Raytheon Technologies

Sector: Resource Transformation
Industry: Aerospace and Defense

Sustainability Accounting Standards Board (SASB) Disclosure 2020

Version 1.0 March 2021

Raytheon Technologies

(NYSE: Raytheon Technologies) is an aerospace and defense company that provides advanced systems and services for commercial, military and government customers worldwide. The company was formed in 2020 through the combination of Raytheon Company and the United Technologies Corporation aerospace businesses. It is headquartered in Waltham, Massachusetts.

To learn more, visit **www.rtx.com**.

Key Capabilities

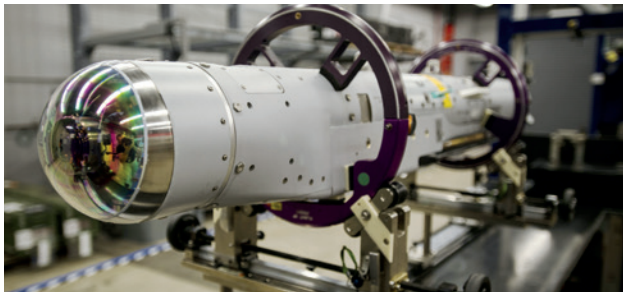
- Actuation, Cargo, Landing and Propeller Systems
- Aerostructures
- Aircraft Engines and Auxiliary Power Systems
- Aircraft Interiors
- Avionics
- Cybersecurity
- Data Analytics
- Missile Defense
- Mission Systems
- Power & Controls
- Precision Weapons
- System Integration and Sensors

Raytheon Technologies consists of four highly specialized business units:

Collins Aerospace
Specializes in aerostructures, avionics, interiors, mechanical systems, mission systems, and power and control systems that serve customers across the commercial, regional, business aviation and military sectors.

Pratt & Whitney
Designs, manufactures and services the world's most advanced aircraft engines and auxiliary power systems for commercial, military and business aircraft.

Raytheon Intelligence & Space
Specializes in developing advanced sensors, training and cyber 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.

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Raytheon Technologies

The merger of Raytheon Company and United Technologies in April 2020 created the world's most advanced aerospace and defense systems provider – and a company that believes it has a responsibility to change the world for the better.

We are committed to dedicating our resources and our talent to help meet the needs of our communities and to help build a better, more sustainable world together. Each of our legacy companies had its own corporate responsibility initiatives and practices that supported a wide range of issues, including investments in STEM education, assistance for military veterans, reductions of our environmental footprint, adhering to the highest codes of conduct and ensuring data privacy. Raytheon Technologies is drawing on and expanding those programs as part of a renewed pledge to sustainable operations, transparency and accountability.

This is our first disclosure within the framework of the Sustainability Accounting Standards Board. It follows disclosure and accountability guidance for the aerospace and defense industry, which most closely aligns with the operations of Raytheon Technologies. As the first SASB disclosure for our new company, we are initially focusing on a limited number of categories that best align with available information and data. Data and information reflects the new company as if the merger and spinoffs of Otis and Carrier had occurred on January 1, 2020. Our expectation is that these disclosures will continue to mature with time as the ability to collect data in a harmonized way progresses across the company. Please refer to our website for additional disclosure on some of the outlined topics, as well as other elements of our corporate responsibility commitment, at **https://www.rtx.com/social-impact/corporate-responsibility**.

Our Values

Trust

We act with integrity and do the right thing.

Respect

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

Accountability

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

Collaboration

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

Innovation

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

Industry: Aerospace & Defense

Table 1. Sustainability Disclosure Topics & Metrics

SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-130a.1	Energy Management	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage of renewable energy	(1) 18,130,410 gigajoules (2) 51% (3) 1%	See Raytheon Technologies Environment
RT-AE-150a.1	Hazardous Waste Management	(1) Amount of hazardous waste generated (2) Percentage of hazardous waste recycled	(1) 20,355 metric tons (2) 48%	See Raytheon Technologies Environment
RT-AE-150a.2	Hazardous Waste Management	(1) Number and (2) Aggregate quantity of reportable spills (3) Quantity recovered	(1) 0 (2) N/A (3) N/A	
RT-AE-230a.1	Data Security	(1) Number of data breaches (2) Percentage involving confidential information	Raytheon Technologies considers this information to be confidential.	
RT-AE-230a.2	Data Security	Descriptions of approach to identifying and addressing data security risks in (1) Company operations (2) Products	(1) As a provider of technologically advanced products and services that deliver safety and security to our customers, Raytheon Technologies considers cybersecurity of paramount importance. Our experienced team of cyber professionals maintains an operational environment built with security in mind, defended 24/7. We leverage industry-leading capabilities, many of which we developed, to help ensure the integrity, availability and confidentiality of both our data and that of our customers. To achieve continuous improvement, we regularly test our environment, processes and people for identification and closure of potential gaps.	See Supplier Cybersecurity

Disclaimer

This report contains certain metrics and other information relating to the company's sustainability objectives, goals, plans, expectations and data. This information is based on a combination of company- and industry-specific datasets and, in certain cases, our current best estimates and assumptions. Such measurements reflect current industry practices, legal and regulatory requirements, and other applicable frameworks, but have not been audited or reviewed by a third party. Furthermore, the company's forward-looking information in the report, including its goals plans and expectations, involve risks and uncertainties that may result in our not achieving goals or cause actual results to differ materially from those expressed or implied. These risks and uncertainties include, among others, global macroeconomic conditions, evolving industry best practices, applicable frameworks, and legal and regulatory requirements. The information in this report is as of March 12, 2021, only, and will be updated when, as and if determined by the company.

Aerospace and Defense Industry Disclosures

SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-230a.2 (cont.)			We promote the integrity of our processes and the management of risks through a number of elements, including: • **External audit:** Raytheon Technologies cyber processes and controls are regularly audited by government organizations as well as assessed by third-party accredited certification organizations against standards such as the ISO 27001 standard. • **Employee training:** Raytheon Technologies has a formal employee cyber awareness program that requires each employee to complete comprehensive annual training designed to raise awareness of potential cybersecurity threats and review key responsibilities and requirements. • **Cyber insurance:** The Raytheon Technologies cyber and technology errors and omissions insurance program provides protection for first-party cyber loss incurred by Raytheon Technologies and for third-party financial loss arising from a privacy breach or Raytheon Technologies' network failure, as well as third-party financial loss arising from Raytheon Technologies' act, error or omission in the provision of covered technology products and services. Companies spread across multiple critical infrastructure segments and the U.S. government trust Raytheon Technologies to provide active cyber protection as a service for their environments. They also leverage our technologies, such as insider threat monitoring and secure cross-domain data transfer, to improve security. Raytheon Technologies strives to improve cybersecurity for our supply chain, non-affiliated companies and the world at large. Our thought leaders serve on government and university advisory boards, industry working groups, alliances and nongovernmental organizations to educate them about cyber safety, advance the collective defense against data theft and misuse, and shape public policy. (2) Raytheon Technologies places a high priority on the security of its products in each business unit. We work closely with our customers to help ensure that products are secure by design and stay secure over time. We leverage secure Systems Development Life Cycle (SDLC) and industry-specific Risk Management Frameworks (RMF), applying Development-Security-Operations (DevSecOps) principles and SAFECode fundamental practices. We use a state-of-the-art Cyber Operations Development and Evaluation (CODE) Center in testing many products.	

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-230a.2 (cont.)			Our Product Security Incident Response Team (PSIRT) remains vigilant, closely tracking national vulnerability databases and threat intelligence reporting from several national, international, public, private and NGO organizations. PSIRT also utilizes response processes recommended by the Forum of Incident Response and Security Teams (FIRST) and National Institute of Standards and Technology (NIST). In addition, many Raytheon Technologies products undergo industry audit and compliance certifications, meeting all requirements mandated by government and commercial customers and adhering to regulatory guidance and standards, including not only data security, but also system security engineering and requirements for cyber resiliency and survivability.	
RT-AE-250a.1	Product Safety	(1) Number of recalls issued (2) Total units recalled	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" as defined by SASB.	See RT-AE-250a.3 (Airworthiness Directives) for mandatory field action related to Raytheon Technologies' commercial aerospace products
RT-AE-250a.2	Product Safety	(1) Number of counterfeit parts detected (2) Percentage avoided	The company is continuing to evaluate this reporting element.	
RT-AE-250a.3	Product Safety	(1) Number of Airworthiness Directives received (2) Total units affected	All Airworthiness Directives are publicly available. The most recent information concerning those directives can be found on the appropriate regulatory sites.	See European Aviation Safety Agency-regulated Airworthiness Directives See FAA-regulated Airworthiness Directives See Transport Canada-regulated Airworthiness Directives
RT-AE-250a.4	Product Safety	Total amount of monetary losses as a result of legal proceedings associated with product safety	Raytheon Technologies considers this information to be confidential.	
RT-AE-410a.1	Fuel Economy and Emissions in Use Phase	Revenue from alternative energy-related products	Raytheon Technologies does not generate revenue from alternative energy-related products.	

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-410a.2	Fuel Economy and Emissions in Use Phase	Description of approach and discussion of strategy to address fuel economy and greenhouse gas emissions of products	Emissions of carbon dioxide (CO_2) from aircraft and engines occur predominately during their use; the release of CO_2 from cradle-to-gate only comprises approximately 2% of emissions, with the remaining 98% being produced during operation. Additionally, over the last 80 years, continuing technology advancements have enabled engines to improve efficiency by 1-1.5% per year. The following are examples of fuel efficiency research and development efforts by our Pratt & Whitney, Raytheon Intelligence & Space and Collins Aerospace business units: **Pratt and Whitney** (P&W), in developing and fielding the Geared Turbofan (GTF) engine for single-aisle aircraft, took the first step toward meeting the International Civil Aviation Organization (ICAO) goals of carbon neutral growth beyond 2020, and 50% of 2005 levels of CO_2 by 2050. Since its initial entry into service (EIS) on the Airbus A320NEO in 2016, the GTF engine family has grown to power five different single-aisle and regional aircraft types. The GTF engine's advanced technology reduced fuel consumption by approximately 16% and oxides of nitrogen by 50% relative to the prior state-of-the-art engine. P&W expects the benefit to impact all future large commercial aircraft. As an engine manufacturer, P&W does not control the timing or configuration of future aircraft developed for the commercial fleet. However, the business does continually invest in advanced technologies for propulsion systems, including gains in thermo-propulsive efficiency, mass and drag. Achieving the ICAO 2050 goals of a 50% reduction in CO_2 relative to 2005 levels will require step changes in the efficiency of operational procedures. P&W is exploring potentially disruptive propulsion technologies capable of meeting the 2050 goals and is working with key government agencies and airframe customers around the globe to explore and understand the full potential of aircraft engine configurations. The next generation of gas turbine engines for commercial aviation will require a broad range of technologies and design methods to achieve the projected fuel burn improvements in two areas: • **Thermal efficiency:** Thermal efficiency has improved by more than 400% in the 82 years since the advent of the jet engine. Future improvements will likely be gained through advanced design methods; clearance management; high temperature materials such as ceramic matrix composites (CMC);	

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-410a.2 (cont.)			high thermal effectiveness cooling circuits; and adapting cooling flows to flight envelope requirements. • **Propulsive efficiency:** Propulsive efficiency advancements led to the first generation of GTF engines. Future improvements that fully exploit this design paradigm may include reduced fan pressure ratios (higher bypass ratios) that require improved composite fan blades and/or other advanced concepts for mass reduction; advanced nacelle technologies and design methods that allow reduced drag and weight; and multidisciplinary design methods that include the intake, fan and full engine. Other disruptive concepts are being explored that could further reduce fuel burn. These concepts, which require significantly higher levels of integration between interdependent propulsion system elements including airframe, systems and engine, will require advances across disciplines, such as: • Lighter, more efficient yet robust electrical system component technologies to improve the effectiveness of hybrid thermal/electrical propulsion systems. • Integration of novel airframes and propulsion technologies, which may include distributed propulsion and boundary layer ingestion. This level of integration will require new business and engineering arrangements to allow for cooperative design, integrated airframe/propulsion aerodynamics and designs, and further advances in materials and manufacturing. P&W designed the GTF family to be fully capable of using certified Sustainable Aviation Fuel (SAF) products. Additionally, P&W is committed to ensuring that products fielded after 2030 are fully capable of using SAF products in any blend ratio up to 100% that are certified and available in the marketplace. P&W has participated on the Commercial Aviation Alternative Fuels Initiative (CAAFI) R&D and Certification committees since 2006 and works with stakeholders to encourage the research, development and deployment of new fuel pathways. P&W is also exploring the use of other fuels, including carbon-free fuels such as hydrogen and ammonia. Most of aviation products' emissions occur at high altitudes. Non-CO_2 emissions (e.g., oxides of nitrogen (NOx) and particulate matter) at these altitudes can potentially contribute to greater global warming impacts than CO_2, such as through ozone and contrail formation. All of the aforementioned P&W propulsive-efficiency improvement initiatives, explorations with hydrogen and the use of SAF are expected to reduce non-CO_2 emissions.	

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-410a.2 (cont.)			**Raytheon Intelligence & Space** is fielding state-of-the-art air traffic management systems in accordance with the FAA NextGen project. This Trajectory-Based Operations (TBO) concept leverages capabilities of modern aircraft to reduce flight times, save fuel and reduce greenhouse gas emissions. Depending on the airport and the FAA's implementation, TBO is expected to reduce air transportation's CO_2 and NOx emissions up to 10%. **Collins Aerospace** is upgrading its navigation systems to harness information for optimal aircraft trajectory planning. Collins Aerospace also is developing lightweight interior seats and structures to reduce aircraft weight. Additionally, it is continually working to reduce drag and mass through new nacelle technologies that improve propulsion system/airframe integration. In addition, Collins continues to invest in power generation, power conversion, power distribution and thermal management technologies that enable a more-electric aircraft and support a hybrid-electric propulsion system. These efforts will reduce aircraft noise, fuel consumption and CO_2 emissions at a lower cost of operations for the airlines.	
RT-AE-440a.1	Material Sourcing	Description of the management of risks associated with the use of critical materials	Raytheon Technologies relies upon a wide variety of materials to manufacture and maintain our products. We use these materials in our direct operations, our supply chain and with our customer base and aftermarket service providers. Many of these materials are subject to restrictions and limitations on their acquisition and use, arising from a range of issues including regulations, limits on global supply and geopolitical considerations. We have processes to identify and address business continuity risks arising from these restrictions and limitations, and we continue to harmonize and integrate legacy procedures following our April 2020 merger. Raytheon Technologies instituted a Global Chemical Substances Program for managing risks associated with restrictions on substances. The program monitors ongoing and emerging risks, including U.S. Geological Survey reports on minerals. We then assess potential impacts and implement any necessary risk mitigation measures in accordance with standard procedures across and within the company's business units.	See Raytheon Technologies 2020 10-K (filed with the SEC on February 8, 2021), Suppliers and Raw Materials, page 9 See Raytheon Technologies Conflict Minerals Policy Statement and Raytheon Technologies Conflict Minerals Form SD/A 2020-06-01 (filed with the SEC on June 1, 2020)

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-440a.1 (cont.)			We are largely dependent upon foreign sources for raw materials, such as rare earth elements, cobalt, tantalum, chromium, rhenium and nickel, often sourced from a deep supply chain. We manage this dependence and the accompanying risk through long-term agreements and the conservation of materials, including scrap reclamation, as well as research and development of alternative technologies and new manufacturing processes. We balance the risks with the costs of alternative practices. We take seriously reports that the violent conflict in the Democratic Republic of the Congo (DRC) region is partially financed by the exploitation and trade of "conflict minerals" as defined by section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Conflict Minerals Rule). Accordingly, Raytheon Technologies supports legislation enacted to curb the illicit trade of these minerals (tin, tantalum, tungsten and gold) and engages in efforts to reduce the risk that these minerals may contribute to the violence in the DRC region. Raytheon Technologies and its business units comply with the Conflict Minerals Rule, and we expect our suppliers to comply with all applicable laws and regulations and to assist us in fulfilling our obligations under the rule. Raytheon Technologies also employs standard procedures to comply with material sourcing restrictions from our defense and commercial customers. These include the U.S. Department of Defense requirements on Sensitive Materials and Specialty Metals that restrict the sourcing of rare earth magnets, titanium, and various cobalt, nickel and specialty steel alloys from certain countries.	
RT-AE-510a.1	Business Ethics	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	The company is continuing to evaluate this reporting element.	
RT-AE-510a.2	Business Ethics	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.	

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-510a.3	Business Ethics	Discussion of processes to manage business ethics risks throughout the value chain	**Anti-corruption policies** Our April 2020 merger combined two companies with their own robust anti-corruption compliance programs. Out of 134 of the world's largest defense companies, Raytheon Technologies was one of the only two that received a Band A rating in Transparency International's Defense Companies Index. Now, Raytheon Technologies is creating a framework leveraging best practices from each legacy company. While the new anti-corruption policy framework is being developed and implemented across the enterprise, our respective legacy policies continue to provide robust controls to mitigate corruption risk and reduce the risk of improper payments. Both legacy anti-corruption policies required that we win business solely on the merits of our products and services. Raytheon Technologies will not bribe anyone to obtain or retain business or secure any other advantage, nor allow anyone to do so for our benefit, in any market—public or private—anywhere. Raytheon Technologies maintains a zero-tolerance policy for corruption that applies to its third parties, suppliers, employees and other affiliated parties. *Employees* Raytheon Technologies has several employee awareness programs to mitigate bribery, corruption, illicit arms trade and other business risks. The foundational awareness document is the Code of Conduct (the Code), which specifically addresses bribery, corruption and international trade risks. It describes, in plain language, the specific behaviors that we expect from all employees and the rationale. Supplementing the Code are several Raytheon Technologies policies, issued both at the corporate and business unit levels. Every Raytheon Technologies employee receives annual ethics and compliance training. We ensure anti-corruption compliance through written communication, video-based training, live training, and targeted online and in-person training for high-risk personnel. Reinforcing Raytheon Technologies' learning program is an ongoing communication program from all levels of leadership. *Third-party sales intermediaries* We work closely with our third-party sales intermediaries to ensure they fully understand and agree to comply with our expectations.	See Raytheon Technologies Ethics & Compliance See Raytheon Technologies Code of Conduct and Supplier Code of Conduct See Raytheon Technologies Ombuds Program See How we pursue anti-corruption initiatives See The International Forum on Business Ethical Conduct (IFBEC) Global Principles See the Defense Industry Initiative See the International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State See the Export Administration Regulations (EAR) administered by the U.S. Department of Commerce See the Sanctions Programs and Country Information administered by the U.S. Department of the Treasury

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SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-510a.3 (cont.)			They are subject to robust due diligence during the selection and onboarding process to confirm their commitment to good business practices. Once on board, we provide them with training and continuously monitor their compliance. *Suppliers* Expectations for compliance with anti-corruption laws and, more broadly, Raytheon Technologies' values and the Code are flowed through the supply chain, most prominently with Raytheon Technologies' Supplier Code of Conduct. Suppliers must adopt this code or have a substantially similar code in place to do business with Raytheon Technologies. The Raytheon Technologies Office of General Counsel, our Finance and Controllers organizations, and our Internal Audit team work together to ensure that we maintain robust internal controls for anti-corruption risk areas and accurate and transparent books and records. All assets, liabilities and transactions are promptly and accurately reflected, and Raytheon Technologies employees are strictly prohibited from ever making a deliberately false or misleading entry in our books or records, no matter how small or immaterial. Raytheon Technologies maintains a robust monitoring program to ensure that all of our business units uphold these requirements. To ensure enterprisewide implementation, Raytheon Technologies regularly assesses and reviews the implementation and sustainment of its anti-corruption controls. When gaps or violations are discovered, the company conducts objective, thorough and balanced investigations. Raytheon Technologies is an industry advocate for ethical business conduct and advances this commitment through various global anti-corruption initiatives, including the Global Principles of Business Ethics for the Aerospace and Defense Industry, the International Forum on Business Ethical Conduct and the Defense Industry Initiative. **Illicit arms trade** Raytheon Technologies acts as a prime contractor or major subcontractor for numerous U.S. and foreign government defense programs. Certain of our products, services, and technologies have military or strategic applications, and as such they are subject to an extensive array of U.S. and other countries' laws, regulations and policies governing international trade in military and strategic items.	

SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-510a.3 (cont.)			In the United States, these include, among others, the International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State, the Export Administration Regulations (EAR) administered by the U.S. Department of Commerce, and embargoes and sanctions regulations administered by the U.S. Department of the Treasury. Raytheon Technologies maintains a comprehensive global trade compliance program to manage the legal and regulatory requirements of U.S. government agencies and their foreign government counterparts that govern international military sales and arms transfer activities everywhere we operate. This includes activities conducted with respect to the award, administration and performance of defense contracts for the life cycle of the program with all parties in the value chain. Depending on the type of international sale from the United States (foreign military sale versus direct commercial sale), Raytheon Technologies may require an export authorization issued by the U.S. Department of State, Department of Commerce or other agency. U.S. export authorization applications are subject to broad-based interagency review during which the agencies consider national security and foreign policy, nonproliferation and human rights, among other factors, in reaching a determination. In addition, for certain international sales, the U.S, Department of State must notify the U.S. Congress prior to approving export authorizations. Raytheon Technologies actively monitors its program for compliance with all applicable regulatory requirements and authorizations. Raytheon Technologies' global trade compliance program manages foreign government laws, regulations, and procurement policies and practices in addition to U.S. government requirements. We are committed to meeting all of our legal and regulatory responsibilities both domestically and abroad. **Internal reporting mechanisms** Raytheon Technologies has several internal mechanisms for reporting suspected violations of its ethics policies or anti-corruption laws and regulations. Those mechanisms are listed in the Code, available online in 19 languages.	

Industry: Aerospace & Defense

Table 2. Activity Metrics

SASB Code	Topic	Metric	Disclosure	Additional Information
RT-AE-000.A	Activity Metrics	Production by reportable segment	The company is continuing to evaluate this reporting element.	
RT-AE-000.B	Activity Metrics	Number of employees	Approximately 181,000 globally	

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Page 2: F-35, photo courtesy U.S. Air Force
Page 3: Receiving station, photograph by Reuben Wu