produces no carbon emissions from combustion. As part of our roadmap to 2050, the RTRC and ARPA-E have partnered to explore the possibilities of ammonia in civil aviation. Although both hydrogen and ammonia produce zero carbon emissions, ammonia has a few distinct advantages as it does not need to be stored nearly as cold (-33°C vs. -253°C for liquid hydrogen). Ammonia is also more energy dense than hydrogen by volume, which translates to less aircraft structural weight and drag.

This program involves designing new systems that can convert liquid ammonia into its desired gaseous state for combustion. As the graphic at right shows, this process would involve a fuel tank to store the liquid ammonia, a pressurization pump, a heat exchanger, a catalytic cracking unit and a combustion chamber within the engine.

### Ammonia-powered flight



## Aircraft system improvements

### Introducing lighter-weight and more energy-efficient aircraft equipment systems

The weight and energy efficiency of airborne systems and equipment are critical variables that affect fuel burn and emissions for aircraft as a whole. Collins and Pratt & Whitney have focused on leveraging the latest materials and design and manufacturing processes to produce the lightest and most efficient aircraft products ever made, contributing to overall aircraft energy efficiency and helping reduce aircraft emissions.

An aircraft's weight is directly correlated to its fuel burn, payload and range. We estimate that, under cruise conditions, every 1,000 pounds of weight reduction results in a 0.7% fuel savings for an average single-aisle aircraft.

Key efforts across our business units to reduce aircraft system weight include:

- Leveraging advanced lightweight materials, including using composites for structural elements ranging from engine nacelles to cabin seats. For example:
  - The DURACARB® carbon brake technology from Collins saves about 700 pounds of weight on single-aisle aircraft, along with improved performance and durability.
  - We are reducing weight by applying thermoset and thermoplastic composites to aerostructures, as well as to mechanical parts such as struts and shafts.
  - Advanced composite fan blades and fan cases for next-generation GTF engines enable lower weight with increased durability and operational capability.
- Leveraging advanced manufacturing processes to make it possible to optimize product weight. Where possible, our engineers leverage technologies such as additive manufacturing and tomolithographic molding (TOMO®) to produce equipment designs that are lighter weight than anything produced with conventional manufacturing technologies, without compromising on safety, quality or reliability.

### Innovations in thermoplastics

Collins recently acquired Dutch Thermoplastics Components (DTC), a leader in the development and fabrication of structural thermoplastic composite parts. Thermoplastics composites offer higher impact resistance, unique process possibilities providing reductions in manufacturing cycle time and the need for fewer fasteners, in addition to what could be offered by traditional thermoset composites, such as strength and lighter weight. Further, thermoplastic composites are recyclable at the end of their life cycle.

This acquisition underscores our commitment to using advanced materials and processes to address key areas of importance for our customers: weight reduction for fuel savings, reliability improvements and sustainable practices across the product life cycle.

### High-temperature materials and manufacturing technologies reduce fuel burn

In 2021, Pratt & Whitney opened a ceramic matrix composites (CMC) R&D facility in Carlsbad, California. The 60,000-square-foot facility is dedicated to the engineering, development and low-rate production of CMC components for aerospace applications.

These innovative ceramic composites are lighter and can withstand higher temperatures, which improves thermal efficiency for gas turbine engines. When ready, these materials will be integrated into military and commercial engines to increase range, improve fuel efficiency and reduce emissions.

In addition to the Carlsbad facility, Pratt & Whitney announced in late 2020 that we would be opening a new turbine airfoil production facility in Asheville, North Carolina. This \$650 million facility will use the latest technologies and processes to manufacture the next generation of turbine airfoils.

We are also focused on improving energy efficiency in aircraft equipment. A broad class of equipment, including electronics, avionics, actuation, fuel systems and environmental control systems (ECS), consume aircraft energy in electric, hydraulic or pneumatic form. Reducing equipment energy consumption directly translates into lower overall aircraft fuel consumption and lower emissions. Our efforts to improve equipment energy efficiency include:

- Deploying an electrified ECS for the Boeing 787, one of the clean-sheet-design aircraft in the new century. This system pressurizes and conditions cabin air by using electric power from the engine generators to drive compressors, taking fresh air via dedicated inlets instead of the more traditional approach of taking bleed air from the engine. From engine power extraction to cabin air compression, this concept yields a net efficiency gain and a reduction of fuel consumption.
- Converting hydraulic actuation to electric actuation, improving overall system efficiency and weight, such as in the electric actuation flight control systems on the Airbus A380.

- Improving the energy efficiency of power electronics used in power distribution systems and motor drives through the use of advanced electronic designs and more efficient semiconductor devices.
- Reducing the drag of exterior fuselage components such as nacelles and satellite antennas.
- Investing \$18 million to develop “smart” actuation components for commercial airplanes and helicopters in our center of excellence for actuation systems in France. This Collins program is supported through a four-year R&D program grant from the French Civil Aviation Authority. The investment will be used to develop a number of solutions, including a lighter, more compact motorized gearbox; more compact actuator structures with improved thermal management; a full-authority actuator to enable fly-by-wire for all helicopter platforms; AI-enabled prognostics and health management capabilities; and an advanced modular electro-mechanical actuator that can be used across a number of platforms.



# Airline, airport and air traffic operations

## Aircraft trajectory and ground operations improvements

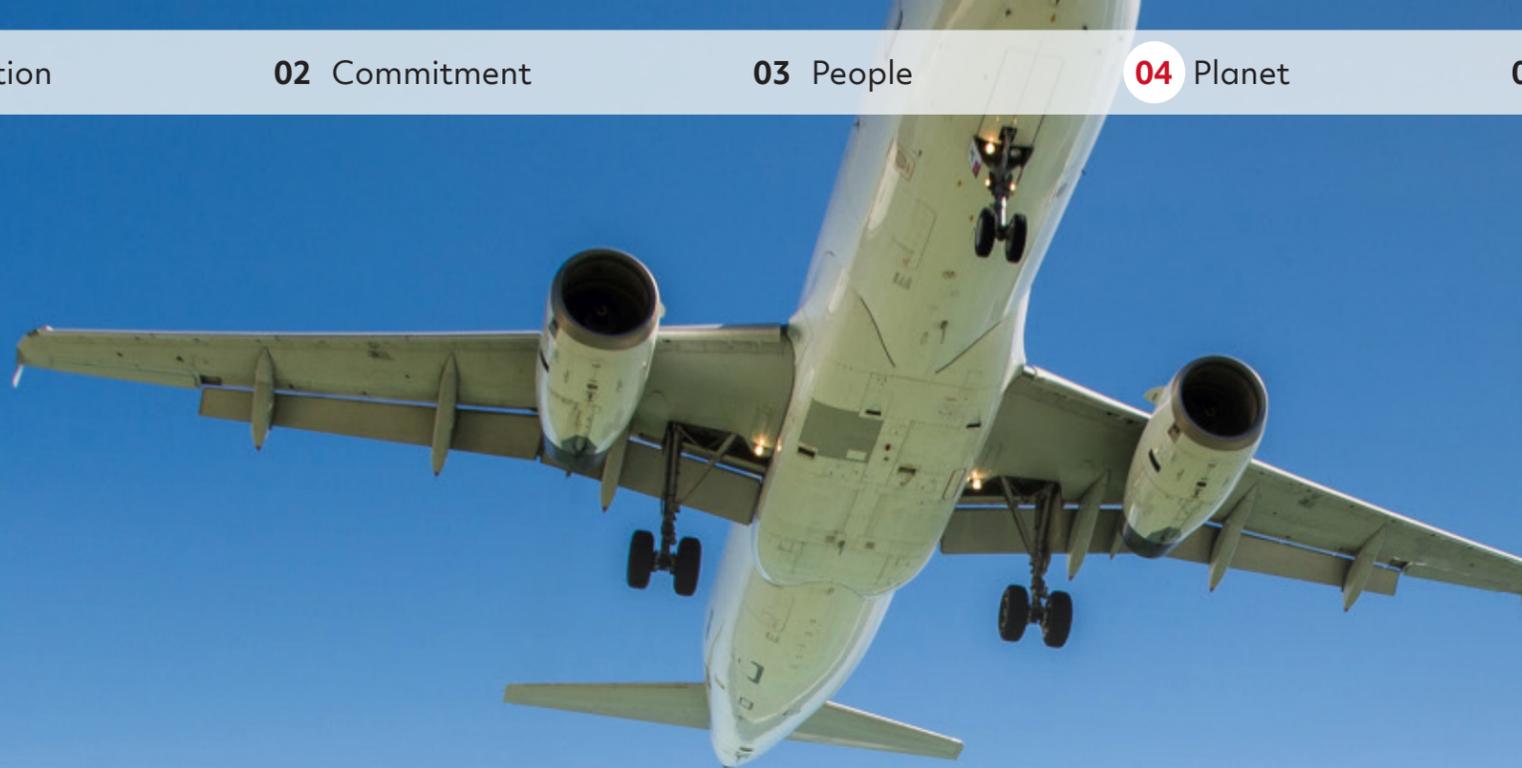
### 2035 milestones

By 2035, develop the next-generation technologies for air traffic and ground optimization, leading to 5% emission reductions on average per flight compared to 2015 baselines.

### 2050 milestones

By 2050, develop next-generation technologies for air traffic and ground optimization, leading to 8% emission reductions on average per flight compared to 2015 baselines.





## Trajectory-based operations

Another way to reduce fuel burn and emissions is through trajectory-based operations (TBO), a concept that proactively optimizes and manages flight trajectories instead of continuously reacting to local conditions and traffic conflicts throughout the flight.

Several solutions from Raytheon Technologies work together to unlock the ability to optimize and reliably execute optimized flight trajectories. The combination of these solutions could reduce air transport emissions by 8% on average per flight by 2050 compared with 2015 baselines.

### RI&S TBO technologies and developments include:

- The FAA's Wide Area Augmentation System (WAAS), which enhances the Global Positioning System (GPS) and provides precision navigation over North America.
- The next-generation Operational Control System (OCX), which modernizes the ground control segment of the GPS.
- The FAA's Standard Terminal Automation Replacement System (STARS), which is used by air traffic controllers to manage the airspace around the nation's busiest terminal areas, accounting for 100% of U.S. commercial departing and arriving air traffic.
- The Advanced Weather Interactive Processing System (AWIPS), the National Oceanic and Atmospheric Administration/National Weather Service's (NOAA/NWS) weather forecasting data and display toolkit for all entities involved in air traffic operations.

### Collins Aerospace TBO technologies and developments include:

- Global air-ground data communications capabilities, such as Controller Pilot Data Link Communications (CPDLC), Automatic Dependent Surveillance-Contract (ADS-C) and ARINC Global Network, and messaging services to enable TBO by providing digital connectivity between the Air Navigations Service Provider (ANSP), the Operations Control Center (OCC) and the aircraft.
- Airborne, weather radar and tailored weather services at the OCC and uploaded to the flight deck to support safe and efficient operations for airline and the flight crew.
- Flight planning and dispatch, fuel analysis, weight and balance, and departure control systems that help with more efficient and predictable flight plans. The recent acquisition of FlightAware significantly complements these offerings with enhanced global situational awareness, predictive technology, analytics and decision-making tools for aircraft operators and millions of passengers.
- Avionics solutions including:
  - Multi-mode GPS receivers compatible with multiple global navigation satellite constellations and augmentation systems, as well as ground based radio navigation aids, providing advanced global navigation and precision landing capabilities.
  - Additional technologies, such as the Automatic Dependent Surveillance-Broadcast (ADS-B), integrated surveillance system, adaptive flight display, head-up display, combined vision systems, autopilot and flight-by-wire, ensuring efficient and safe execution of the cleared trajectory, even under marginal weather conditions.

## Airline and airport operations

Raytheon Technologies provides a comprehensive set of cloud-based, connected systems and tools for passengers, airlines and airports to help the air transportation ecosystem operate as seamlessly and efficiently as possible. Enabled by our network connectivity, messaging and data exchange, with continuous innovation in artificial intelligence, machine learning and data analytics, these systems and tools directly reduce emissions associated with ground operations and also support efficient flight operations to fully capture the benefits of TBO.

For example:

- Collins provides the ARINC PaxLink™ Passenger Services System, which includes modules ranging from airline network and schedule planning, fuel consumption analysis, crew management, weight and balance, and departure control systems to passenger reservations, check-in and border management at the airport. The system provides safe and efficient ground operations and management of on-time performance and disruptions.
- Collins offers the Aviation Resource Management System, which provides flight data monitoring and analysis, logistics and inventory management, maintenance repair and overhaul (MRO) planning and execution management.
- Pratt & Whitney offers EngineWise™, which combines industry-leading data analytics, engine expertise and customer fleet experience to build shared insights and engine MRO capabilities. These capabilities ensure asset health and safety as well as efficient airline technical operations to achieve fast turnaround time and reduced material and energy consumption, while maintaining optimum product performance and minimizing unplanned aircraft downtime.



# Product use **value chain partners**

## Alternative aviation fuels, airframer efficiency improvements and operations improvements from other players

In addition to developing technologies that are in our control to pursue, we are also working closely with industry partners, including airframers and energy companies, to support the development of other important technologies that are necessary to deliver net zero reductions in CO<sub>2</sub> emissions. These industry partner efforts will deliver the following aspirational milestones:

- 2035 milestone**    **2050 milestone**
- 30% SAF availability    85% SAF/AAF availability

### 2035 and 2050 milestones

Airframers and other value chain partners enhance aircraft design to reduce drag and weight and improve overall vehicle fuel economy.

Technologies for air traffic optimization and infrastructure improvements from other value chain partners.



## Enabling the use of alternative aviation fuels

The most common fuel used by commercial aircraft is Jet A, a kerosene-based fuel that meets specific performance and safety requirements. AAFs include SAFs and other alternatives such as hydrogen and ammonia. SAFs are renewable synthetic jet fuels that can be produced by converting biomass feedstock and waste into liquid fuels, or alternatively by chemically combining CO<sub>2</sub> and hydrogen. AAFs are poised to have an immense impact on the aviation sector's path toward net-zero. Several SAFs have been approved within industry specifications (ASTM D1655) to be used as a 50% blend with conventional jet fuel.

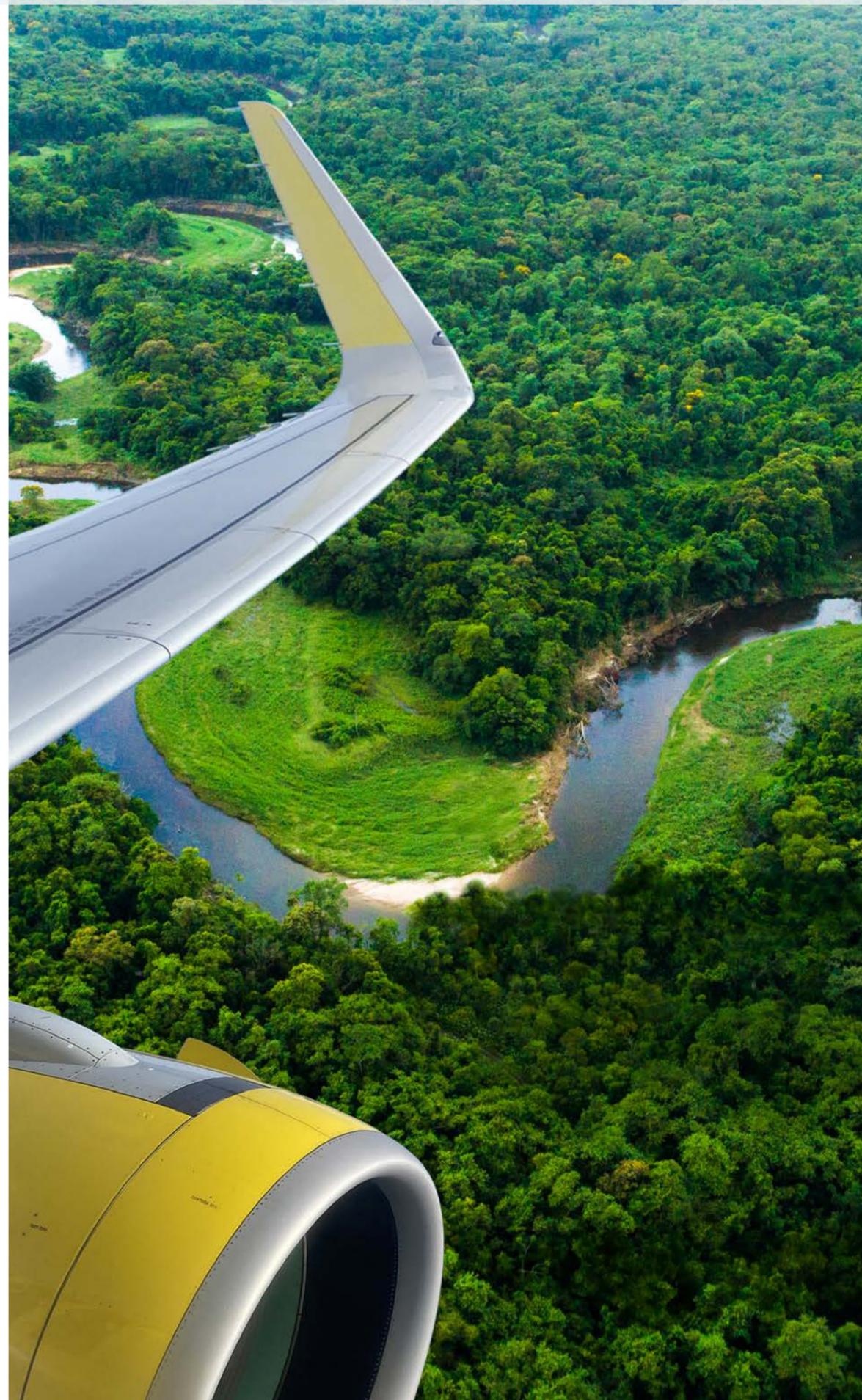
Today's pure SAFs offer up to an 80% or more reduction in fuel life cycle CO<sub>2</sub> emissions relative to fossil-fuel based jet fuel, yet SAFs currently comprise less than 0.1% of global jet fuel consumption. Focused investments from industry and governments are occurring to increase global SAF production and reduce cost. The goal is to drive increased availability and use, which ATAG has projected to rise exponentially in this decade.

Pratt & Whitney has been active in SAF testing and certification for almost two decades, and all of our modern engines are currently compatible with the approved 50% SAF blend.

Collins designs and integrates advanced fuel measurement and management systems, as well as other fuel system components, such as fuel controls, pumps, valves and nozzles for nearly every type of engine and aircraft. Today, these systems and components are compatible with approved 50% SAF blends. In collaboration with engine and aircraft manufacturers, Collins is working to ensure compatibility with unblended (100% or neat) SAFs to provide even greater environmental benefit.

Ensuring compatibility with 100% SAF may require testing, requalification or recertification, and in some cases the redesign of components or subcomponents depending on the future standards of 100% SAF. For example, for current fuel gauging systems Collins has developed a densitometer device that directly measures the density of fuel, allowing a 1% fuel quantity accuracy regardless of fuel type. For new aircraft, Collins is developing a pressure-based fuel gauging system that directly measures the pressure of fuel so we can accurately calculate fuel quantity regardless of type.

In addition to our efforts at Raytheon Technologies, the contributions of airframers, SAF producers and others are essential to reach the air transport industry's net-zero 2050 goal. Across the industry, we must innovate separately and together to reach this essential milestone.



## Supporting AAF in the value chain

- Since 2006, we have evaluated the compatibility of both blended and 100% SAF pathways through extensive testing of our commercial and military engines. We continue this effort in support of the aviation industry objective to identify multiple 100% SAFs that will minimize environmental impact, increase availability and reduce cost. We are currently partnering with ATR and Embraer on a 100% SAF flight demonstration program. We aim to enable release of industry specifications for 100% SAF that is safe and approved by regulators to operate on all current and legacy engines.
- We continue to support technical efforts to increase approval of multiple pathways for blended and 100% SAF as a founding member of the Commercial Aviation Alternative Fuels Initiative (CAAFI), an industry-government coalition charged with developing, approving and releasing specifications for SAFs that meet all regulatory safety requirements. The goal is to support the development of new pathways to scale up production capability and drive down cost.
- We support ATAG's efforts to collaborate with industry regulators, customers and partners to encourage global alignment for the development of a roadmap for sufficient global AAF production, including but not limited to SAF, to support 85% of aviation industry energy needs by 2050. And along the way, we aim to support the aviation industry to achieve 30% AAF (primarily SAF) availability relative to demand by 2035.

## Partnering with government programs for a sustainable future

Around the world, government agencies are accelerating their efforts to achieve ambitious environmental and climate goals. As an enterprise with a global footprint, Raytheon Technologies is partnering with and participating in programs in both North America and Europe to develop a wide range of technologies, which include the following examples:

**Canadian government and the government of Québec.** As part of Canada's green recovery plan, the Canada Strategic Innovation Fund is backing the Collins and Pratt & Whitney hybrid-electric technology demonstrator. The government of Québec is supporting this project through Investissement Québec and the Ministère de l'Économie et de l'Innovation, as part of an initiative known as "Aéronef pour la mobilité numérique et verte de demain" (Green and Digital Aircraft of Tomorrow). (See "From gas to hybrid-electric: A demonstrator collaboration.")

**U.S., FAA CLEEN III.** Collins, Pratt & Whitney and RTRC have been selected by the FAA to develop technologies under the agency's Continuous Lower Energy, Emissions, and Noise III (CLEEN III) program. Under CLEEN III, Collins is leading the development of an exhaust noise attenuation technology reducing combustion noise, while Pratt & Whitney is leading the development of an advanced combustion system and a higher efficiency fan system, delivering noise, fuel burn and emissions reductions.

**Europe, Clean Aviation and SESAR 3.** Collins, through its Applied Research & Technology organization, has been accepted as a Founding Member in both Clean Aviation and Single European Sky air traffic management (ATM) R&D 3 (SESAR 3), which are funded from 2022 through 2030. This will enable us to contribute to new green technologies through our position on the governing boards of these programs, while shaping the direction of the R&D agenda.

**U.S., MDA SBX.** RMD and partners replaced the U.S. Missile Defense Agency (MDA) Sea-Based X-Band Radar (SBX)'s cooling system with a redesigned system that is more energy efficient and uses an environment-friendly refrigerant. The new design reduces the radar's annual power consumption by an estimated 4,346,000 kilowatt-hours, as well as its annual carbon dioxide equivalent emissions (CO<sub>2</sub>e) by an estimated 17,786 tons. Further, the new design delivers better reliability, increasing redundancy by 150%. This project was recognized with the 2021 Secretary of Defense Environmental Award.

**France, DGAC.** Collins is investing \$18 million to develop "smart" actuation components for both commercial airplanes and helicopters in our center of excellence for actuation systems in France. This program is supported through a four-year R&D program grant from the French civil aviation authority (DGAC).

**U.S., DOE ARPA-E HySIITE.** Pratt & Whitney has been selected by the U.S. Department of Energy's ARPA-E to develop the Hydrogen Steam Injected Intercooled Turbine Engine (HySIITE), which uses liquid hydrogen combustion and water vapor recovery to achieve zero in-flight CO<sub>2</sub> emissions, while reducing NO<sub>x</sub> emissions by up to 80% and reducing fuel consumption by up to 35%.

**U.S., DOE ARPA-E REECH.** Under the Range Extenders for Electric Aviation with Low Carbon and High Efficiency (REECH) program, RTRC is developing a compact propulsion engine optimized with waste heat recovery (CO-POWER) technology to achieve ultra-efficient and lightweight fuel to electricity power generation systems by using supercritical carbon dioxide (sCO<sub>2</sub>) as a working fluid.

# Decarbonizing **our operations**



Greenhouse gas emission reduction from our operations is a key element of our sustainability program. We recognize our responsibility to operate our facilities in ways that efficiently use resources and minimize emissions to help respond to climate change. We have developed robust programs and organization-wide reduction goals and track progress regularly to ensure we meet our commitments.

These efforts are overseen by our corporate senior vice president of operations and supply chain, who is the highest ranking internal official responsible for climate change and sustainability. At the Board level, the Governance and Public Policy Committee provides

oversight on climate-related issues, and the full Board is also periodically briefed on climate-related initiatives. In addition, our emission reduction targets are part of the “Sustainability & Safety” objectives under our Corporate Responsibility Scorecard (CRS) to our Executive Annual Incentive Plan.

In 2021, we announced a goal to reduce GHGs from our operations 10% by 2025 from 2019 levels. Due to the increased urgency of the climate crisis, we are setting a longer-term, more aggressive GHG goal that aligns with a 1.5 degree Celsius science-based pathway as identified in the Paris climate agreement. Our new goal is to reduce emissions by 46% by 2030

## Our expanded climate-related goals for our operations

### 15%

reduction in GHGs  
by 2025 from 2019

### 10%

renewable electricity  
usage by 2025

### 2.5%

reduction in energy  
consumption by 2025  
from 2019

### 46%

reduction in GHGs  
by 2030 from 2019

### 100%

implementation of 11  
energy/GHG best management  
practices (BMPs) by 2025

from 2019 levels. Limiting global warming increase to 1.5 degree Celsius is increasingly being recognized as what is needed to prevent the most harmful effects of climate change. As an interim milestone toward our 2030 goal, we are raising our 2025 GHG goal to 15% (market-based) to align with a “well below 2 degree Celsius” science-based pathway.

In addition, we are setting renewable electricity and energy consumption goals that will support and guide our GHG reduction efforts. We selected a 2019 baseline because it is the most recent year not impacted by COVID-19.

While decarbonizing our operations is important, we recognize that decarbonizing along our value stream to address Scope 3 GHG emissions, particularly associated with the use of our products, has the potential for a much more significant impact on our overall emissions. (See “On the path to decarbonize aviation” for our commitment to addressing our product emissions.) In addition, we are working to improve our measurement of relevant categories of Scope 3 emissions.

# Energy and greenhouse gas emissions

Our original 2025 GHG goal included Scope 1, Scope 2 and Scope 3 business travel emissions. Scope 1 emissions are those directly released from our facilities, such as combustion of natural gas or jet fuel for engine testing. Scope 2 emissions are primarily from electricity use. Scope 3 business travel includes employee business air travel and car rental. In future years, we will be tracking performance towards our Scope 1 and Scope 2 (market-based) GHG reduction goals.

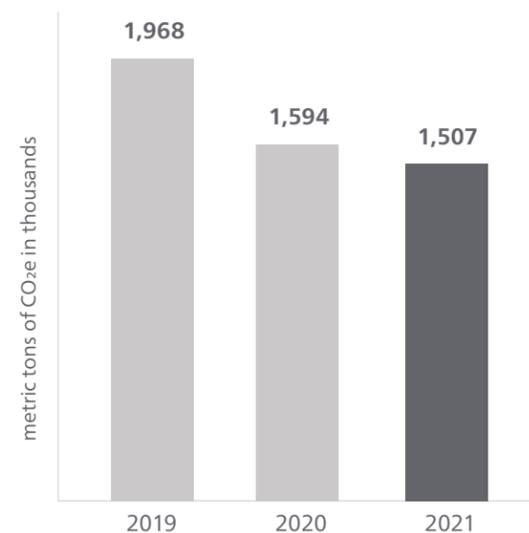
Our GHG emissions in 2021 were 1,507,000 metric tons of CO<sub>2</sub>e – 23% lower than our 2019 emissions. Our Scope 1 emissions represent 34% of that total, while Scope 2 (location-based emissions) represents 62% and Scope 3 business travel makes up 4%. However, our 2021 GHG emissions are lower than is typical due to the effects of the COVID-19 pandemic. We expect our GHG emissions to increase over the next couple of years.

Sites conduct energy and GHG assessments, surveys and “treasure hunts” to identify potential projects. They also perform “Gemba” walks on an ongoing basis to talk to the process owners in specific areas about ways to improve energy efficiencies, since the best ideas often come from employees who work in the areas. In 2021, we implemented more than 100 energy reduction projects of various size and reach.

We have established a cross-functional team to assist business units and sites in their energy reduction programs. The Conserving Raytheon Technologies Energy & Water (CREW) team oversees the standardizing of policy and processes, assists in program implementation and shares best practices.



Total GHG emissions in our original goal



Note: Raytheon Technologies adheres to the GHG Protocol and the U.S. EPA standards for our GHG accounting metrics. GHG data is validated each year by a third party consistent with ISO 14064 (greenhouse gases). Figures represent Scope 1, Scope 2 (location-based) and Scope 3, Category 6 (business travel). Figures from 2020 and 2021 reflect reduced GHG emissions due to the COVID-19 pandemic's effect on the commercial aviation sector business.

Another 2025 goal is 100% implementation of energy/GHG best management practices (BMPs) by 2025. These are 11 proven processes and initiatives that help reduce energy use and emissions. As of the end of 2021, we have implemented 47% of them. These practices include evaluating building automation, reviewing our HVAC systems, improving equipment maintenance programs and implementing lighting updates.

### Reducing energy consumption

Within our operations, energy consumption accounts for approximately 90% of our GHG emissions. Therefore, a central decarbonization strategy involves reducing energy consumption and improving energy efficiency in our operations. We are constantly looking to identify and execute energy conservation and efficiency projects. In 2021, Raytheon Technologies business units invested over \$12 million in energy reduction-related projects. To help drive our energy reductions, we established a goal to reduce energy consumption 2.5% by 2025 from 2019 levels.

Our strong energy programs earned Raytheon Technologies the 2021 ENERGY STAR® Partner of the Year – Sustained Excellence Award from the U.S. Environmental Protection Agency.



### Renewable electricity usage

Renewable electricity is another important component of our decarbonization strategy. We are involved in over 30 renewable electricity projects and contracts around the globe that generated 92,000 megawatt hours in 2021. In addition to 22 renewable projects located on-site at company locations, we also purchased renewable electricity from offsite projects. One of our largest renewable energy contracts began in 2021 at Pratt & Whitney's site in West Palm Beach, Florida, through their participation in an off-site community solar program. In addition, several Collins and RI&S sites in the UK are buying green power equal to 100% of their consumption.

Currently, 3.5% of our electricity, inclusive of all global sites, is from renewable energy resources (up from 1.5% in 2020) and we are actively looking to increase this proportion. As part of our expanded climate commitment, we set a goal to achieve 10% renewable electricity by 2025.

ORIGINAL EMISSIONS  
2025 GOAL

10%

reduction of GHG emissions from 2019 baseline

EMISSIONS GOAL  
PROGRESS

23%

reduction of GHG emissions since 2019

# Reducing climate risks, improving resilience

Climate change is creating climate risks for all companies. Climate risks are business risks and, as such, they are financial risks. We believe the first step in managing these risks is to identify and understand them. Raytheon Technologies has processes in place for identifying, assessing and managing climate-related risks, as well as climate-related opportunities.

One key process is our Enterprise Risk Management (ERM) process, which we use to identify, understand, prioritize and appropriately manage the full range of significant risks to the company. ERM is a year-round continuous process, led by the corporate finance organization, with an annual cycle for structured reviews, discussions and decision-making. The top risks are compiled annually and briefed to the Audit Committee of the Board of Directors, as well as the full Board. In connection with this process, the Board allocates oversight responsibilities for these top risks among itself and its committees.

Our well-defined, long-range strategic planning process also helps identify, assess and manage climate-related risks and opportunities, particularly transitional technology or market risks due to climate change. Each of our business units develops strategic plans, which are the central mechanism for setting business-level operational, technology, R&D investment and funding priorities. The plans are based on extensive research and analysis on the targeted markets, changes in customer needs and priorities, customer procurement, changes in public policies, technology advances and competitor assessments. The Board of Directors is briefed on the strategic plans, which are updated annually.

Our Business Resilience & Crisis Management (BRCM) program provides a key method for identifying and managing physical climate-related risks. This program is aligned with ISO 22301 (business continuity) and includes requirements and processes to help our organization prepare for, respond to and recover from a wide range of risks and threats, including natural events caused by climate change. The BRCM program is run by the vice president, chief security officer, who reports to the corporate senior vice president of operations and supply chain.

## The Business Resilience & Crisis Management program involves:

### Threat and vulnerability assessments.

Each business site conducts a review of its physical risks, including those that may be associated with climate change. The review analyzes the probability and severity of, and ease of recovery from, specific events. The impacts of potential physical risks go well beyond the physical boundaries of our facilities and include our employees, supply chain, distribution networks and customers. For example, physical risks may include severe weather events, heat waves or flooding. Sites must perform these assessments every two years, using approved tools and methodologies.

### Crisis management.

Our incident and crisis management structure includes escalation and notification protocols, as well as senior management engagement from the local level to the C-suite. This structure has been employed for events including hurricanes, major security incidents and the COVID-19 pandemic.

### Continuity and response plans.

Business units and sites regularly maintain and update an incident response plan, which documents our response for physical threats and prioritizes life and safety, and is subject to audit. For example, we've used the BRCM process to identify, assess, prepare for and respond to hurricane threats and vulnerabilities in several areas where the company has locations, such as Florida and Puerto Rico; wildland fires in California and other states; and severe winter weather in northern states. In addition, we maintain business continuity plans to ensure the continuity of critical processes.

### Training and exercising.

Incident and crisis management teams are routinely trained in process and tools. We use tabletop exercises and drills to assess the efficacy of our plans and identify any gaps.

## Climate risk analysis

We participate in the voluntary global GHG disclosure system called CDP (formerly Carbon Disclosure Project) and respond to its annual climate questionnaire. Our comprehensive response in 2021 earned a score of “A-,” the best score received in our industry. Only three peer companies received the same score.\*

CDP’s detailed climate questionnaire addresses issues of governance, climate strategy, climate risks and opportunities, GHG emissions, accounting methodologies and goals. It incorporates all the reporting elements from the Task Force on Climate Related Financial Disclosures (TCFD). (See Appendix for TCFD Index.)

As part of the assessment and disclosure process, we have identified three general types of climate-related risks to which we are subject: physical, regulatory and market/technology risks.

To further understand our risk and opportunities, we use climate-related scenario analysis. For example, we modeled multiple climate scenarios published by the International Energy Agency, including one that limits global warming increase to 1.5 degree Celsius over various time horizons. In addition, we included several relevant climate-related drivers specific to our commercial aviation business. We also considered the scenario analysis that was conducted by ATAG and described in its [Waypoint 2050 report](#).

Climate-related risks are influencing our business strategies and financial planning. This is particularly evident in commercial aviation, where innovation is critical to respond to the climate crisis and to meet the aviation sector’s net-zero goal. As described in “On the path to decarbonize aviation,” we are focused on creating more sustainable technologies and products, such as improved engine efficiency, new propulsion systems and advanced structures and materials. Additionally, we are making significant investments in sustainable technologies and developing technology roadmaps for high-priority technology areas.

**We are pursuing efforts to respond to and mitigate these risks to the extent possible:\*\***

	Description	Potential impacts	Mitigation efforts
<b>Physical risks</b>	Risks associated with increasing frequency and severity of storms and other extreme weather events.	Increased costs due to weather damage to company assets, business interruption, customer and supply chain impacts, and employee disruptions.	Managed through the BRCM program and includes expenditures to make our facilities more resilient to severe storm events, as well as insurance coverage.
<b>Regulatory risks</b>	Risks associated with emerging climate and energy regulation such as carbon pricing, emission restrictions and energy taxes.	Increased operation and compliance costs.	Ongoing efforts to reduce energy consumption and decarbonize our facilities through efficiency projects, equipment updates, facility modernization and renewable energy.
<b>Market/technology risks and opportunities</b>	Risks associated with increased demand for offerings focused on climate change, transitioning to lower emission technologies for our products, including potential decrease in demand for certain existing products, and our dependence on suppliers and government actions, etc., as well as the risk that competitors develop solutions that gain acceptance before we do.	Significant investment and investigation of new technologies, alternative power sources, new materials and airframe structures, and different fuel and energy storage.	Strategic planning efforts, development of technology roadmaps and increased R&D funding for sustainable technologies and other measures.

\* Core A&D peers include: Airbus, Boeing, General Electric, General Dynamics, Honeywell, L3Harris, Lockheed Martin, Northrop Grumman, Safran.  
 \*\* See Raytheon Technologies’ CDP disclosure for more information.

## Monitoring climate change from above

Several RI&S technologies are already being used to help meet the demand for improved data and analysis relating to climate data and weather forecasting. They include:

- **EVI-5 GLIMR (Geostationary Littoral Imaging and Monitoring Radiometer)** Designed to closely monitor the health of our oceans and assess risks for coastal communities to protect both our environment and our economy, this instrument is being used in a new NASA mission. It will provide unique observations of ocean biology, chemistry and ecology in the Gulf of Mexico, portions of the southeastern U.S. coastline and the Amazon River plume, where the Amazon enters the Atlantic.
- **MODIS (Moderate Resolution Imaging Spectroradiometer)** This system, which is flying on NASA Earth Observation System (EOS) satellites Aqua and Terra, helps scientists determine the amount of water vapor in a column of the atmosphere and the vertical distribution of temperature and water vapor – measurements crucial to understanding Earth’s climate system.
- **VIIRS (Visible Infrared Imaging Radiometer Suite)** Using VIIRS data, scientists can measure cloud and atmospheric particle properties, ocean color, sea and land surface temperature, ice motion and temperature, fires and the amount of sunlight reflected from the Earth’s surface. There are two VIIRS on orbit as part of the Joint Polar Satellite System for NASA and NOAA. Three additional VIIRSs are on order for continuity of observations.
- **TWICC (Theater Weather Imaging and Cloud Characterization)** Being built for the U.S. Space Force to replace the aging DOD Meteorological Satellite Program satellites, TWICC will provide critical environmental sensing to the U.S. and its allies, as well as shared continuity of observations to NASA and NOAA.

# Saving water and reducing waste

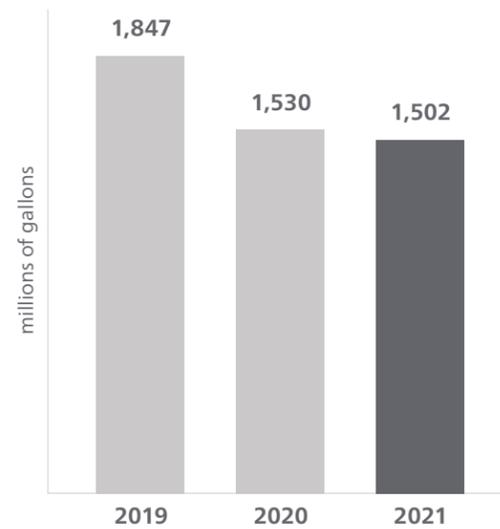
As stewards of our environment, we are committed to driving pollutants in our manufacturing processes to the lowest achievable levels and conserving natural resources in the design, manufacture, use and disposal of our products and the delivery of our services. This commitment is part of how we operate and has been for decades.

Similar to our GHG emission reduction goals, we have set goals for reducing our water consumption and reducing waste sent to landfills and incineration, the two most environmentally harmful disposal methods. All of these efforts are organized under the EH&S Management System. At each site, we establish an EH&S Committee, which develops an annual EH&S plan that addresses activities to support their goals and targets and identifies necessary resources.

Water consumption in 2021 was 19% less than our 2019 baseline, though usage was artificially low due to the effects of COVID-19 on commercial aviation and employees working from home. We anticipate consumption to increase in the next year or two.

In addition, by the end of 2021 we implemented 50% of our water best management practices, well ahead of our 2021 goal. Water BMPs are proven processes and initiatives that will help reduce water consumption. They include forming a site water team, developing a leak management plan and enhanced cooling tower management.

Potable water consumption



## Our water conservation goals

### WATER 2025 GOALS

# 10%

reduction in water consumption from our 2019 baseline

# 100%

implementation of nine water best management practices

### WATER GOALS PROGRESS

# 19%

reduction from our 2019 baseline\*

# 50%

implementation of water BMPs

\* Reflects reduced water consumption due to the pandemic's effect on the commercial aviation sector and restrictions that kept employees at home.

## Saving water, drop by drop

Collins reduced water consumption by implementing numerous water projects in 2021, including:

- In Figeac, France, a new system for demineralized water production was implemented. Water is treated and then used for production water, providing a savings of 260,000 gallons. In addition, water consumption software was installed for real-time connection of water meters to continuously monitor different water uses, diagnose leaks faster and determine water consumption kinetics and peak flow rates. This information will allow us to identify and define future projects to reduce water consumption.
- In Monroe, North Carolina, irrigation optimization helped to promote the intelligent use of water, including segregating the site into zones based on exposure, implementing drought tolerant plants, grouping low and high-water-use plants, using moisture sensors and precision nozzles and improving scheduling. The projects resulted in a savings of nearly 46,000 gallons.



## Managing our waste

We are strategically reducing the amount of waste we send to landfills and incinerators. In 2021, we reduced the amount by 24% from our 2019 baseline, reducing the amount of waste sent to landfills and incineration by 8,095 tons. In 2021, the amount of waste sent to landfills and incineration was 26,325 tons. To achieve this progress, we are focusing on minimizing waste generation; increasing recycling by improving waste segregation and finding additional recycling outlets; reusing materials where we can to extend their useful life; and expanding food composting at our facilities.

Our sites are making good progress in implementing our waste BMPs, well ahead of our 2021 goal. In 2021, we implemented 56% of them. Waste BMPs are proven practices that will help sites reduce waste and improve recycling rates. They include a detailed waste assessment, development of a recycling plan and a container management plan, and coolant recycling requirements.

In addition, in the U.S. 20 of our facilities in nine states have earned the zero-waste certification Total Resource Use and Efficiency (TRUE), which is managed by the Green Business Certification, Inc.

TRUE is a rigorous certification that requires extensive recycling and reuse practices, mature waste management programs and active employee participation, as well as passing a third-party audit. The sites are required to meet program requirements annually to maintain the certification. RMD's Tewksbury, Massachusetts, location was the first aerospace and defense manufacturing site to be certified (in 2014), and in early 2020 RI&S' McKinney facility became the first site in Texas to receive a platinum rating.

Many of our hazardous waste streams are not suited for recycling and reclamation and instead require treatment, incineration or some other manner of proper disposal. We periodically evaluate new technologies for waste reduction, recycling and reclamation that could be used to reduce our hazardous waste disposal volumes.

We experienced no release of CERCLA hazardous substances in an amount equal to or greater than the reportable quantity identified in the U.S. Comprehensive Environmental Response, Compensation and Liability Act.

## Moving toward a circular economy

As a global manufacturer, we are responsible for designing our products and our processes to be as efficient and as sustainable as possible. In a circular economy, every organization and individual that touches a given product seeks to reduce material use, redesign materials to be less resource intensive and recapture "waste" as a resource for reuse. We apply this mentality in several ways across the organization, including the entire manufacturing and product life cycle:

- **Maintaining a component's useful lifespan.** Our maintenance, repair and overhaul (MRO) shops focus on reworking parts to keep them flying – and in productive use – as long as possible. For example, Pratt & Whitney engines are in the air for 15 years or more, undergoing multiple required and regularly scheduled maintenance and performance restoration shop visits over the engine's service life. These shop visits prolong the service life and keep the engine operating at specification.
- **Reusing and recycling materials.** We look for ways to reuse materials to extend their useful life and recycle materials at the end of their useful function. For example, an oil recycling system was installed at the Collins Saint-Marcel, France, actuation facility, and the site was able to reuse 1,500 liters of oil last year, eliminating over 3,000 pounds of hazardous waste. Likewise, the Collins Fort Worth, Texas, Landing Systems Service Center installed a wastewater filtration system that turned 23,000 gallons of oily wastewater into useable wash water for cleaning aircraft wheels – avoiding the need to transport it off site for treatment and reducing the site's hazardous waste generation by 75%.
- **Recycling components so they can be reconstituted and used again.** The Pratt & Whitney scrap and revert team focuses on managing scrap parts, capturing strategic revert alloys, protecting Pratt & Whitney technology and improving sustainability while decreasing costs. The team's efforts have yielded more than 4 million pounds of scrap metal recycled from September 2020 through September 2021. Additionally, over 2.4 million pounds of input material was reverted back to the supplier to be turned into new castings for production. In addition, the Collins MRO facilities recycle end-of-life products, reclaiming and refurbishing appropriate components to keep them out of landfills and extend their on-wing life. Intertrade, a Collins-owned company, buys, refurbishes, brokers and sells used aircraft components. In 2021, Intertrade refurbished and sold 232 tons of aircraft products, extending their life and keeping them out of landfills.

## Reducing waste from landfills and incinerators

### WASTE 2025 GOALS

10%

reduction in waste sent to landfill and incineration from our 2019 baseline

100%

implementation of 11 waste best management practices

### WASTE GOALS PROGRESS

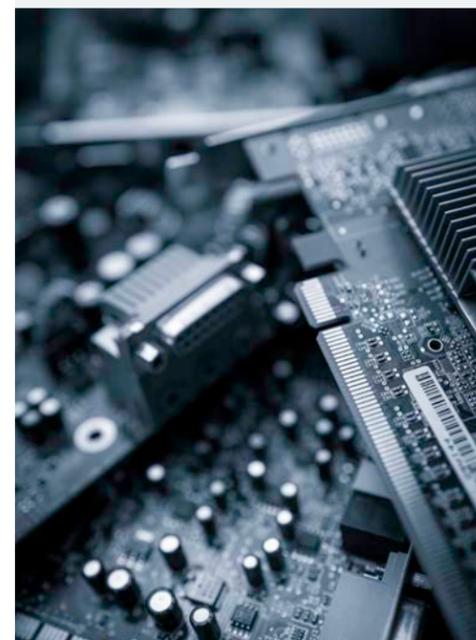
24%

reduction from our 2019 baseline\*

56%

implementation of waste BMPs

\* Reflects reduced waste generation due to the pandemic's effect on the commercial aviation sector and restrictions that kept employees at home.



## Reducing waste, supporting communities

With more than 10,000 employees and 4.6 million square feet of space, the RMD headquarters in Tucson, Arizona, generates a significant amount of surplus materials through regular office clean-outs and operational changes. The site runs a surplus office supply reuse and donation program as part of a comprehensive waste reduction and recycling program.

In 2021, the site donated more than 2.5 tons of surplus office supplies, furniture and electronics, including 160 computer monitors, to local schools and nonprofit organizations. This program supports both waste reduction and important community organizations.

# Reducing risks of **chemical usage**

We use a variety of chemicals, chemical formulations and materials to manufacture complex parts and components and to assemble, maintain and service our products. We have an active and integrated Global Chemical Substances (GCS) program to comply with global chemical substance requirements, understand our reliance on such chemicals and minerals. We strive to reduce adverse impacts to human health and environment, as well as potential business disruption risk. The GCS program monitors and tracks global chemical regulations and identifies their potential impacts, including recognition that regulatory changes could require changes in our operations, sourcing processes and/or production methods.

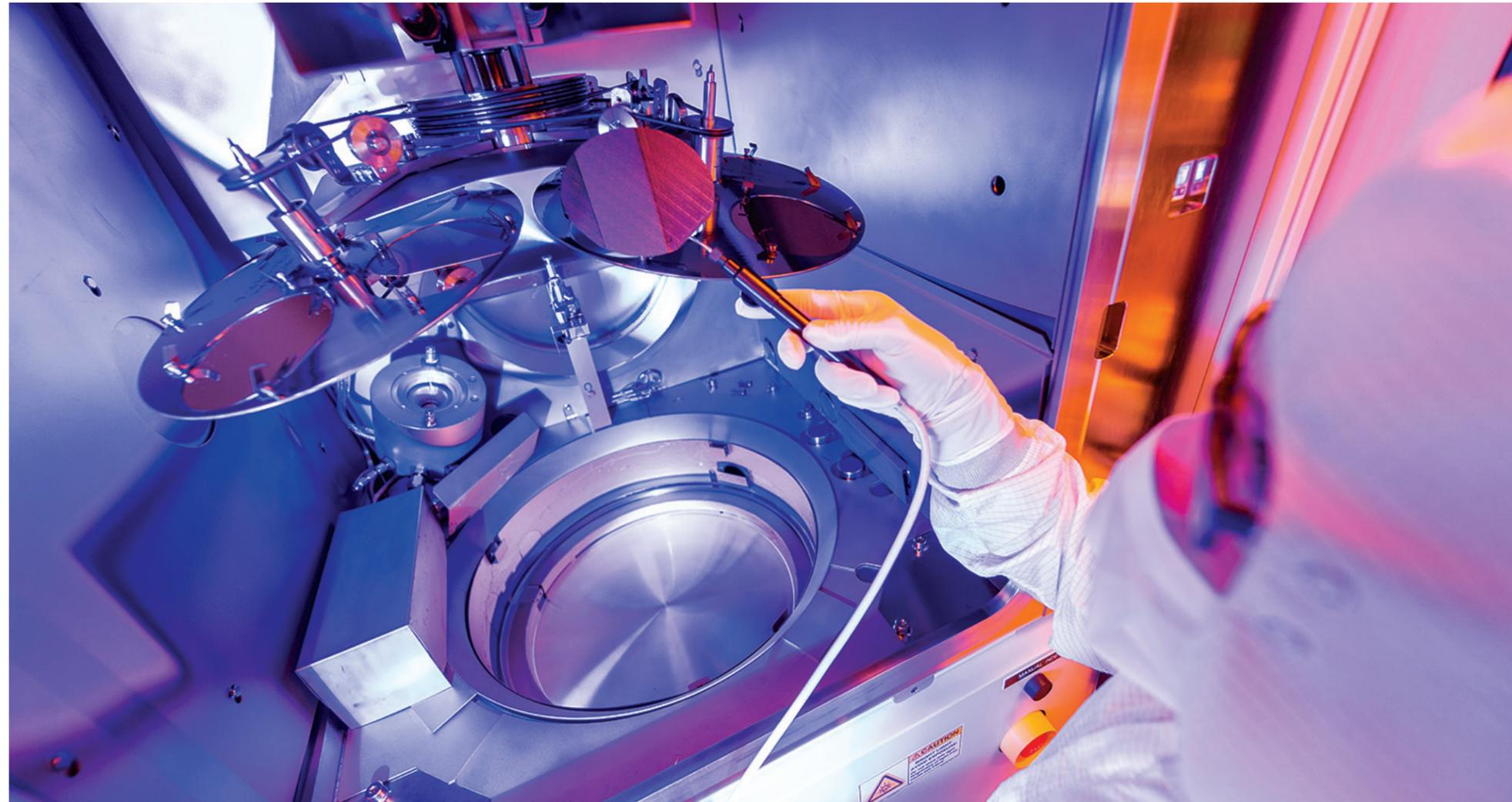
The GCS program is a cross-functional collaboration principally between our Engineering and Operations & Supply Chain teams. The GCS program reports monthly to the corporate EH&S vice president, and the GCS Executive Committee (GCSEC) conducts periodic cross-functional reviews, co-chaired by the Corporate vice presidents of EH&S and Engineering. GCSEC members include vice presidents from supply chain, operations, quality, legal, and research and development.

In the context of EU REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), our program activity includes participation in multiple authorization consortia. We use internal, supply chain, trade association and other sources of chemical substance dependency information to identify associated risks for chemical substances deemed to be of concern. We apply strategies that target use-reduction opportunities, as well as alternatives development, selection and deployment.

## Critical minerals

In 2021, we began an enterprisewide study to identify our dependence on a larger group of critical minerals and review their sources. It's a complex endeavor, given that we are not a primary processor; instead, we purchase finished and semi-finished metal products.

For example, we use cobalt in specialty wear-resistant coatings used in aircraft parts; gallium in high-power GaN devices used in radars; chromium in high-temperature alloys in jet engines; and rare earth elements in high-strength permanent magnets in aircraft and missile actuator motors. Magnesium is a constituent of many common aluminum alloys used in a



wide variety of structural applications in aircraft, missiles, and ground and sea-based shelters and enclosures.

Each of our business units is currently identifying dependence on critical minerals in products and processes. The results of this study will help us define our future priorities and manage related risks. Pratt & Whitney uses advanced alloy systems that contain a variety of these critical minerals. For many years, it has employed various means to manage the risks associated with potential disruptions, including stockpiling and long-term sourcing contracts.

## IAEG recognition

In 2021, five Raytheon Technologies employees were recognized by the International Aerospace Environmental Group (IAEG) for their outstanding contributions to IAEG and for supporting efficiency and effectiveness, strategic development and customer value. All five of the company's winners support our GCS program, working across business units and functions to support compliance and reduce risk across product design, sourcing, manufacturing, product delivery, product services and end-of-life considerations.

## Flying toward a chromate-free future

Raytheon Technologies has been working toward eliminating the use of chromates for decades. These chemical compounds are often applied to aerospace and defense parts to help prevent metal corrosion, increase wear resistance and improve adhesive bonding. However, chromates pose environmental and health risks. Complete substitution of chromates is challenging because they provide unique performance in a wide range of applications and need a wide range of substitutes, each of which require extensive evaluation, testing, qualification, customer approval and certification by various global governmental agencies.

All four of our business units are making steady progress in reducing our dependence on this class of chemicals. For example, Collins has qualified a chromate-free surface pretreatment solution to repair metal bond aircraft body components. We are actively engaged with suppliers and industry groups to develop more chromate-free bond primers that will create a complete chromate-free protection system for bonded metal structures for select substrates and applications.

These efforts build on the success of the chromate-free landing gear primer we debuted in 2018. This solution is more environmentally friendly than the products that are currently in use and meets the EU's REACH regulations.

In 2021, Pratt & Whitney modified a design specification, removing hexavalent chrome sealing from a sulfuric acid anodizing process for aluminum parts. This accomplishment was the end result of a long-term effort to qualify and fully industrialize the non-chromate alternative for this commonly used process.

RI&S and RM&D have implemented various alternatives, including the use of trivalent chromium conversion coating on many aluminum structures. These efforts culminated in the first major system designed to be fully chromate free.



# Overseeing environmental compliance

## Environmental compliance

Compliance remains a foundational priority. We regularly assess our operating locations for compliance with regulatory requirements and risk management issues. The findings from these assessments are tracked until they are closed, and management is informed of the program results.

### OUR ENVIRONMENTAL COMPLIANCE GOALS

**Zero**

significant fines and penalties for non-compliance with EH&S laws

**Zero**

serious environmental incidents

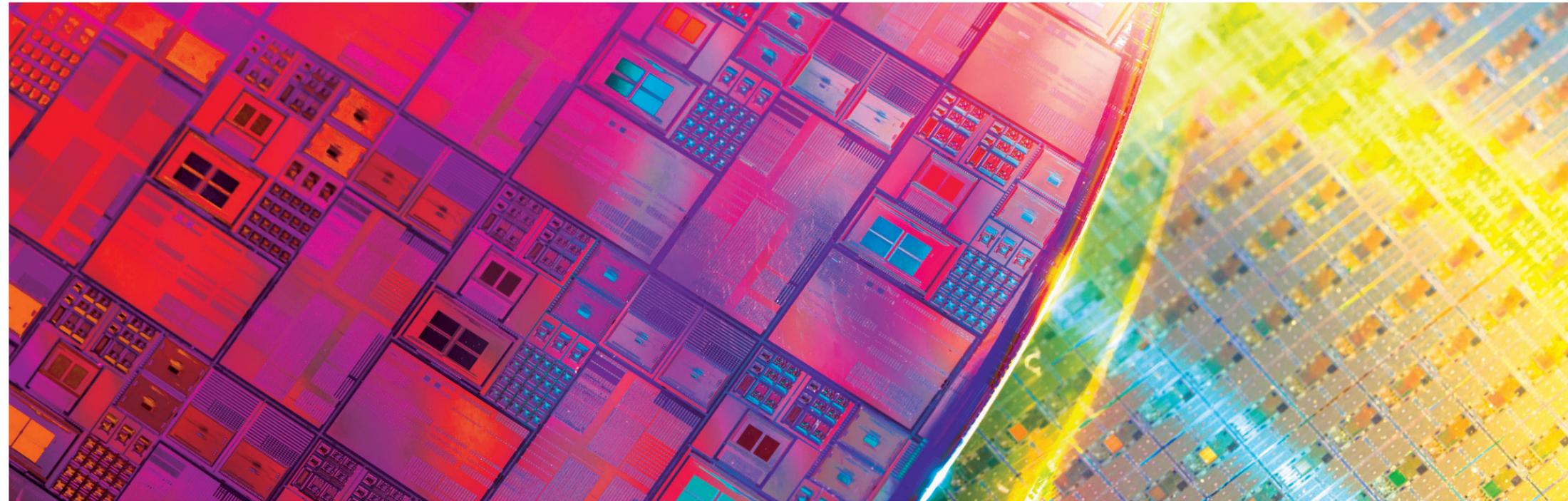
### OUR ENVIRONMENTAL COMPLIANCE PROGRESS

**Zero**

significant fines/penalties in 2021

**Zero**

serious environmental incidents in 2021



The Raytheon Technologies Environment, Health and Safety (EH&S) Policy establishes the core tenets of our EH&S program, including being stewards of our environment, continuously improving our processes and programs, and promoting employee awareness and participation. (See our [policy statement](#).) The policy identifies key oversight, compliance and procedural responsibilities for senior management, including the CEO. The senior vice presidents of operations, supply chain, quality and EH&S and the vice president of EH&S oversee our EH&S efforts. They report on the progress of the EH&S program to the CEO every quarter, and to the Governance and Public Policy Committee of our Board of Directors at least once per year.

The [EH&S Management System](#) is the cornerstone of our EH&S program and organizes the elements of the EH&S program into an efficient mechanism for compliance with EH&S laws and regulations, as well as company requirements. It also enables our belief in continual improvement. The system was developed using key elements from ISO 14001 (environmental management) and other management system standards.

The Management System provides tools for identifying and systematically managing EH&S impacts associated with our activities. It defines roles and responsibilities, allowing operations to effectively plan and manage EH&S programs.

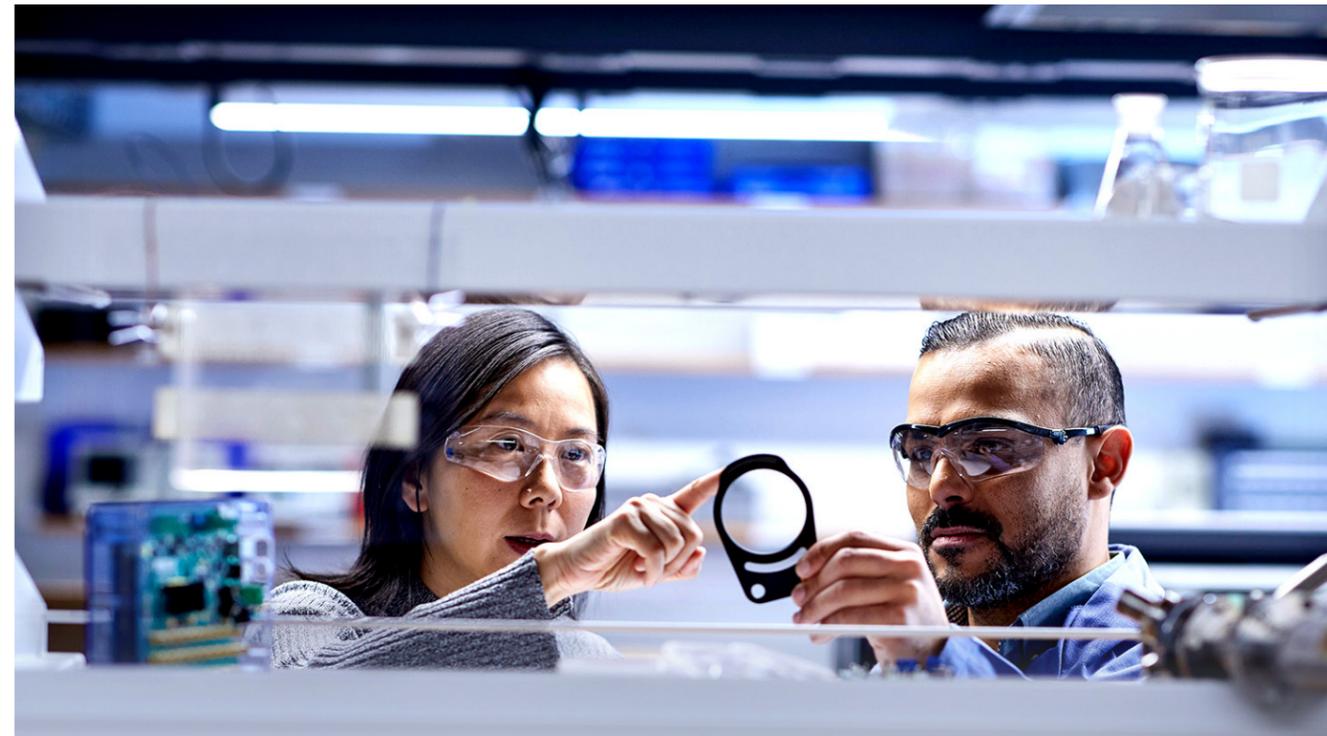
Sites continually identify and assess environmental hazards and risks and employ strategies to manage and mitigate them. We conduct tiered compliance audits and engage outside auditors to monitor our environmental, health and safety compliance. We conduct root-cause analyses to ensure appropriate corrective and preventive actions are taken in response to any incidents or deficiencies that we identify. We communicate with and train our employees to ensure they are aware of environmental and safety issues and requirements. For more information on health and safety oversight, refer to the “Protecting employee health and safety” section of this report.

# Supplier quality, environment, health and safety matters

As a leader in the aerospace and defense industry, we rely on a broad base of suppliers to provide the high-quality raw materials, products and services that are paramount to the continued success of our business. We are committed to engaging with all areas of our supply chain to ensure we use quality, responsibly sourced materials in our products. Our efforts start at the top, where supply chain compliance is led by the senior vice president, operations and supply chain, who briefs the Board of Directors on supply chain matters annually. Members of the enterprisewide Raytheon Technologies Supply Chain Council and Quality Council, as well as the Contracts and Legal organizations also provide oversight for supply chain matters. Decisions and processes are then filtered down to each business unit and every supplier through our [Supplier Code of Conduct](#) and [Supplier Quality Policy](#).

Our standard terms and conditions of purchase require suppliers to comply with all applicable laws and regulations. In addition, they require suppliers to adopt and comply with a code of conduct or policy statement regarding business conduct, ethics, and compliance that satisfies, at a minimum, the principles set forth in our Supplier Code of Conduct. Among other things, the Supplier Code requires all suppliers to conduct operations in a manner that:

- Complies with all applicable environmental, health and safety laws, regulations and directives.
- Actively manages risk.
- Conserves natural resources.
- Prevents pollution.
- Safeguards the environment.
- Minimizes waste, emissions and energy consumption.



To cascade this impact throughout our supply chain, our Supplier Code requires each of our suppliers to, among other things, have management systems, tools and processes to ensure compliance with applicable laws and regulations and the requirements contained in the Supplier Code. To help achieve these outcomes, we actively engage with our suppliers. We provide onboarding training to new strategic suppliers and communicate with existing suppliers as needed.

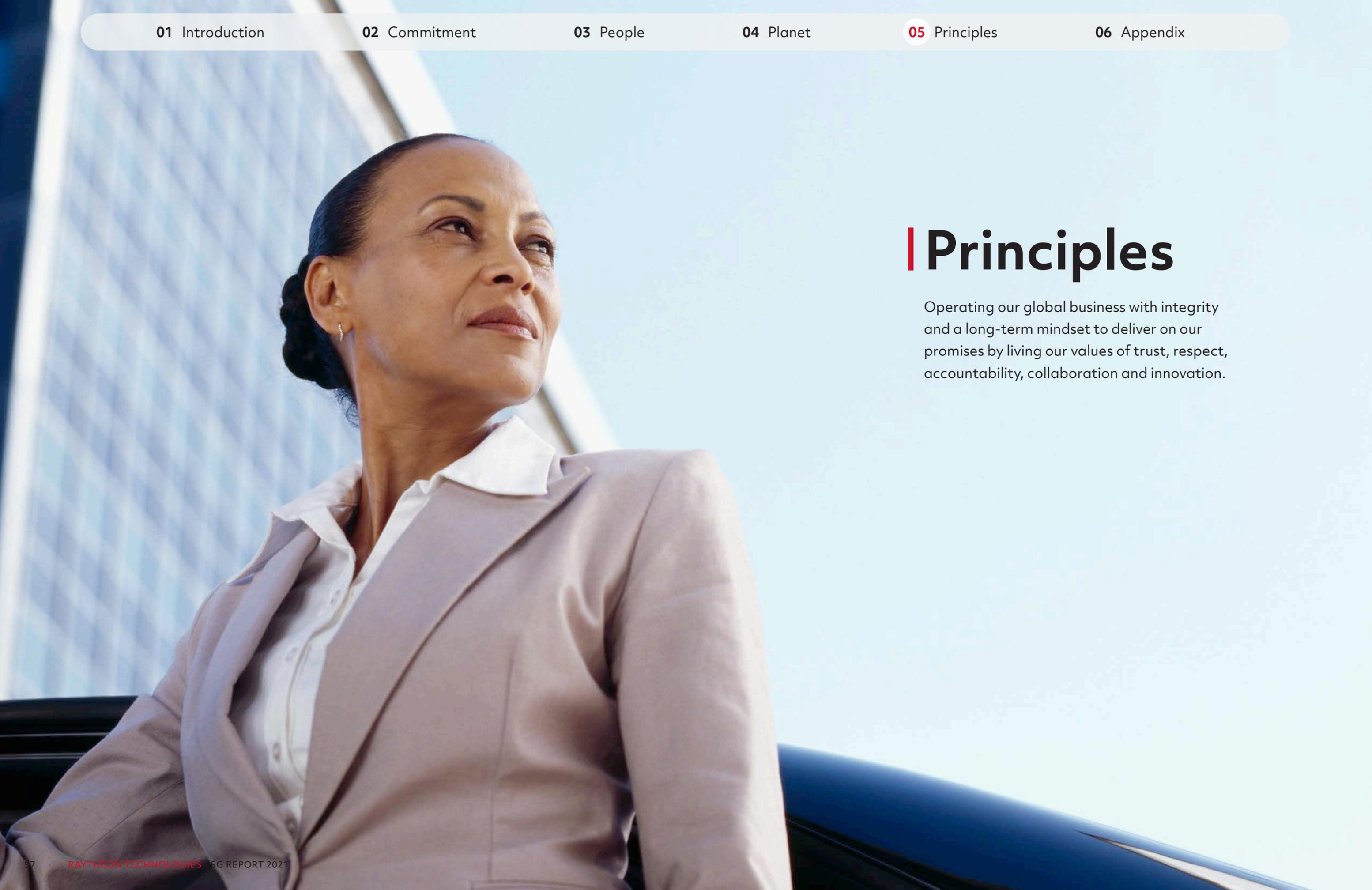
We continue to innovate and are developing a supplier sustainability plan to engage with and assess the programs and performance of our supply base. This plan will enable continued awareness

and knowledge to support improvements in our supply chain. We recognize the need to leverage our relationships with our suppliers to educate and encourage them to take appropriate actions to help decarbonize the aviation industry.

We also participate in industry and non-governmental organizations focused on reducing supply chain risks and environmental impacts, including the International Aerospace Environmental Group and the Responsible Minerals Initiative. For more information on how we address employee safety, see “Protecting employee health and safety.”

To further ensure the strength of our supply chain, we take a number of measures, including:

- Performing initial and periodic screenings of all suppliers.
- Conducting internal audits of selected suppliers to assess conformance with our quality requirements.
- Engaging third parties to conduct external audits as defined by each of our business units.
- Requiring each of our business units to have an alert management system in place to support rapidly identifying, monitoring and resolving supplier issues when they arise, consistent with the 8D methodology in AS13000.



# | Principles

Operating our global business with integrity and a long-term mindset to deliver on our promises by living our values of trust, respect, accountability, collaboration and innovation.

# Principles. Raytheon Technologies provides mission-critical support to military personnel and the flying public.

Cultivating an accountable, responsible culture is one of the most essential aspects of our work, ensuring that our products and services are safe and secure. To achieve these outcomes, we must uphold the highest ethical principles across our global operations and our value chain.

Our corporate values – trust, respect, accountability, collaboration and innovation – are the bedrock of our culture and policies, and set the standard for every aspect of our business, including:

- The safety and quality of our products.
- The human rights of people in our business units and operations.
- The resilience of our operations.
- The integrity of our operations.

Collectively, we are responsible for ethical behavior at every juncture, from conversations with colleagues to meetings with policymakers and customers.

## We focus on critical areas across our operations, including:

### Prioritizing product safety and quality

We prioritize product safety and quality across the organization with a comprehensive oversight process as well as robust programs and practices to reduce product safety and quality risk.

### Advancing human rights

Our new enterprise [Human Rights Policy](#), which is based on based on legacy company policies and practices, details our commitment to respect and protect human rights. It also outlines the human rights principles that we expect our business units, employees, customers, suppliers and other partners to uphold.

### Ensuring business resilience

We produce mission-critical systems and equipment, making the resilience of our business a top priority. Our robust teams, policies and procedures ensure that we are prepared for a wide range of crises.

### Operating with integrity

Our business is built on a foundation of ethical behavior. Our [Code of Conduct](#) outlines our expectations and guides the actions of Raytheon Technologies employees. We provide mandatory ethics and compliance training, and provide avenues for reporting ethical concerns.

## 2021 progress highlights

# 100%

of Raytheon Technologies facilities and sites that provide product and services have a certified Quality Management System (QMS) or have a plan to achieve certification

# 100%

of employees are required to complete global ethics and compliance training annually

# Our commitment to product safety, quality and transparency

The quality and safety of our products are essential to our business – and a focus for all Raytheon Technologies activities. Our promise to our customers and their end users is straightforward: We design, manufacture, service and maintain safe products that meet or exceed all applicable government standards, industry regulations and customer requirements for safety and product quality. To ensure we fulfill that promise, we have built a proactive culture that prioritizes product safety and quality across the organization, starting with our CEO and Board of Directors.

Product safety is among the key risks identified under our Enterprise Risk Management (ERM) program.

**In consideration of the 2021 ERM program and its risk oversight role, the Board of Directors recently amended the charter of the Governance and Public Policy Committee (GPPC) to confirm the Committee's oversight responsibility for company product safety risks (with the Special Activities Committee assisting on classified product safety).**

We have established processes for regular reviews with the GPPC on product safety matters, including incident metrics and managed safety issues, as well as for immediate reporting in the event of significant product safety incidents.

Our product safety programs and goals are overseen by the corporate product safety officer (PSO), who is supported by Raytheon Technologies' executive leadership. The president of each business unit is responsible for the overall safety of products designed, produced or maintained by their business and appoints a business unit PSO to execute a product safety management system (SMS). Our core product safety teams meet eight to 10 times a year for safety-related discussions, best practice sharing and activities related to safety culture. All of our products and services, across business units, are assessed for safety performance and continuous improvements.

Our focus on safety and quality starts when our products are just a concept. We apply military and commercial safety system methods consistent with military standards and commercial aerospace recommended practices, as well as aerospace standards for quality, throughout the design process.

To reduce product safety and quality risk, we establish design requirements to avoid or minimize risks using safety assessment tools, including:

- Design failure mode effects analysis, which determines what might go wrong with a given product design, how critical the failure may be and how to prevent or mitigate the risk or the likelihood of occurrence.
- Process failure mode effects analysis, which takes the same approach to manufacturing processes and quality controls.
- Safety hazard analysis, which identifies potential hazards associated with product failure or misuse, the criticality of those hazards, the mitigation or control of those hazards and the verification of the hazard controls.
- Failure mode effects and criticality analysis, a data-driven approach to risk assessment.
- Proactive approaches to quality, such as employing AS9145 requirements for advanced product quality planning and production part approval process.

Raytheon Technologies' multiple SMS solutions govern all of our products and parts from production to the use phase, ensuring they meet or exceed the regulatory requirements of the FAA, Transport Canada (TC), the European Union Aviation Safety Agency (EASA) and other relevant agencies. Each SMS provides clear accountability, with explicit policy statements from leadership on product safety goals and objectives.



This material is based upon work supported by the U.S. Navy / SPAWAR Systems Center Pacific under Contract No. N66001-11-C-4053.

## Raytheon Technologies product safety program objectives

- Promotion of continual improvement in our safety culture, processes and products.
- Full employee awareness of SMS policies, processes and tools relevant to their responsibilities.
- Enterprisewide responsiveness to, and open reporting of, identified safety hazards.
- Proactive identification and management of safety-critical parts, features and manufacturing controls.
- Implementation of safety risk controls to acceptable risk levels.

## Ensuring product safety

We focus on safety throughout the life cycle of Raytheon Technologies products and services – including after they are delivered to our customers. Our business units' practices and procedures include:

- A Product Safety Incident Review Board that meets twice annually to review significant safety-related issues across the four business units.
- Extensive data management tools to report, monitor and track corrective actions for product safety issues and hazards, including significant safety-related events.
- Safety training programs for employees and contractors.
- Emergency response and accident investigation protocols.

This approach benefits our employees, customers and business. For instance, in 2021 both the FAA and TC formally acknowledged the Pratt & Whitney SMS for meeting the intent of U.S. and international SMS standards.

The FAA is also reviewing our Product Safety Community of Practice (COP) program at Collins Aerospace, which enhances our processes and capabilities for safety risk analysis and management. The COP accomplished the generation of realizable standard work, documenting best practices and establishing standards that address important elements of safety risk analysis and assessment methods. For their work leading this effort, two Collins employees received Raytheon Technologies' 2021 Product Safety Award.

At Raytheon Intelligence & Space (RI&S), our product safety protocols include performing robust system safety assessments prior to program startup, including identification of potential hazards and proactive implementation of mitigation strategies to reduce the safety risks of our future fielded products. The team promotes our product safety culture by proactively holding safety awareness employee events and communicating the importance of a safety-first mindset.

For example, Raytheon UK recently implemented an EH&S awareness campaign, Safety for Everyone (SaFE), to remind all employees of the importance of product safety and near miss reporting, and to stop and speak up if they see potential safety issues. Another illustration of RI&S's superior safety culture is demonstrated by the Raytheon Multi-program Testbed flight team, which received praise from customers for fully implementing an FAA Safety Management System that enabled safely executing 55 test missions in 2021, including a highly successful deployment to the Northern Edge exercise in Alaska.



## Product quality

Raytheon Technologies is committed to achieving competitive excellence and providing our customers with products and services that meet or exceed our quality representations and requirements. We strive to accomplish this objective by continually improving our people and our processes, sharing best practices across our business units and throughout our supply chain, and promoting an ethical culture.

The Raytheon Technologies Quality Council, which includes senior Quality and Mission Assurance leaders from each business unit and the corporate function, meets regularly to share best practices, collaborates on continual improvement initiatives, oversees the Quality Management System (QMS) activity in the business units and aligns all on our enterprise quality policies.

Each of our business units must have a documented QMS to ensure compliance with customer, statutory, regulatory and industry requirements. All of our facilities and sites that provide products and services must be compliant with an industry QMS standard that is appropriate to the product or service delivered at that site. We demonstrate that compliance through internal QMS audits and third-party certification of our QMS.

### Quality Management System certifications

**100%**

of Raytheon Technologies facilities and sites that provide product and services have a certified QMS or have a plan to achieve certification

#### AS9100

(quality management for aerospace and defense):

**262** sites

#### AS9110

(quality management for aerospace and defense maintenance):

**51** sites

#### AS9120

(quality management for aerospace and defense distributors):

**7** sites

#### ISO 9001

(quality management):

**46** sites

Our QMS processes meet or exceed current industry standards and are maintained and audited through a rigorous, tiered approach. These audits may include the supply chain, where suppliers may be audited for compliance based on risk. Our first-tier suppliers may be required to flow these same requirements to all levels of the supply chain. For example, we control age-dated materials via regularly scheduled product and process verification conducted in our factories and our suppliers' factories. We may also control these materials, depending on product risk, via a positive recall system with less frequent audits on the overall system performance.

The QMS auditing process for Raytheon Technologies is a competitive differentiator, in that we use the QMS Advanced Surveillance Recertification Program (ASRP) within several of our business units. Collins, RI&S and Raytheon Missiles & Defense (RMD) operate according to the ASRP requirements, a demanding process that few companies opt to undertake. Pratt & Whitney is working toward ASRP certification, building on the best practices identified by the other business units.

ASRP requirements go above and beyond the standard internal audit program. Rather than the standard QMS audit once per year by the certification body, we use a more robust and rigorous system of internal tiered audits, including those at the site, business and enterprise levels. ASRP enables and encourages cross-site and cross-business trending and data sharing to promote increased responsiveness. An independent third party audits each participating site on a reduced frequency, with increased emphasis on the internal auditing processes and effectiveness of the Enterprise Audit Team.

ASRP is a rigorous and demanding audit process that is difficult to attain. The rigor of ASRP supports our commitment to product quality: In third-party certification audits, ASRP companies have significantly fewer major nonconformances in key areas than non-ASRP companies.



# Respect for human rights

Raytheon Technologies is committed to respecting human rights. This commitment is delineated in our [Code of Conduct](#) and embedded in both our culture and our values of trust, respect, accountability, collaboration and innovation. Respect for human rights is a core operating principle for all of our people and our business units globally.

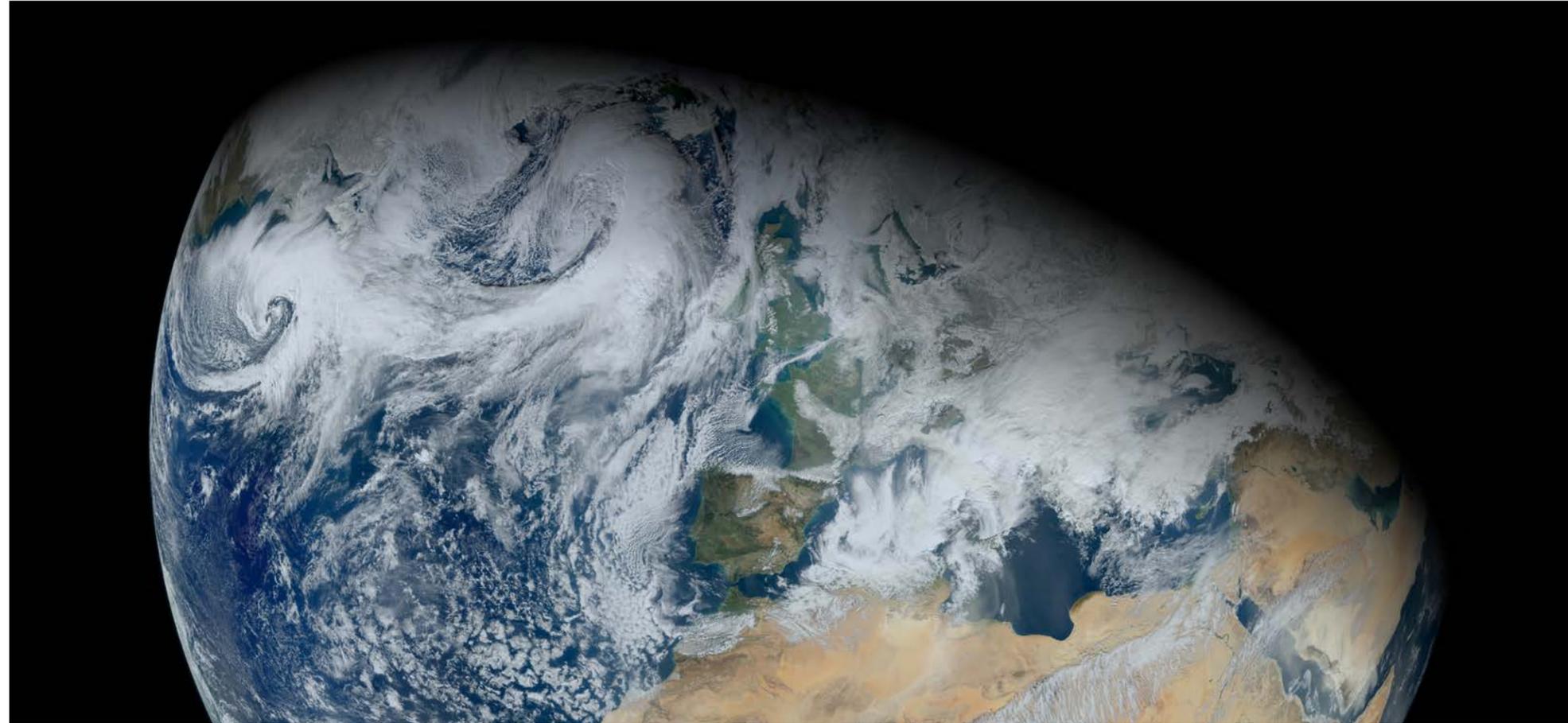
The Raytheon Technologies Human Rights Council is responsible for overseeing company processes, policies and practices to identify, assess and address human rights risks. The Council, which we launched in 2021, is composed of leaders across multiple functions and each of our business units.

During 2021, the Council developed our new enterprise [Human Rights Policy](#) based on legacy company policies and practices. The policy articulates our commitment to respect and protect human rights and sets forth the principles we expect our business units and employees, as well as our customers, suppliers and other partners, to uphold.

We monitor and evaluate our impact on human rights through due diligence and other measures, and take actions designed to mitigate such impact. Our Code of Conduct, company policies, and ethics and compliance training reinforce our commitment to safe and healthy working conditions and zero tolerance for discrimination, harassment and child or forced labor.

Our [Supplier Code of Conduct](#) outlines the standards to which we hold our suppliers and third-party providers. Our suppliers are also required to adhere to the standards set forth in our [Modern Slavery](#) and [Conflict Minerals](#) policy statements. For more information on our supplier due diligence activities, see "Supplier quality, environment, health and safety matters."

To reinforce our expectations, we have a robust conflict minerals compliance program that employs a risk-based due diligence process based on an internationally recognized framework, and we participate in industry initiatives to raise awareness of responsible sourcing of conflict minerals.



## Responsible product sales

We recognize that the human rights considerations associated with our defense products and services are a dynamic and complex subject. Sales of these products carry potential risks associated with their misuse or failure, and we have a responsibility to identify and mitigate these risks where feasible. Central to this responsibility is our strong commitment to compliance with all U.S. and applicable non-U.S. laws and regulations governing exports, imports, anti-boycott, economic sanctions and embargoes. Our global trade compliance program implements controls, processes and required trainings within each business unit to ensure compliance with the laws and regulations that help protect human rights.

We also operate a due diligence program focused on identifying and mitigating human rights risks associated with potential product sales. The Human Rights Council developed the framework for this program and each business unit is responsible for embedding controls in its operations to screen potential sales involving certain types of products in countries that present higher risk of human rights violations from product misuse. The Council is charged with periodically reviewing the results of these screenings, and working with the business units on specific sales opportunities that may present heightened human rights risks.

# Data security and privacy

Protecting the security, integrity and confidentiality of customer, supplier and employee information is one of our top priorities. Strong cybersecurity controls ensure the continuity of our business – a critical outcome given the relevance of our data and systems to national security.

The company places specific focus on data security and privacy in three strategic areas:

- **Enterprise cybersecurity:** Protecting and securing the Raytheon Technologies network across the enterprise from internal and external threat actors.
- **Product security:** Ensuring the security of the hardware and software in our products.
- **Data privacy:** Protecting the privacy of the personal information of our employees, business partners and customers. This includes only collecting personal information when necessary and providing transparency regarding the data we do collect.

Under the direction of our chief digital officer and SVP of enterprise services, the global chief information security officer (CISO) is responsible for the company's data security efforts and provides regular updates to the Board of Directors on data security and privacy. In addition, our product cybersecurity officer (PCO) leads our activities relating to product security, and our chief privacy officer (CPO) manages our data privacy compliance program, leading a team responsible for program implementation.

At each of Raytheon Technologies' business units, a CISO leads work to assess and manage business-specific risks, establishing a structure that ensures our products and data are secure. Similarly, each business has a lead privacy professional who manages and mitigates data privacy risks and implements our compliance program.

## Enterprise cybersecurity

Raytheon Technologies' digital risk management policy and framework is aligned to the National Institute of Standards and Technology (NIST) SP 800-53 and NIST SP 800-171, and has established a common process based on these control families to manage digital and cybersecurity risks. Our Cyber Security Council, chaired by Raytheon Technologies' Global CISO, brings together cybersecurity leaders and key stakeholders from across the company to discuss cyber threats, risks, events and activities. Additionally, our Enterprise Risk Management (ERM) process provides the Board of Directors with business unit and corporate function input of identified risks and potential impacts related to enterprise security.

Our Security Operations Center tracks and responds to enterprise cybersecurity issues 24/7, with analysts positioned across several time zones. Incidents are handled by an experienced incident response team, informed by expert cyber threat intelligence and threat-hunting staff. We follow a formal incident response process, tailored to engage leadership and critical stakeholders at appropriate thresholds. The incident response life cycle provides feedback to continuously improve our security and reduce risk.

We have a robust process for governing the deployment of IT systems into the enterprise. This process includes a rigorous review of the new IT system, and the type of data that will be hosted, to ensure they are secure. Once a system is in production, our vulnerability management program uses active discovery and penetration testing to validate patching and configuration of enterprise systems.

## Protecting cyber assets

To monitor our ability to prevent, detect and respond to cybersecurity risks for our 174,000 employees we:

- Monitor networks in over 60 countries, protecting millions of digital assets.
- Analyze more than 7.3 billion web requests per week, blocking an average of 348 million web requests that are classified as dangerous.
- Capture more than 100 TB per day of full network packet data.
- Reject approximately 17 million unwanted or unsafe emails per week.

To ensure our employees are trained and aware of how they play a part in protecting our company, they are required to take a series of annual cybersecurity trainings. Additionally, our security awareness program employs multiple methods to continually educate our global workforce, including a simulated phishing program, timely communications and role-based training. Our internal cybersecurity training courses include Cybersecurity and Risk Management Framework for Avionics, Penetration Testing Tools for Product Security and Secure Coding. Enterprise security risk councils provide further collaborative strategic oversight and common direction at the business level.

In addition, external validation and assessment of the cyber program is conducted by organizations including the Defense Contract Management Agency (DCMA), and our external auditor assesses the Sarbanes Oxley (SOX) internal control program.



## Gender diversity in cybersecurity

Raytheon Technologies is a sponsor and member of Women in CyberSecurity (WiCyS), a nonprofit organization dedicated to boosting gender equality in the cybersecurity workforce. The organization provides a global community of engagement, encouragement and support for women at all stages of their careers. Whether members are students exploring their career interests, veterans transitioning from the military or experienced leaders in the workforce, WiCyS provides resources, support and connections to an extensive network of cybersecurity professionals.

## Product cybersecurity

Ensuring the security of our products is a critical focus; our customers depend on the security of the hardware, software and services that support products such as satellites, propulsion systems, avionics components, drones and lasers, and we make every effort to meet or exceed their expectations. Senior leaders across the organization meet regularly to discuss best practices, review incidents, report on potential attack vectors and manage product security across its full life cycle. Our Product Cybersecurity Policy defines roles and responsibilities for product cybersecurity, including standalone and embedded products, along with hosted services.

The Raytheon Technologies product cybersecurity officer (PCO) is responsible for:

- Compliance with our Product Cybersecurity Policy.
- Collaboration among our business units' product cybersecurity functions, including the sharing of product cybersecurity incident reports that may have cross-business impact.
- Informing executive leadership of significant product cybersecurity incidents.
- Maintenance of an enterprisewide product cybersecurity culture.
- Functional leadership to the PCOs in each business who seek to ensure that potential security vulnerabilities are minimized in our products.



The Raytheon Technologies Product Cybersecurity Maturity Model (PCMM) was established to assess the proficiency of our teams and the robustness of our processes in developing secure products and services. The PCMM was also established to provide a baseline to drive continuous improvement. In addition, we incorporate into our product development cybersecurity best practices such as vulnerability scanning, static and dynamic composition analysis and web application scanning, to name just a few.

Throughout product development, we leverage secure systems development life cycle and industry-specific risk management frameworks, applying development, security and operations (DevSecOps) principles and SAFECODE fundamental practices. Many of our products are tested in our state-of-the-art Cyber Operations Development and Evaluation (CODE) Center (see "Raytheon CODE Center: The Frontline of Cyber defense"), in addition to testing by the relevant business.

## Industry collaboration

We are active members of, and/or contributors to, many organizations and bodies, including:

- Information sharing and analysis centers (ISACs): Aviation ISAC, Space ISAC, National Defense ISAC
- Cybersecurity and Infrastructure Security Agency (CISA) US-CERT
- Forum of Incident Response and Security Teams (FIRST)
- Carnegie Mellon University Software Engineering Institute (SEI) CERT Division
- Radio Technical Commission for Aeronautics (RTCA)
- National Defense Industrial Association (NDIA)
- Aerospace Industry Association (AIA)
- European Centre for Cybersecurity in Aviation (ECCSA)

In partnership and collaboration with the Enterprise Cybersecurity Incident Response Team, our Product Security Incident Response Team (PSIRT) monitors national and international vulnerability databases and threat intelligence reporting. PSIRT uses response processes recommended by the Forum of Incident Response and Security Teams and the National Institute of Standards and Technology (NIST).

We seek to ensure our products meet all security requirements mandated by government and commercial customers and adhere to regulatory guidance and standards for data security and system security engineering. Many Raytheon Technologies products also undergo industry audit and regulatory compliance certifications.



## Raytheon CODE Center: The frontline of cyber defense

Some of the biggest threats to military personnel, the flying public and Raytheon Technologies' customers and employees aren't physical – they're digital. A coordinated cyberattack has the potential to put sensitive data, physical systems such as air traffic control, water supplies and power grids, and even human lives at risk. We developed the Raytheon CODE Center to test for, mitigate and harden against these vulnerabilities.

This state-of-the-art engineering environment, referred to as the cyber range, enables Raytheon Technologies and our customers to test the resiliency of mission-critical systems. By simulating cyber war game scenarios, including sophisticated nation-state cyberattacks, we can assess potential vulnerabilities to better identify and understand the evolving risks.

Our range automation software allows testers to set up and tear down massive product test ranges in hours or days instead of months. The exceptional talent of our cybersecurity experts adds even more value to the CODE Center, allowing us to use test feedback to mount stronger defenses against cyberattacks.

## Data privacy

Protecting the privacy of our employees', suppliers' and customers' data is critical both to our policy commitments and to our overall business success. These efforts are overseen by our chief privacy officer (CPO) and implemented by a lead privacy professional in each business unit. The Privacy Office conducts a review twice each year with the vice president of global ethics and compliance, to ensure that the program is meeting its goals.

We have appointed data protection officers (DPOs) around the world to better mitigate risk. In locations where a DPO is not required but oversight is desired by the local entity, we appoint data protection stewards. Our ethics and compliance officers (ECOs) assist with communications regarding data privacy issues. The Board of Directors is briefed annually on our privacy compliance program, including a review of the results of data privacy audits.

We have a robust set of data privacy policies, including privacy and incident response policies.

Our data privacy policy sets forth the privacy principles by which Raytheon Technologies operates, and it embodies the requirements of our BCRs while covering international and U.S. legalities such as the Health Information Portability and Accountability Act (HIPAA). Our privacy policy requires that we provide appropriate and clear notice about the personal information that we collect and how we process and store it, noting any updates.

Our data incident policy dictates that all incidents involving the potential unauthorized access, possession or loss of protected information (including personal information) must be reported, investigated and remediated. It also requires, where applicable, notification to regulators, customers and affected individuals.

### Binding Corporate Rules

We are one of a limited number of companies in the world to have approved Binding Corporate Rules (BCRs). This required us to provide EU regulators with our data protection policies, training materials, information regarding our audit program and confirmed regulatory approval. Our BCRs set forth requirements incorporated in our policies, including data minimization, transparency and incident response.



## Addressing privacy risk

We employ four key processes to identify and address privacy risk:

1. The Privacy Advisory Committee completes an annual risk assessment, reviewing risk for the company as a whole and calibrating program priorities for the year.
2. We conduct an annual privacy self-assessment across our functions and business units to evaluate compliance with policy, identify function — or entity-specific risks and audit for data privacy issues. We conduct the self-assessment across each of our business units and functions every year.
3. The Internal Audit team uses a data privacy questionnaire and considers privacy issues in its general audit work.
4. We complete a privacy impact assessment (PIA) for systems, service providers and products that involve the processing of personal information. Through the PIA, we incorporate privacy by design into our products and services, as well as protect the privacy of our employees, job applicants, visitors and others whose personal information we may collect and process.

In addition, we require data privacy training and awareness across the company. All salaried employees are required to take annual data privacy training, and each business provides additional training tailored to its functional areas and product lines.

# Ensuring **business resilience**



The pandemic highlighted the importance of business resilience and crisis management for every organization. The likelihood of future crises, such as a weather event or public health emergency, is all the more reason for companies like Raytheon Technologies to focus on overall resiliency – especially given the mission-critical systems and equipment we produce.

Our Business Resilience and Crisis Management (BRCM) policies and teams, led by our chief security officer, are often regarded as industry leaders by federal and state agencies. In each business unit, the vice president of Operations serves as the executive champion for BRCM, while our Crisis Management Team (CMT) comprises C-suite executives from across the organization. Our corporate and business incident support teams are made up of functional and business executives who work in coordination with site-level management and response teams.

All corporate entities and business units at Raytheon Technologies conduct threat and vulnerability assessments (TVAs) every two years, as well as annual exercises designed to prepare the company for a wide range of crises, from environmental events to cyberattacks to situational occurrences. In 2021, we completed 100% of the planned physical security assessments and TVAs at key sites that meet our thresholds for size, scope, complexity and intellectual property. In addition, development of an annual process to update our Incident Response Plans and Business Continuity Plans is in progress; these plans will be reviewed by Internal Audit and other assessors.

Exercises occur at every level of the company and can be companywide, geographically specific or limited to a business unit or team. We conduct assessments of these exercises to improve incident response plans and enhance future risk mitigation strategies. For example, proactive relationship building with external law enforcement and other community first responders is a cornerstone of preparedness.

We are currently formalizing our risk assessment mitigation strategy reviews at the business and corporate levels, which will provide an additional layer of feedback on threat assessments, as well as recommendations for further reducing risk and increasing business resiliency. We expect to complete these efforts in 2022.

## Crisis management in action: Responding to COVID-19

When it became clear that the COVID-19 crisis was escalating in early 2020, we relied on our crisis management response. The CEO, who chaired the CMT, activated the team to develop a company-wide response strategy. After a short period, leadership was transferred to the Incident Support Team, which became the Pandemic Response Team.

We provided tools and resources for approximately 100,000 of our employees to work from home safely and effectively, an effort that included significant enhancements to our IT infrastructure to accommodate a large percentage of our workforce switching to home offices. We also implemented a comprehensive program to create a safe working environment for our thousands of manufacturing, lab and other essential employees, who continued to work on-site to ensure we could meet our customer commitments. The program focused on cleaning, screening, personal protective equipment, staggered work schedules, social distancing, mandatory face coverings, COVID-19 testing, self-quarantine and contact tracing procedures, and COVID-19 vaccination clinics.

All along, we tracked and reported daily on the number of employee cases, recovered employees, hospitalizations and thermal screens conducted, as well as other metrics. Through 2021, very few of our employee COVID-19 cases were attributed to workplace transmission.



# A foundation of **ethics and compliance**

Our ethics and compliance efforts are rooted in our company values of trust, respect, accountability, collaboration and innovation. The resulting policies ensure that these values remain at the core of everything we do, helping Raytheon Technologies employees make sound, ethical decisions. These efforts are particularly critical given the highly regulated nature of our business and products. A strong, comprehensive approach to accountability and compliance is an essential factor in how we make and handle our products and how we establish and maintain our customer and other relationships.

We are committed to driving transparency, visibility, coordination and collaboration across the organization through our [Global Ethics & Compliance governance model](#). At the top, the Audit Committee of the Raytheon Technologies Board of Directors is empowered by the Board to provide oversight for the company's compliance with its policies and procedures, Code of Conduct and applicable laws and regulations. The Audit Committee receives regular updates from our Global Ethics & Compliance (GEC) team and others regarding the implementation and effectiveness of our compliance program.

More broadly, our Board provides active and independent oversight on Raytheon Technologies' business strategy, risk management, ESG strategy and other aspects of our business and affairs. The Board has adopted robust governance practices and continuously reviews and considers these practices to enhance its effectiveness.

The members of the Board have the skills and expertise essential for effective oversight, including extensive risk management, government, industry and financial experience and expertise, given the importance of ethics, compliance and risk management to our business. Further, the Board recognizes the value of selecting directors who come from various backgrounds and professions and are diverse in age, gender, race and ethnicity, to ensure that the Board as a whole has a wealth of experiences and perspectives to inform its decisions. For more information on the composition of our Board, see our [proxy statement](#).

## Global ethics and compliance oversight

Our senior management team is engaged with GEC leadership through our Risk & Compliance Council, which includes the CEO and several direct reports, including the general counsel, CFO, chief human resources officer and corporate vice president of global ethics & compliance. In addition, the Financial Exposure Committee, which includes many of the same roles as well as other representatives, including the Controller and internal audit, reviews investigations that may present potentially significant financial exposure for the company.

Our corporate GEC leaders regularly collaborate and coordinate with business unit GEC leaders through formal channels, including our Compliance Leadership Group (CLG), as well as through day-to-day informal engagements. The CLG includes leaders from Global Trade, Government Contracts, Cybersecurity, HR compliance, Antitrust, the Controllershship, Internal Audit, business unit GEC leads and others.

Together, these coordination and oversight efforts are designed to ensure visibility and accountability throughout the organization. We also conduct internal risk assessments and evaluate the strength of our ethics and compliance program against standards informed by government authorities and industry best practices. Our GEC team reviews these assessments and uses them to help ensure our compliance program continues to address our evolving risk environment and our resources are appropriately deployed. Further, our Internal Audit organization conducts independent audits of various compliance program elements to help ensure policies and procedures are operating as designed.

In 2021, the GEC continued to harmonize key processes and practices and develop and enhance our comprehensive program. Some notable accomplishments during the year include:

- Developing a company-wide anonymous reporting system.
- Developing and beginning to execute a comprehensive enterprisewide compliance validation and assessment program.
- Building out and deploying our global data privacy officer network and related processes.



## Ethics and our employees

We have articulated our expectations and guidelines for ethical behavior in the Raytheon Technologies [Code of Conduct](#), which addresses employee responsibilities, discrimination, product safety, transparency, privacy, ethics, corruption, anti-competitive conduct and more. We extend those responsibilities to our vendors and partners via our [Supplier Code of Conduct](#).

We embed ethical integrity throughout our company with mandatory annual ethics and compliance training for all employees, as well as targeted training on topics such as the rules for giving and receiving gifts, disclosing conflicts of interest, adhering to anti-corruption policies and laws, asking questions and reporting concerns. Employees can also tap into our robust Ethics & Compliance Education Center, which provides hundreds of on-demand ethics courses. Raytheon Technologies senior leaders and board members also receive ethics and compliance training as part of their roles, and employees are periodically required to acknowledge the company Code of Conduct.

**All Raytheon Technologies employees are required to complete annual Global Ethics and Compliance training.**

In addition, we require all individuals to speak up when they observe or suspect violations of our Code of Conduct, policies or the law. To support this requirement, we provide multiple avenues for employees to raise concerns, including some designed for anonymous reporting, and have a strict policy prohibiting retaliation against anyone who submits a report or raises a concern in good faith.

These avenues include speaking to a supervisor, contacting an Ethics & Compliance officer or reaching out to Human Resources or the Office of General Counsel. We also maintain our Speak Up HelpLine, which is staffed by a third-party provider and offers anonymous global phone and web-based reporting options. Additionally, our [Ombuds Program](#) offers a confidential, informal, neutral and independent resource to assist individuals in exploring options for resolving problems, complaints and conflicts.

Our values and Code of Conduct underpin our participation in the [political process](#), where we have an overarching goal of educating elected officials and the public about how policy issues impact our business and customers. Our Global Government Relations organization coordinates engagement with government officials, and all our employees and external lobbyists involved in government relations activities receive guidance and consent on their advocacy from senior management. The company's Board of Directors provides additional oversight, reviewing and monitoring all government relations activities.

For more information about our governance policies, procedures and activities, consult our [proxy statement](#).

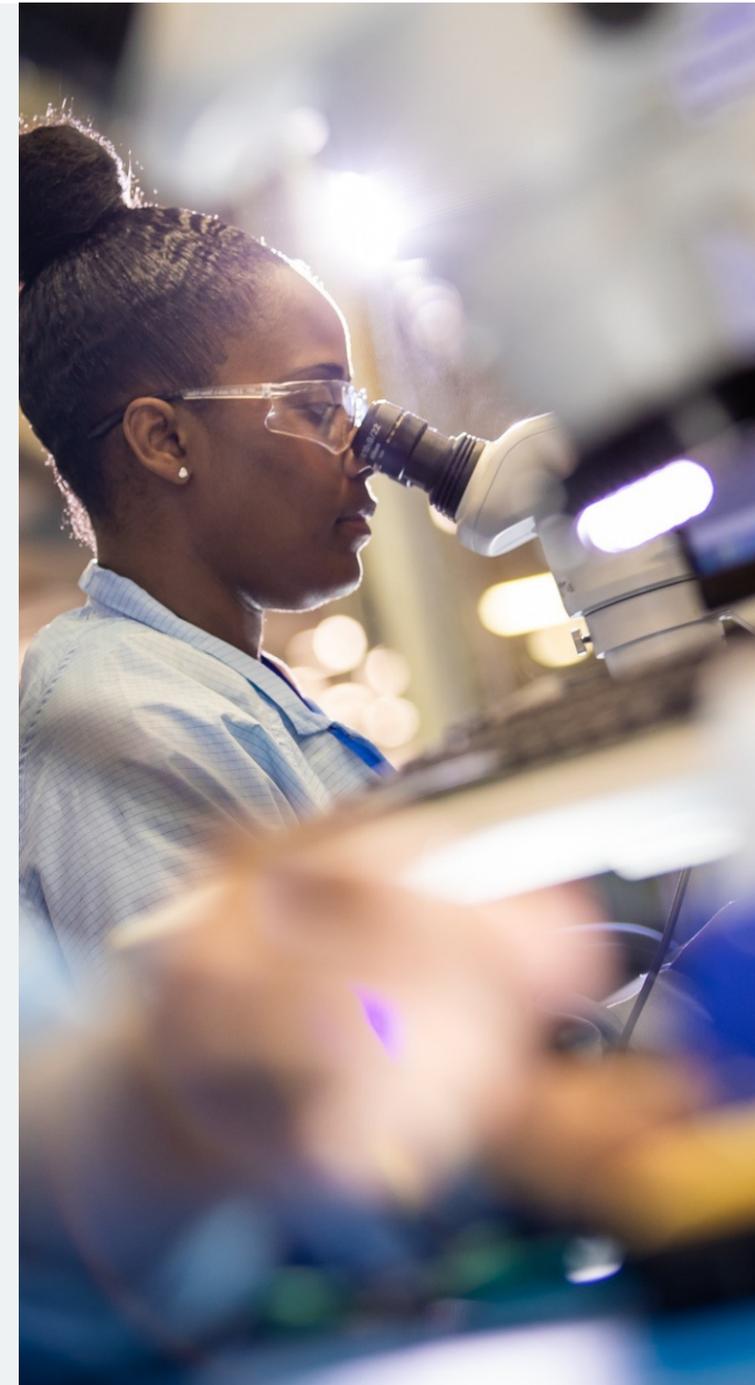
### Global Ethics & Compliance education: Focus on integrity

Once a year, every employee at Raytheon Technologies is required to pause their work to complete mandatory ACT with Integrity training. In developing the program each year, the Global Ethics & Compliance team draws from real ethics cases. The program explains how employees can ACT – that is:

- Ask questions if they're concerned about an issue of integrity.
- Check the details of the action that cause concern.
- Take action when appropriate.

For 2021, our program focused on protecting proprietary data, promoting careful and respectful communications on social media, and reinforcing the critical importance of asking questions and bringing issues forward.

Ethics education like the ACT program illustrates the high expectations we have for ethical behavior and provides tangible guidance that leads to thoughtful decisions.



# | Appendix

Transparently sharing data, policies and other information about our progress and performance on our ESG aspirations.



# 2021 Raytheon Technologies recognition and awards

Comprehensive climate disclosures earned A-

*CDP*

2021 ENERGY STAR® Partner of the Year – Sustained Excellence Award

*U.S. Environmental Protection Agency*

75 sites received Liberty Mutual safety awards

*Liberty Mutual*

57 sites Voluntary Protection Program Star certified

*U.S. Occupational Health Administration*

25 awards for excellence for participation in the U.S. DOD’s Mentor-Protégé program

*DOD Nunn Perry*

Top Companies to Grow Careers in the U.S.

*LinkedIn*

Most Attractive U.S. Employer for University Engineering Students

*Universum*

World’s Best Employers

*Forbes*

Top 50 Companies for Diversity

*DiversityInc.*

Best Place to Work for Disability Inclusion

*Disability:IN – Disability Equality Index*

Best Places to Work for LGBTQ Equality

*Human Rights Campaign Foundation – Corporate Equality Index*

Military Friendly® Employer

*Military Friendly*

100 Best Companies for Women, Best Companies for Multicultural Women, Best Companies for Dads, Inclusion Index Company

*Seramount*

# Raytheon Technologies Performance Data Table

For ease of reference, consolidated data points for key topic areas are presented below.

Description	2021 data (unless otherwise noted)	Notes
<b>Company data</b>		
Enterprise revenue (\$)	64,388 million	See <a href="#">10-K</a>
# of total employees	174,000	
# of engineers	58,000	Engineers includes anyone in a engineering job function that is also a professional grade level (Exec, Director, Fellow, Manager, Professional)
# of new hires	19,955	
Total investment in company- and customer-funded R&D	\$7.2B	See <a href="#">10-K</a>
Total number of board members	13	
Total employees represented by labor unions and other employee representative bodies	30,000	See <a href="#">10-K</a>
% of physical security assessments and threat vulnerability assessments completed at key, required sites	100%	Key sites – site is critical based on if thresholds are met set across any or all of the following criteria; size, scope, complexity, intellectual property, key personnel and dollar value
<b>Corporate social responsibility</b>		
Corporate giving (corporate grants)	\$33.7M	Composed of corporate grants
Total corporate giving (including matching gifts)	\$50.1M	Including matching gifts
Employee volunteering hours	58,200	Volunteering hours is across U.S.-based employees
Total number of company charitable grants	Approximately 975 grants made to 800 organizations	Estimate
Total amount of employee donations	\$12.2M	Corporate matches are a U.S.-based program with the exception of Giving Tuesday, which was offered as an international campaign for a 24-hour window
Total matching gifts from employee giving	\$16.4M	Corporate matches are a U.S.-based program with the exception of Giving Tuesday, which was offered as an international campaign for a 24-hour window
# of individuals reached through Raytheon Technologies' direct funding support of nonprofits	888,000	
% of Raytheon Technologies' signature programs demonstrating an efficacy rate within or above benchmark ranges	76%	
% of Raytheon Technologies' signature programs demonstrating a cost per outcome within or below benchmark ranges	65%	
# of students engaged with STEM as a result of Raytheon Technologies' funding and signature partners	117,000	
# of volunteer opportunities	1,500	
# of U.S. employees who verified their volunteer hours through a volunteer opportunity offered by Raytheon Technologies	1,200	
# of causes supported through employee giving globally	8,000	
# of employees who participated in employee giving globally	11,500	

**Raytheon Technologies Performance Data Table** *(continued)*

For ease of reference, consolidated data points for key topic areas are presented below.

Description	2021 data (unless otherwise noted)	Notes
<b>Talent</b>		
Employee engagement survey score	72 out of 100	Semi-annual surveys conducted in June and October of 2021
Employee turnover rate (voluntary)	6.1%	Excludes retirements
Total employee training hours completed	703,000	The sum of required training hours required across the entire enterprise; not inclusive of all training required by individual business units and functions
The average of required training hours	3.98	The average required training hours required across the entire enterprise; not inclusive of all training required by individual business units and functions
<b>Diversity</b>		
% of employees that are people of color (POC)	30.9%	U.S. only. Includes all employees who self-identify as American Indian/Alaskan Native, Asian, Black/African American, Hispanic
% of employees that are Black/African American	7.9%	U.S. only.
% of employees that are Asian/Asian American	9.8%	U.S. only.
% of employees that are Hispanic/Latinx	10.4%	U.S. only.
% supplier spend on small and diverse suppliers	28%	U.S. spend only. Includes: MBE – Minority-owned, SDB – Small Disadvantaged Business, SDV – Service Disabled Vet, HUB Zone – historically underutilized business zones, WBE – Woman-owned, Lesbian, Gay, Bisexual Transgender
Total supplier spend on small and diverse suppliers	\$6.7B	U.S. spend only. Includes: MBE – Minority-owned, SDB – Small Disadvantaged Business, SDV – Service Disabled Vet, HUB Zone – historically underutilized business zones, WBE – Woman-owned, Lesbian, Gay, Bisexual Transgender
# of women employees	43,800	
# of veteran employees	15,000	Based on voluntary self-identification
% of employees under age 30	16.2%	
% of employees between age 30-50	50.1%	
% of employees over age 50	33.7%	
% of board members that are women	30.8%	
% of board members that are POC	15.4%	
% of executives that are women	30.1%	
# of executives that are women	398	
% of executives that are POCs	16.6%	
# of executives that are POCs	203	

*(continued)*

**Raytheon Technologies Performance Data Table** *(continued)*

For ease of reference, consolidated data points for key topic areas are presented below.

Description	2021 data (unless otherwise noted)	Notes
<b>Emissions</b>		
Total 2021 GHG emissions in scope of operational goals (Scope 1, Scope 2 (location-based), Scope 3 Category 6 (business travel)) (MT CO <sub>2</sub> e)	1,507,000	
Total 2020 GHG emissions in scope of operational goals (Scope 1, Scope 2 (location-based), Scope 3 Category 6 (business travel)) (MT CO <sub>2</sub> e)	1,594,000	
Total 2019 GHG emissions in scope of operational goals (Scope 1, Scope 2 (location-based), Scope 3 Category 6 (business travel)) (MT CO <sub>2</sub> e)	1,968,000	
% of GHG emissions operations goal represented by Scope 1	34%	Adherence to the GHG Protocol and the U.S. EPA standards
% of GHG emissions operations goal represented by Scope 2	62%	Adherence to the GHG Protocol and the U.S. EPA standards
% of GHG emissions operations goal represented by Scope 3 Category 6 (business travel)	4%	Adherence to the GHG Protocol and the U.S. EPA standards
GHG emissions intensity (metric tons/\$M revenue)	23.4	
<b>Energy</b>		
% of energy sourced from energy grid	52%	
% of total electricity sourced from renewable sources	3.5%	
Total renewable energy projects	Over 30	
On-site renewable electricity projects	22	
Total electricity generated from renewable electricity projects (MWh)	92,000	
Total energy consumed (GJs)	17,650,000	
<b>Product safety</b>		
% of facilities or sites that provide products and services that have a certified QMS or have a plan to achieve certification	100%	
# of sites under AS9100	262	
# of sites under AS9110	51	
# of sites under AS9120	7	
# of sites under ISO 9001	46	

*(continued)*

**Raytheon Technologies Performance Data Table** *(continued)*

For ease of reference, consolidated data points for key topic areas are presented below.

Description	2021 data (unless otherwise noted)	Notes
<b>Safety</b>		
# of work-related incidents	634	Includes COVID cases
# of work-related fatalities and serious incidents	3	This includes 1 COVID-related fatality
# of work-related fatalities from work-related incidents	1	This is a COVID-related fatality
# of training units completed across all EH&S topics	1 million	This is an estimated number of completed units
2021 Total Recordable Incident Rate (TRIR)	0.36	Includes COVID cases, TRIR is a workplace safety metric measuring recordable incidents as defined by OSHA
2020 Total Recordable Incident Rate (TRIR)	0.34	Includes COVID cases, TRIR is a workplace safety metric measuring recordable incidents as defined by OSHA
2019 Total Recordable Incident Rate (TRIR)	0.41	Includes COVID cases, TRIR is a workplace safety metric measuring recordable incidents as defined by OSHA
% of facilities covered by EH&S Management System	100%	
2021 Lost Day Incident Rate (LDIR)	0.12	LDIR is a workplace safety metric measuring incidents that resulted in lost work days
2020 Lost Day Incident Rate (LDIR)	0.09	LDIR is a workplace safety metric measuring incidents that resulted in lost work days
2019 Lost Day Incident Rate (LDIR)	0.09	LDIR is a workplace safety metric measuring incidents that resulted in lost work days
<b>Waste</b>		
# of reportable spills	0	
Amount of hazardous waste generated (tons)	22,270	
% of generated hazardous waste that is recycled	24%	
% reduction in waste sent to landfill and incineration since 2019	24%	
Amount of waste sent to landfill and incineration (tons)	26,325	
Total waste generated (tons)	87,300	
Total waste intensity (tons/\$M revenue)	1.36	
<b>Water</b>		
Total potable water consumed (k gallons)	1,502,000	
2021 Water use intensity (k gallons/\$M revenue)	23.3	
2020 Water use intensity (k gallons/\$M revenue)	26.8	
2019 Water use intensity (k gallons/\$M revenue)	24.9	

# Global Reporting Initiative (GRI) Index 2021

Table 1. General disclosures

Disclosure	Disclosure title	ESG report section(s)/disclosure
Organizational profile		
GRI 102-1	Name of the organization	Raytheon Technologies Corporation
GRI 102-2	Activities, brands, products, and services	<i>About Raytheon Technologies</i>
GRI 102-3	Location of headquarters	Corporate headquarters: 870 Winter Street, Waltham, MA 02451
GRI 102-4	Location of operations	See <a href="#">Locations</a> on the RTX.com website
GRI 102-5	Ownership and legal form	See Raytheon Technologies <a href="#">Form 10-K</a>
GRI 102-6	Markets served	See Raytheon Technologies <a href="#">Form 10-K</a>
GRI 102-7	Scale of the organization	<i>About Raytheon Technologies</i>  Employees: 174,000 Engineers: 58,000  For more information, see: <ul style="list-style-type: none"> <li>▪ <a href="#">Raytheon Technologies Form 10-K</a></li> </ul>
GRI 102-8	Information on employees and other workers	Permanent employees: 170,800 Temporary employees: 2,700 Women: 43,800 U.S. Veterans: 15,000
GRI 102-9	Supply chain	<i>Supplier quality, environment, health and safety matters</i>  For more information, see: <ul style="list-style-type: none"> <li>▪ <a href="#">Suppliers</a> on the RTX.com website</li> </ul>
GRI 102-10	Significant changes to the organization and its supply chain	See Raytheon Technologies <a href="#">Form 10-K</a>  See Raytheon Technologies <a href="#">Proxy Statement</a>
GRI 102-11	Precautionary Principle or approach	<i>Planet</i>  We are moving forward with actions to reduce the environmental impacts of our operations and products
GRI 102-12	External initiatives	See <a href="#">Strategic Partnerships</a> on the RTX.com website
GRI 102-13	Membership of associations	Integrated throughout the report, including: <ul style="list-style-type: none"> <li>▪ <i>Data security and privacy</i></li> <li>▪ <i>On the path to decarbonize aviation</i></li> </ul>

(continued)

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
<b>Strategy</b>		
GRI 102-14	Statement from senior decision-maker	CEO letter
<b>Ethics and integrity</b>		
GRI 102-16	Values, principles, standards, and norms of behavior	About Raytheon Technologies
<b>Governance</b>		
GRI 102-18	Governance structure	Advancing our ESG capabilities For more information, see: <ul style="list-style-type: none"> <li>■ <a href="#">Corporate Governance</a> on the RTX.com website</li> <li>■ Raytheon Technologies <a href="#">Proxy Statement</a></li> </ul>
<b>Stakeholder engagement</b>		
GRI 102-40	List of stakeholder groups	Advancing our ESG capabilities For more information, see: <ul style="list-style-type: none"> <li>■ <a href="#">Strategic Partnerships</a> on the RTX.com website</li> </ul>
GRI 102-41	Collective bargaining agreements	15,000 employees (12%) in the United States participate in collective bargaining
GRI 102-42	Identifying and selecting stakeholders	Advancing our ESG capabilities
GRI 102-43	Approach to stakeholder engagement	Advancing our ESG capabilities
GRI 102-44	Key topics and concerns raised	Advancing our ESG capabilities
<b>Reporting practice</b>		
GRI 102-45	Entities included in the consolidated financial statements	See Raytheon Technologies <a href="#">Form 10-K</a>
GRI 102-46	Defining report content and topic Boundaries	Advancing our ESG capabilities
GRI 102-47	List of material topics	Advancing our ESG capabilities
GRI 102-48	Restatements of information	N/A – This is Raytheon Technologies’ first comprehensive ESG report.
GRI 102-49	Changes in reporting	N/A – This is Raytheon Technologies’ first comprehensive ESG report.
GRI 102-50	Reporting period	January 1, 2021 through December 31, 2021
GRI 102-51	Date of most recent report	N/A – This is Raytheon Technologies’ first comprehensive ESG report. 2020 SASB Reporting March 2021
GRI 102-52	Reporting cycle	Annual
GRI 102-53	Contact point for questions regarding the report	Raytheon Technologies contact information is available on <a href="#">RTX.com</a> .
GRI 102-54	Claims of reporting in accordance with the GRI Standards	None – This report is informed by the GRI Standards: Core option.
GRI 102-55	GRI content index	GRI Index
GRI 102-56	External assurance	Some environmental data goes through an external assurance process as part of reporting for CDP (the Carbon Disclosure Project)

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Table 2. Topic specific disclosures

Disclosure	Disclosure title	ESG report section(s)/disclosure
<b>GRI 201: Economic performance</b>		
<b>GRI 103</b>	Management approach	See Raytheon Technologies <a href="#">Form 10-K</a>
<b>GRI 201-1</b>	Direct economic value generated and distributed	<i>About Raytheon Technologies</i> For more information, see: ■ <a href="#">Raytheon Technologies Form 10-K</a>
<b>GRI 201-2</b>	Financial implications and other risks and opportunities due to climate change	<i>Reducing climate risks, improving resilience</i> For more information, see: ■ <a href="#">2021 CDP Climate Change Response</a> ■ <a href="#">TCFD index</a>
<b>GRI 201-3</b>	Defined benefit plan obligations and other retirement plans	<i>Attracting, developing, and engaging world-class talent</i> For more information, see: ■ <a href="#">Raytheon Technologies Form 10-K</a>
<b>GRI 203: Indirect economic impacts</b>		
<b>GRI 103</b>	Management approach	<i>Building community vitality</i>
<b>GRI 203-2</b>	Significant indirect economic impacts	<i>Building community vitality</i> For more information, see: ■ <a href="#">Corporate Responsibility</a> on the RTX.com website
<b>GRI 205: Anti-corruption</b>		
<b>GRI 103</b>	Management approach	<i>A foundation of ethics and compliance</i> For more information, see: ■ <a href="#">Anti-Corruption</a> on the RTX.com website
<b>GRI 205-1</b>	Operations assessed for risks related to corruption	<i>A foundation of ethics and compliance</i> For more information, see: ■ <a href="#">Anti-Corruption</a> on the RTX.com website
<b>GRI 205-2</b>	Communication and training about anti-corruption policies and procedures	<i>A foundation of ethics and compliance</i> For more information, see: ■ <a href="#">Anti-Corruption</a> on the RTX.com website

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
<b>GRI 206: Anti-competitive behavior</b>		
<b>GRI 103</b>	Management approach	<i>A foundation of ethics and compliance</i> For more information, see: ■ <a href="#">Code of Conduct available at Ethics and Compliance</a> on the RTX.com website
<b>GRI 206-1</b>	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	<i>A foundation of ethics and compliance</i> For more information, see: ■ <a href="#">Code of Conduct available at Ethics and Compliance</a> on the RTX.com website
<b>GRI 301: Materials</b>		
<b>GRI 103</b>	Management approach	<i>Advancing sustainable innovation and technology</i> <i>Moving toward a circular economy</i>
<b>GRI 301-2</b>	Recycled input materials used	<i>Moving toward a circular economy</i>
<b>GRI 302: Energy</b>		
<b>GRI 103</b>	Management approach	<i>Decarbonizing our operations</i> For more information, see: ■ <a href="#">Environment</a> on the RTX.com website
<b>GRI 302-1</b>	Energy consumption within the organization	<i>Decarbonizing our operations</i> 17,650,000 GJs
<b>GRI 302-3</b>	Energy intensity	274 GJ/\$M revenue
<b>GRI 302-4</b>	Reduction of energy consumption	<i>Decarbonizing our operations</i>
<b>GRI 302-5</b>	Reductions in energy requirements of sold products and services	<i>On the path to decarbonize aviation</i>
<b>GRI 303: Water</b>		
<b>GRI 103</b>	Management approach	<i>Saving water and reducing waste</i> For more information, see: ■ <a href="#">Environment, Health &amp; Safety</a> on the RTX.com website
<b>GRI 303-1</b>	Interactions with water as a shared resource	<i>Saving water and reducing waste</i>
<b>GRI 303-5</b>	Water consumption	<i>Saving water and reducing waste</i> 1. 1,502,000 k gallons of potable water consumed 2. Water use intensity: 23.3 k gallons/\$M revenue

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
<b>GRI 305: Emissions</b>		
<b>GRI 103</b>	Management approach	<i>Decarbonizing our operations</i> For more information, see: <ul style="list-style-type: none"> <li>■ For more information on greenhouse gas emissions from our operations, see: <a href="#">Environment</a> on the RTX.com website</li> <li>■ For more information on our approach to sustainable technology development, see the websites of our three business units with commercial operations and the RTRC: Raytheon Technologies Research Center; Pratt &amp; Whitney, Collins Aerospace; Raytheon Intelligence &amp; Space</li> </ul>
<b>GRI 305-1</b>	Direct (Scope 1) GHG emissions	<i>Decarbonizing our operations</i> 510,500 MT CO <sub>2</sub> e
<b>GRI 305-2</b>	Energy indirect (Scope 2) GHG emissions	<i>Decarbonizing our operations</i> 941,700 MT CO <sub>2</sub> e
<b>GRI 305-3</b>	Other indirect (Scope 3) GHG emissions	<i>Decarbonizing our operations</i> Category 6, Business travel: 55,000 MT CO <sub>2</sub> e For more information, see: <a href="#">2021 CDP Climate Change Response</a> (additional Scope 3 categories reported)
<b>GRI 305-4</b>	GHG emissions intensity	<i>Decarbonizing our operations</i> 23.4 MT CO <sub>2</sub> e/\$M revenue
<b>GRI 305-5</b>	Reduction of GHG emissions	<i>Decarbonizing our operations</i> 23% reduced from 2019 baseline
<b>GRI 305-7</b>	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	<i>On the path to decarbonize aviation</i>
<b>GRI 306: Waste</b>		
<b>GRI 103</b>	Management approach	<i>Saving water and reducing waste</i>
<b>GRI 306-1</b>	Waste generation and significant waste-related impacts	<i>Saving water and reducing waste</i>
<b>GRI 306-2</b>	Management of significant waste-related impacts	<i>Saving water and reducing waste</i>
<b>GRI 306-3</b>	Waste generated	<i>Saving water and reducing waste</i> 87,300 tons 1.36 tons/\$M revenue
<b>GRI 306-4</b>	Waste diverted from disposal	<i>Saving water and reducing waste</i>
<b>GRI 306-5</b>	Waste directed to disposal	<i>Saving water and reducing waste</i> 26,325 tons sent to landfill or incineration

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
<b>GRI 307: Environmental compliance</b>		
<b>GRI 103</b>	Management approach	<i>Overseeing environmental compliance</i>  For more information, see: ■ <a href="#">Environment, Health &amp; Safety</a> on the RTX.com website
<b>GRI 307-1</b>	Non-compliance with environmental laws and regulations	<i>Overseeing environmental compliance</i>  Zero significant fines and penalties for non-compliance with EH&S laws. We paid \$21,600 in various fines and penalties related to allegations of non-compliance with environmental and safety laws and regulations.
<b>Custom</b>	# of facilities certified to ISO 14001	53
<b>GRI 401: Employment</b>		
<b>GRI 103</b>	Management approach	<i>Attracting, developing and engaging world class talent</i>
<b>GRI 401-1</b>	New employee hires and employee turnover	<i>Attracting, developing and engaging world class talent</i>
<b>GRI 401-2</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<i>Attracting, developing and engaging world class talent</i>
<b>GRI 401-3</b>	Parental leave	<i>Attracting, developing and engaging world class talent</i>
<b>Custom</b>	Approach to responsible workforce restructuring	Raytheon reviews restructuring actions to ensure they are necessary, given within required notice periods, and made in a non-discriminatory manner. Raytheon offers affected employees severance and re-training benefits.
<b>GRI 402: Labor/management relations</b>		
<b>GRI 103</b>	Management approach	<i>Employee and labor relations</i>
<b>GRI 403: Occupational health and safety</b>		
<b>GRI 103</b>	Management approach	<i>Protecting employee health and safety</i>  For more information on our approach for health and safety visit <a href="#">Environment, Health &amp; Safety</a> on the RTX.com website.  With regard to nanotechnologies, we deploy nanotechnologies in certain products and invest in nanotechnology R&D in our continuing efforts to advance technology to enable functionality, durability, longevity and performance for aviation, space and national defense. Where such activities involve known or intentionally created nanoparticles, those activities are strictly controlled, including engineering controls, personal protective equipment and administrative worker exposure controls, as appropriate.
<b>GRI 403-1</b>	Occupational health and safety management system	<i>Protecting employee health and safety</i>
<b>GRI 403-2</b>	Hazard identification, risk assessment, and incident investigation	<i>Protecting employee health and safety</i>
<b>GRI 403-3</b>	Occupational health services	<i>Protecting employee health and safety</i>
<b>GRI 403-5</b>	Worker training on occupational health and safety	<i>Protecting employee health and safety</i>
<b>GRI 403-6</b>	Promotion of worker health	<i>Protecting employee health and safety</i>  <i>Fostering employee well-being</i>

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
GRI 403-8	Workers covered by an occupational health and safety management system	<i>Protecting employee health and safety</i>
GRI 403: Occupational health and safety <i>(continued)</i>		
GRI 403-9	Work-related injuries	<i>Protecting employee health and safety</i>  In 2021, our employees experienced the following: Fatalities as a result of work-related injury: 1 (COVID-related) Other serious work-related injuries: 2 Recordable work-related injuries: 634 (including COVID-19 cases) Rate of lost time incidents: 0.12
GRI 403-10	Work-related ill health	<i>Protecting employee health and safety</i>
GRI 404: Training and education		
GRI 103	Management approach	<i>Deepening learning and development</i>
GRI 404-1	Average hours of training per year per employee	<i>Deepening learning and development</i>
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	<i>Deepening learning and development</i>
GRI 404-3	Percentage of employees receiving regular performance and career development reviews	<i>Deepening learning and development</i>
GRI 405: Diversity and equal opportunity		
GRI 103	Management approach	<i>Advancing our ESG capabilities</i>  <i>Prioritizing diversity equity and inclusion</i>
GRI 405-1	Diversity of governance bodies and employees	<i>Advancing our ESG capabilities</i>  <i>Prioritizing diversity equity and inclusion</i>  <i>A foundation of ethics and compliance</i>  <a href="#">DE&amp;I Report</a>
GRI 406: Non-discrimination		
GRI 103	Management approach	<i>Respect for human rights</i>  For more information, see: ■ <a href="#">Code of Conduct available at Ethics and Compliance</a> on the RTX.com website
GRI 406-1	Incidents of discrimination and corrective actions taken	<i>Respect for human rights</i>  For more information, see: ■ <a href="#">Code of Conduct available at Ethics and Compliance</a> on the RTX.com website
GRI 407: Freedom of association and collective bargaining		

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
GRI 103	Management approach	<i>Employee and labor relations</i>
GRI 408: Child labor		
GRI 103	Management approach	<p><i>Respect for human rights</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Approach to Human Rights</a> on the RTX.com website</li> <li>▪ <a href="#">Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Supplier Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Modern slavery statement</a> on the RTX.com website</li> <li>▪ <a href="#">Conflict mineral statement</a> on the RTX.com website</li> </ul>
GRI 409: Forced or compulsory labor		
GRI 103	Management approach	<p><i>Respect for human rights</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Approach to Human Rights</a> on the RTX.com website</li> <li>▪ <a href="#">Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Supplier Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Modern slavery statement</a> on the RTX.com website</li> <li>▪ <a href="#">Conflict mineral statement</a> on the RTX.com website</li> </ul>
GRI 410: Security practices		
GRI 103	Management approach	<p><i>Respect for human rights</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Approach to Human Rights</a> on the RTX.com website</li> <li>▪ <a href="#">Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Supplier Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Modern slavery statement</a> on the RTX.com website</li> <li>▪ <a href="#">Conflict mineral statement</a> on the RTX.com website</li> </ul>
GRI 412: Human rights assessment		

*(continued)*

Global Reporting Initiative (GRI) Index 2021 *(continued)*

Disclosure	Disclosure title	ESG report section(s)/disclosure
GRI 103	Management approach	<p><i>Respect for human rights</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Approach to Human Rights</a> on the RTX.com website</li> <li>▪ <a href="#">Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Supplier Code of Conduct</a> on the RTX.com website</li> <li>▪ <a href="#">Modern slavery statement</a> on the RTX.com website</li> <li>▪ <a href="#">Conflict mineral statement</a> on the RTX.com website</li> </ul>
<b>GRI 413: Local communities</b>		
GRI 103	Management approach	<i>Building community vitality</i>
GRI 413-1	Operations with local community engagement, impact assessments, and development programs	<p><i>Building community vitality</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">CSR initiatives: Connect Up</a></li> </ul>
<b>GRI 414: Supplier social assessment</b>		
GRI 103	Management approach	<p><i>Respect for human rights</i></p> <p><i>Supplier quality, environment, health and safety matters</i></p>
<b>GRI 415: Public policy</b>		
GRI 103	Management approach	<p><i>A foundation of ethics and compliance</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Committee on Governance and Public Policy Charter</a></li> <li>▪ <a href="#">Ethics and Compliance</a> on the RTX.com website</li> </ul>
GRI 415-1	Political contributions	<p><i>A foundation of ethics and compliance</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Federal Lobbying Reports</a></li> <li>▪ <a href="#">Public Activities</a> on the RTX.com website</li> </ul>
<b>GRI 418: Customer privacy</b>		
GRI 103	Management approach	<p><i>Data security and privacy</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">Binding Corporate Rules</a> on the RTX.com website</li> </ul>
GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<i>Data security and privacy</i>
<b>GRI 419: Socioeconomic compliance</b>		
GRI 103	Management approach	<i>A foundation of ethics and compliance</i>
GRI 419-1	Non-compliance with laws and regulations in the social and economic area	<p><i>A foundation of ethics and compliance</i></p> <p><i>Overseeing environmental compliance</i></p> <p>Zero significant fines and penalties for non-compliance with EH&amp;S laws. We paid \$21,600 in various fines and penalties related to allegations of non-compliance with environmental and safety laws and regulations.</p>

# Sustainability Accounting Standards Board (SASB) Disclosure 2021

## Industry: Aerospace & Defense

Table 1. Sustainability disclosure topics and metrics

SASB code	Metric	ESG report section(s)/disclosure
<b>Energy management</b>		
RT-AE-130a.1	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	<i>Decarbonizing our operations</i> (1) 17,650,000 GJ (2) 52% (3) 2% of total energy  For more information, see: <ul style="list-style-type: none"> <li>Environment on the RTX.com website</li> <li>Our 2021 CDP Climate Change response</li> </ul>
<b>Hazardous waste management</b>		
RT-AE-150a.1	(1) Amount of hazardous waste generated (2) Percentage recycled	<i>Saving water and reducing waste</i> (1) 22,270 tons (2) 24%  For more information, see: <ul style="list-style-type: none"> <li>Environment on the RTX.com website</li> </ul>
RT-AE-150a.2	(1) Number and aggregate quantity of reportable spills (2) Quantity recovered	<i>Saving water and reducing waste</i> (1) Zero reportable spills (2) Not applicable, as no reportable spills
<b>Data security</b>		
RT-AE-230a.1	(1) Number of data breaches (2) Percentage involving confidential information	Raytheon Technologies considers this information to be confidential.
RT-AE-230a.2	Description of approach to identifying and addressing data security risks in: (1) Company operations, and (2) Products	<i>Data security and privacy</i>  For more information, see: <ul style="list-style-type: none"> <li>Supplier Cybersecurity on the RTX.com website</li> </ul>

(continued)

Sustainability Accounting Standards Board (SASB) Disclosure 2021 *(continued)*

SASB code	Metric	ESG report section(s)/disclosure
<b>Product safety</b>		
RT-AE-250a.1	Number of recalls issued; total units recalled	<p><i>Our commitment to product safety, quality and transparency</i></p> <p>Raytheon Technologies business units seek to continually improve the durability, reliability, and safety of their products. Although such efforts may result in inspection recommendations or product improvements that lead to field action, Raytheon Technologies does not consider such voluntary product improvement efforts to be "recalls."</p>
RT-AE-250a.2	Number of counterfeit parts detected; percentage avoided	Raytheon Technologies business units have quality and safety controls in place to address counterfeit parts throughout the life cycle of design and production. However, Raytheon Technologies considers this data confidential.
RT-AE-250a.3	Number of Airworthiness Directives received, total units affected	<p>All Airworthiness Directives are publicly available. The most recent information concerning those directives can be found on the appropriate regulatory sites.</p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ <a href="#">European Aviation Safety Agency-regulated Airworthiness Directives</a></li> <li>■ <a href="#">FAA-regulated Airworthiness Directives</a></li> <li>■ <a href="#">Transport Canada-regulated Airworthiness Directives</a></li> </ul>
RT-AE-250a.4	Total amount of monetary losses as a result of legal proceedings associated with product safety	Raytheon Technologies considers this information to be confidential.
<b>Fuel economy and emissions in use-phase</b>		
RT-AE-410a.1	Revenue from alternative energy-related products	<p>Raytheon Technologies does not generate revenue from alternative energy related products.</p> <p>The majority of current and future commercial aircraft engine and nacelle OEM revenues are obtained from sale of sustainable GTF propulsion systems.</p>
RT-AE-410a.2	Description of approach and discussion of strategy to address fuel economy and greenhouse gas (GHG) emissions of products	<p><i>On the path to decarbonize aviation</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ <a href="#">Our 2021 CDP Climate Change response</a></li> </ul>
<b>Materials sourcing</b>		
SASB RT-AE-440a.1	Description of the management of risks associated with the use of critical materials	<p><i>Reducing risks of chemical usage</i></p> <p><i>Advancing sustainable technology and innovation</i></p> <p><i>Respect for human rights</i></p> <p>For more information, see</p> <ul style="list-style-type: none"> <li>■ <a href="#">Raytheon Technologies Form 10-K</a></li> <li>■ <a href="#">Raytheon Technologies Conflict Minerals Policy Statement</a></li> <li>■ <a href="#">Raytheon Technologies Conflict Minerals Form SD 2021-06-01</a></li> </ul>

*(continued)*

## Sustainability Accounting Standards Board (SASB) Disclosure 2021 *(continued)*

SASB code	Metric	ESG report section(s)/disclosure
<b>Business ethics</b>		
RT-AE-510a.1	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery and/or illicit international trade	<i>A foundation of ethics and compliance</i> The company is continuing to evaluate this reporting element.
RT-AE-510a.2	Revenue from countries ranked in the "E" or "F" Band of Transparency International's Government Defense Anti-Corruption Index	The company is continuing to evaluate this reporting element.
RT-AE-510a.3	Discussion of processes to manage business ethics risks throughout the value chain	<i>A foundation of ethics and compliance</i> <i>Respect for human rights</i> <i>Supplier environmental health and safety matters</i> For more information, see: <ul style="list-style-type: none"> <li>■ <a href="#">Raytheon Technologies Ethics &amp; Compliance</a></li> <li>■ <a href="#">Raytheon Technologies Code of Conduct</a></li> <li>■ <a href="#">Raytheon Technologies Supplier Code of Conduct</a></li> <li>■ <a href="#">Raytheon Technologies Ombuds Program</a></li> <li>■ <a href="#">How we pursue anticorruption initiatives</a></li> <li>■ <a href="#">The International Forum on Business Ethical Conduct (IFBEC) Global Principles</a></li> <li>■ <a href="#">Defense Industry Initiative</a></li> <li>■ <a href="#">International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State</a></li> <li>■ <a href="#">Export Administration Regulations (EAR) administered by the U.S. Department of Commerce</a></li> <li>■ <a href="#">Sanctions Programs and Country Information administered by the U.S. Department of the Treasury</a></li> </ul>

### Table 2. Activity metrics

SASB code	Metric	ESG report section(s)/disclosure
RT-AE-000.A	Production by reportable segment	The company is continuing to evaluate this reporting element. For more information, see: <ul style="list-style-type: none"> <li>■ <a href="#">Raytheon Technologies Form 10-K</a></li> </ul>
RT-AE-000.B	Number of employees	<i>About Raytheon Technologies</i>

# Task Force on Climate-Related Financial Disclosures (TCFD) Disclosure 2021

Description	Recommended disclosures	ESG report section(s)/disclosure
<b>Governance</b>		
<b>Disclose the organization's governance around climate-related risks and opportunities.</b>	a. Describe the board's oversight of climate-related risks and opportunities	<p><i>Advancing our ESG capabilities</i></p> <p><i>Reducing climate risks, improving resilience</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ Our <a href="#">2021 CDP Climate Change</a> response (C1.1b)</li> </ul>
	b. Describe management's role in assessing and managing climate-related risks and opportunities	<p><i>Advancing our ESG capabilities</i></p> <p><i>Decarbonizing our operations</i></p> <p><i>Reducing climate risks, improving resilience</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ Our <a href="#">2021 CDP Climate Change</a> response (C1.2, C1.2a)</li> </ul>
<b>Strategy</b>		
<b>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</b>	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<p><i>Reducing climate risks, improving resilience</i></p> <p><i>On the path to decarbonize aviation</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ Our <a href="#">2021 CDP Climate Change</a> response (C2.1a, C2.3a, C2.4a)</li> </ul>
	b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	<p><i>Reducing climate risks, improving resilience</i></p> <p><i>On the path to decarbonize aviation</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ Our <a href="#">2021 CDP Climate Change</a> response (C2.3a, C2.4a, C3.1, C3.2a, C3.3, C3.4)</li> </ul>
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<p><i>Reducing climate risks, improving resilience</i></p> <p>For more information, see:</p> <ul style="list-style-type: none"> <li>■ Our <a href="#">2021 CDP Climate Change</a> response (C3.2, C3.2a)</li> </ul>

(continued)

## Task Force on Climate-Related Financial Disclosures (TCFD) Disclosure 2021 *(continued)*

Description	Recommended disclosures	ESG report section(s)/disclosure
<b>Risk management</b>		
<b>Disclose how the organization identifies, assesses, and manages climate-related risks.</b>	a. Describe the organization's processes for identifying and assessing climate-related risks.	<i>Reducing climate risks, improving resilience</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C2.1, C2.2, C2.2a)</li> </ul>
	b. Describe the organization's process for managing climate-related risks.	<i>Reducing climate risks, improving resilience</i>  <i>On the path to decarbonize aviation</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C2.2)</li> </ul>
	c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	<i>Reducing climate risks, improving resilience</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C2.2)</li> </ul>
<b>Metrics and targets</b>		
<b>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</b>	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<i>On the path to decarbonize aviation</i>  <i>Moving toward a circular economy</i>  <i>Decarbonizing our operations</i>  <i>Saving water and reducing waste</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C2.3a, C2.4a, C4.1, C4.1a, C4.3a, C6.1, C6.3, C6.5, C6.10, C8.2a, C8.2c, C8.2e, C9.1)</li> </ul>
	b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	<i>Decarbonizing our operations</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C6.1, C6.3, C6.5, C6.10, C7.1a, C7.2, C7.3a, C7.5, C7.6a, C7.9a)</li> </ul>
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	<i>On the path to decarbonize aviation</i>  <i>Decarbonizing our operations</i>  <i>Saving water and reducing waste</i>  For more information, see: <ul style="list-style-type: none"> <li>Our <a href="#">2021 CDP Climate Change</a> response (C4.1, C4.1a)</li> </ul>

For more information, please visit our website [RTX.com](https://www.rtx.com).

### Forward Looking Statements and Other Important Information

This report contains certain metrics and other information relating to Raytheon Technologies' ESG objectives, goals, plans, expectations, performance and data. The report describes topics which we consider to be the most salient to stakeholders when evaluating Raytheon Technologies' ESG-related information. However, the inclusion of information in this report is not an indication that such information is necessarily material as contemplated by the U.S. federal securities laws and the applicable regulations thereunder.

In addition, the metrics and other data information in this report are based on company data collection and are subject to uncertainties with respect to specificity of reporting, characterization, comparison and other process consistencies. In certain cases, this information is also based on our current best estimates and assumptions. We believe such information and metrics are reasonable and are generally consistent with current industry practices, legal and regulatory requirements, and other applicable frameworks, but they have not been audited or reviewed by a third party (other than audited financial data). Unless otherwise specified, metrics shared are for the calendar year January 1, 2021 – December 31, 2021.

Furthermore, this report contains statements which, to the extent they are not statements of historical or present fact, constitute "forward-looking statements" under the securities laws. Forward-looking statements can be identified by the use of words such as "believe," "expect," "plans," "will" and other words of similar meaning. Examples of forward-looking statements in this report include statements and assumptions relating to Raytheon Technologies' ESG-related goals, objectives, aspirations and commitments, planned efforts and activities, expectations on the results of such efforts and activities, and expectations on the performance of technology. These forward-looking statements are subject to risks and uncertainties that may result in Raytheon Technologies not achieving or changing, in whole or in part, goals, objectives, aspirations or commitments, or cause actual actions or results to differ greatly from those expressed or implied. These risks and uncertainties include, among others: (i) global macroeconomic, business, political and climate conditions; (ii) availability of funding; (iii) evolving legal and regulatory requirements; (iv) the success of our environmental, social and governance related initiatives; (v) the accuracy of our estimates and assumptions; (vi) the success of new technologies; (vii) the impact of acquisitions or divestitures or other changes in our employee or product and service base; (viii) the ability to attract and retain personnel and suppliers with technical and other skills; (ix) the willingness of suppliers to adopt and comply with our programs; and (x) the impact of business disruptions, including as a result of cyber or other security threats. Please consult our U.S. Securities and Exchange Commission (SEC) filings, including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, for further information regarding risks and uncertainties associated with our business. The forward-looking statements in this report speak only to the date of this report and Raytheon Technologies assumes no obligation to update or revise such statement, whether as a result of new information, future events or otherwise, except as required by applicable law.

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