



By the numbers

Financials¹

\$67.1

2022 net sales
(dollars in billions)

\$4.78

2022 adjusted earnings
per share²

\$7.1

2022 research and development³
(dollars in billions)

\$7.2

2022 cash flow from operations
(dollars in billions)

\$2.160

2022 dividends paid
per common share

\$175

2022 backlog
(dollars in billions)

Sales mix

Sales by type

41% Commercial
59% Defense

Sales by geography

61% United States
17% Europe
12% Asia Pacific
5% Middle East and
North Africa
5% Other

Total backlog

\$106B Commercial
\$69B Defense

Raytheon Technologies

Raytheon Technologies (NYSE: RTX) is the world's largest aerospace and defense company. Our global team of 180,000+ employees pushes the limits of known science and redefines how we connect and protect our world. We are advancing aviation, building smarter defense systems and creating innovations to take us deeper into space. The company, with 2022 sales of \$67 billion, is headquartered in Arlington, Virginia.

To learn more, visit www.rtx.com.

¹ The financial information presented is on a continuing operations basis.

² Adjusted earnings per share is a non-GAAP financial measure. For the corresponding measures calculated in accordance with generally accepted accounting principles (GAAP) and a reconciliation of the differences between the non-GAAP and GAAP measures, please refer to page 14 in this annual report.

³ Amounts include company- and customer-funded research and development.

Dear Shareowners

As I reflect on Raytheon Technologies' growth and progress in 2022, I'm gratified our strong fundamentals and innovative spirit prevailed through a year of adversity.

We worked through tremendous challenges, including inflation headwinds, a strained supply chain, an extremely tight labor market and Russia's invasion of Ukraine, which caused us to cease all operations and sales in Russia. Despite these many challenges, this past year confirmed that our focused portfolio, our superior technical capabilities and our talented workforce are unmatched across commercial aerospace and defense markets.

Commercial air traffic continued its recovery from the global pandemic, resulting in strong demand for our commercial products and services, while heightened threat levels are leading the United States and its allies to enhance defense readiness and to invest in advanced capabilities.

Our transformative technologies are allowing us to shape the future of our industry in sustainable flight, connected aviation ecosystems, multi-domain operations, and next-generation sensors and effectors. Two years into our merger, we continue to realize operational advantages and cost synergies, and our \$175 billion backlog underscores the high demand for our solutions, products and services.

We take pride in our mission, and as near-term headwinds recede and we continue to invest in our business, we are well positioned for future success.

Gregory J. Hayes
Chairman and
Chief Executive Officer



Financial highlights

In 2022, Raytheon Technologies had net sales of \$67.1 billion and adjusted earnings per share of \$4.78, driven by the commercial air traffic rebound. We spent more than \$9 billion on research and development and capital expenditures in 2022 as we continue to invest in technology and innovation and fund future organic growth. We generated \$7.2 billion in cash flow from operations and ended the year with \$4.9 billion in free cash flow despite a \$1.6 billion additional U.S. federal cash tax payment associated with the amortization of R&D spending for federal tax purposes.

We continue to reduce costs, achieving over \$400 million in merger-related gross cost synergies. These bring our total synergies to about \$1.4 billion since the merger, and we are on track to meet our target of \$1.5 billion a year earlier than planned.

We also returned \$5.9 billion to shareowners in 2022 through dividends and share repurchases, bringing our capital return merger-to-date to \$13.3 billion.

Continued progress

► Sustainable aviation

Raytheon Technologies' commitment to sustainable air travel continues to advance. In October, Airbus began development flight testing of the Pratt & Whitney GTF Advantage engine on an A320neo aircraft. The GTF Advantage is the world's most efficient and sustainable single-aisle aircraft engine, and last year it also proved capable of running on 100 percent sustainable aviation fuel. Since entering service in 2016, GTF engines have saved more than one billion gallons of jet fuel and more than 10 million metric tons of CO₂.

Our leadership in sustainability was also evident in NASA's selection of Pratt & Whitney to develop advanced engine technologies to reduce fuel consumption and emissions for the next single-aisle aircraft. Meanwhile, the European Union Commission selected Collins Aerospace and Pratt & Whitney, via the Clean Aviation Joint Undertaking, to team with EU and UK partners on seven sustainable aviation development projects, ranging from hybrid electric propulsion and thermal management to novel wing designs and future liquid hydrogen storage tanks. Additionally, our 2021 acquisition of FlightAware continues to progress as we integrate aircraft tracking and AI-driven prediction tools into offerings for airports, commercial and business aviation and even uncrewed aircraft system customers.

► Smarter defense

Raytheon Technologies continues to be an essential partner in U.S. and allied defense. We are a leader in the development of operational hypersonic and counter-hypersonic systems, a key strategy for the U.S. military. After a second successful flight test of the Hypersonic Air-breathing Weapon Concept in July, the U.S. Air Force awarded Raytheon Missiles & Defense a \$1 billion contract to develop the Hypersonic Attack Cruise Missile. RMD also completed the systems requirement review for its glide phase interceptor prototype to defend the United States from hypersonic missile threats.

As part of the U.S. government's support for Ukraine, Raytheon Technologies' solutions are being used to defend Ukrainian citizens, including the Javelin weapon system, Stinger missiles and GPS-guided Excalibur munitions. In November, the U.S. Army

“Since entering service in 2016, GTF engines have saved more than one billion gallons of jet fuel and more than 10 million metric tons of CO₂.”

Adjusted earnings per share and free cash flow are non-GAAP financial measures. See page 14 for additional information on non-GAAP measures.

awarded the company a \$1.2 billion contract for six National Advanced Surface-to-Air Missile Systems for Ukraine, and in December, the U.S. government announced plans to send a Global Patriot Solutions missile defense system to Ukraine.

In September, Pratt & Whitney delivered its 1,000th F135 engine — the safest, most capable military jet engine in operation. We are also working on modernization of the F-35, pairing Pratt & Whitney's F135 Engine Core Upgrade with Collins' Emergency Power and Cooling System for significantly more thrust, range and thermal capabilities. These engine system upgrades will greatly enhance engine efficiency and engine life, as well as reduce life cycle cost. This unique solution demonstrates the true power of our company.

Raytheon Technologies continues to support multi-domain operations on several fronts, including the next phase of development for the U.S. Army's TITAN program, a tactical ground station that finds and tracks threats to support long-range precision targeting. Collins was awarded a production contract of up to \$583 million for the Mounted Assured Positioning, Navigation and Timing System Gen II Program. RMD was awarded a \$651 million contract, with options totaling \$2.5 billion, for the AN/SPY-6(V) family of radars to equip 31 U.S. Navy ships.

RMD also delivered the first Lower Tier Air and Missile Defense Sensor to the U.S. Army, providing a stepped increase of performance from our legacy Patriot system, defending against a range of threats, from crewed and uncrewed aircraft to cruise missiles and ballistic missiles.

► Intelligent space technologies

We continue to make advances in space technologies, which we know will be essential for the future of global commerce, scientific discovery and security. In 2022, Raytheon Intelligence & Space delivered the ground test and flight operations system in support of the James Webb Space Telescope, and Collins was selected to produce NASA's next-generation spacesuit for the International Space Station. In November, NASA launched Artemis 1, which included key subsystems and avionics from Collins, and also included CubeSat miniature satellites that leverage precision avionics from our recently acquired Blue Canyon Technologies.



Global Patriot Solutions
missile defense system

An aerial photograph of a lush green forest with a winding river. In the foreground, the yellow and grey components of an aircraft engine are visible, partially obscuring the view of the forest.

How we are advancing

2022 was our first full year using our common operating system, known as CORE (customer-oriented results and excellence). Our CORE system provides a common language, toolset and methodology for delivering on customer commitments — all directed toward organic growth through greater collaboration.

Our CORE operating system is showcased in our new state-of-the-art advanced casting foundry and airfoil production facility in Asheville, North Carolina, which opened its doors in November. The facility's highly automated manufacturing will improve the quality and productivity of high-volume programs for decades to come. Our modernization efforts are also reflected in our linking of more than 15,000 machine tools and test stands to our network and deploying an internet-of-things layer to 46 additional factories. Thanks to CORE initiatives in our factory in Largo, Florida, we achieved a 25 percent reduction in cycle time and a 10 percent reduction in floor space.

Clearly, supply chain disruptions affected the global economy — and Raytheon Technologies. But we were able to reduce the impact through our dedicated team of specialists who worked with our 14,000 product suppliers to monitor performance, diagnose problems and find solutions.

We make products essential to national security and flight safety, and the criticality of that fact underpins everything we do. We understand the importance of delivering what customers need today, while investing our time and talents innovating for the future. We will make advancements in artificial intelligence and machine learning to help enhance shared knowledge and to aid critical decision-making in aerospace, defense and space. We will also continue to develop advanced digital models that increase our industry's efficiency and productivity, while investing in smart cyber solutions to ensure system safety.

Commitments to our communities and our workforce

In 2022, we put our *People, Planet and Principles* environmental, social and governance strategy into practice. We built and integrated measurement systems across our company, adding the same engineering rigor and discipline we bring to our product development to our ESG strategy, to create long-term outcomes that will impact generations to come.

As an example, we can see clearly where we continue to make progress on diversity, equity and inclusion. We track global workforce shifts to determine where to make the most impactful community and academic investments that can help solve the pipeline challenge. From there, we are working to achieve executive gender parity, aiming for 50 percent women executives across the globe. And we seek to double the representation of people of color in executive roles compared to 2020.

Improving opportunities for all people is aligned with maintaining the health of our planet. As we look to the future as an industry, we face critical questions about how to grow sustainably. I believe Raytheon Technologies has the talent, technology and vision to meet the environmental challenges ahead and to lead our industry into the future.

Whether it is sustainability or workforce equity, our ambitions are clearly outlined, and we have prioritized progress. Our Board of Directors reviews our plans and milestones regularly and assesses our performance in these areas under our annual incentive compensation plan.

Resilience leads to progress and growth

Since the merger in 2020, we've been tested — by the pandemic, by inflation and supply chain issues, and by labor shortages. And we have demonstrated our resilience: We've strived to maintain our commitments to our customers and communities, and we've built a backlog that supports our position as an industry leader.

As I write this letter, we have just announced a reorganization of our business units to better position Raytheon Technologies for the future. We stand on 100 years of pioneering technology, and yet we still have the energy and opportunity of a newly formed company. One thing you can count on: We will continue to disrupt ourselves when needed in the ongoing pursuit of better ways to deliver value to our customers and all stakeholders.

My thanks to our dedicated team for another outstanding year. And thanks to you, our shareowners, for your ongoing support of Raytheon Technologies as we continue to lead, inspire and redefine our industry. Thank you for your belief in our ability to deliver value to you, and thank you for your trust.



Gregory J. Hayes

Chairman and Chief Executive Officer

“Raytheon Technologies has the talent, technology and vision to meet the environmental challenges ahead and to lead our industry into the future.”

Business highlights



Collins Aerospace

Collins Aerospace specializes in sustainable and cost-effective materials, advanced avionics, connected data networks, comfort-driven cabin equipment, connected mission systems and electrified power and control systems for the aerospace and defense industry.

\$20.6B

net sales

\$2.6B

adjusted operating profit*

- Opened new engineering and operations centers in India as part of more than \$200 million of investments in R&D and manufacturing
- Launched award-winning aircraft interiors products, including business class seating and suites, an environmentally friendly food-cooling system and jetlag-reducing lighting
- Won prognostic health maintenance, repair and overhaul contracts with Singapore Airlines and Scoot, along with an on-site support contract extension with China Southern Airlines
- Reached key delivery milestones for the one-megawatt electric motor as part of the regional hybrid-electric demonstrator
- Selected by the U.S. Air Force Research Laboratory to design an advanced, high-impact resistant thermoplastic ventral fin for the F-16



Pratt & Whitney

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

\$20.5B

net sales

\$1.3B

adjusted operating profit*

- Earned a \$115 million contract for the F135 Engine Core Upgrade from the U.S. Department of Defense and welcomed three additional countries to the F-35 program — all powered by the F135 engine
- Began FAA FAR33 certification testing on the GTF Advantage engine for the A320neo family
- Celebrated the unveiling of the U.S. Air Force's B-21 Raider, powered by Pratt & Whitney engines — the first sixth-generation aircraft
- Attained Canadian certification of the PW127XT-M regional turboprop engine for ATR aircraft and PW812GA turbofan for the Gulfstream G400, along with the American and European certifications of the PW812D turbofan for the Dassault Falcon 6X
- Supported the entry into service of the ATR 72-600 (PW127XT-M), Cessna SkyCourier (PT6A-65SC), Daher Kodiak 900 (PT6A-140A) and TBM 960 (PT6E-66XT), and Thrush Aircraft 510P2+ (PT6A-140AG)

Hybrid-electric flight demonstrator progress: In 2022, Pratt & Whitney and Collins marked the first successful ground test of their regional hybrid-electric flight demonstrator engine, which is targeting a 30 percent improvement in fuel efficiency and CO₂ emissions compared to today's most advanced regional turboprop aircraft. The system, which integrates a Collins one-megawatt electric motor with a highly efficient Pratt & Whitney fuel-burning engine, is expected to begin flight testing in 2024.

* See page 14 for additional information regarding non-GAAP financial measures.



Raytheon Intelligence & Space

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.

\$14.3B

net sales

\$1.3B

adjusted operating profit*

- Celebrated the successful launch into orbit of the National Oceanic and Atmospheric Administration's latest polar satellite with RI&S' Joint Polar Satellite System-2 to enhance forecasting and long-term planetary change observation
- Selected by the U.S. Federal Aviation Administration for a 10-year, \$375 million project to modernize the Wide-Area Augmentation System to enhance safer air travel throughout the national airspace system
- After passing a tailored mission payload critical design review for the U.S. Space Force's Missile Track Custody program in November, RI&S was selected as the prime contractor to develop a prototype of the Medium Earth Orbit missile tracking system
- Received U.S. Air Force Advanced Battle Management System Digital Infrastructure Consortium Award to aid its development of the digital backbone to support the U.S. Department of Defense's Joint All-Domain Command and Control vision after demonstrating critical capabilities during the U.S. DoD's Valiant Shield 22 exercises
- Validated the ability to defeat multiple mortars and large drones with Stryker-mounted high-energy laser in collaboration with a subsidiary of KBR
- Broke ground in January on a \$450 million, 400,000-square-foot intelligent factory in North Texas, planned to open in 2025



Raytheon Missiles & Defense

Raytheon Missiles & Defense provides the industry's most advanced end-to-end solutions to detect, track and engage threats.

\$14.9B

net sales

\$1.6B

adjusted operating profit*

- Down-selected by the U.S. Missile Defense Agency to develop the Glide Phase Interceptor, the first interceptor specifically designed to defeat hypersonic threats
- Earned a \$972 million contract for upgraded AMRAAM missiles from the U.S. Air Force and Navy and international customers
- Completed the second successful test flight of the Hypersonic Air-breathing Weapon Concept for DARPA and the U.S. Air Force, in partnership with Northrop Grumman
- Awarded a \$648 million contract for the latest SM-3 defensive interceptor variant, Block IIA — a defensive interceptor weapon capable of destroying short- to intermediate-range ballistic missiles
- Selected by the U.S. Navy to provide new radars, which simultaneously track enemy missiles and planes, to every new surface ship in its fleet, a \$651 million contract with options that could bring the total value to \$3.16 billion
- Delivered SPY-6 radar arrays — the first delivery of three — to the future USS John F. Kennedy (CVN 79), the first aircraft carrier to receive the advanced radar

Advanced materials for a competitive edge

Raytheon Technologies is dedicated to tackling the biggest challenges in aerospace and defense. Sometimes those challenges require new materials that push the limits of what's possible.

Advancing technology with advanced materials

Advanced materials are essential for a wide range of solutions that can reduce emissions, allow for higher speeds, increase heat resistance and reduce costs.

Nearly every product line across Raytheon Technologies relies on advanced materials, and the company places great value on our investment. Differentiated materials in development at Raytheon Technologies include:

- **Composites:** Combine fibers enveloped in a matrix material to create special properties such as high strength and low weight
- **Coatings:** Used to protect objects from the environment surrounding them, including high temperatures, corrosive effects, dust, high voltage and electromagnetic interference
- **Metallic alloys:** Combine metals and other elements to deliver capabilities such as high strength and harsh environment tolerance
- **Semiconductors:** Used to build microprocessors, power electronics, radio frequency devices and light-sensing or light-emitting devices for myriad applications

In fact, advanced materials is one of 13 cross-company technology roadmaps that we have identified as essential to the future of our industry, and we foster collaboration across the company to develop advanced materials for resource efficiency, speed-to-market and quality.

Three examples of advanced materials Raytheon Technologies is investing in include gallium nitride, ceramic matrix composites and carbon/carbon composites.

Mature materials, faster

Future applications will demand performance beyond even today's capabilities. Our scientists and engineers are already charting the path for materials development to support next-generation needs. We collaborate across our businesses to leverage the best talent and experience from our 59,000-strong team of technologists, and to bring the benefits of these advanced technologies to as many applications as we can. The company is committed to making the long-term investments needed to tackle the most complex challenges in our industry.



► Gallium Nitride

Raytheon Technologies' investment in gallium nitride dates back to the late 1990s, driven by the need for more powerful semiconductors for radar systems. The company pioneered the use of gallium nitride — a hard, glass-like substance that can move electrons 1,000 times faster than the silicon commonly used in computer chips. In radars, gallium nitride amplifies high-power radio frequency signals efficiently, increasing range while decreasing size, weight, power consumption and cost.

Today, military-grade gallium nitride powers multiple radars and sensors, from the SPY-6 family of radars and the Global Patriot Solutions air and missile defense system to the Next Generation Jammer and airborne radars for the F/A-18. To support these product lines and ensure a steady supply of quality material, Raytheon Technologies has its own semiconductor foundry in Andover, Massachusetts.

► Ceramic Matrix Composites

Since the dawn of the jet age, engineers have dramatically raised the temperature of the “hot section” of the gas turbine engine, including the combustor, turbines and exhaust, to increase power and fuel economy. This has required continuous advances in materials, from wrought alloys used in the first engines to the current use of single-crystal nickel superalloys and thermal barrier coatings.

There is still further potential to drive improvements in engine performance through hotter operation, and we are developing materials that can withstand even higher temperatures, focusing on the unique properties of silicon carbide, in the form of ceramic matrix composites. Silicon carbide is much lighter than today's best superalloys, with the ability to withstand much higher temperatures.

In 2021, we opened a “center of excellence” in Carlsbad, California, specifically to develop ceramic matrix composite technology. Testing results bode well for major improvements in engine fuel efficiency, reduced emissions and a smaller carbon footprint for both commercial and military engines.

► Carbon/Carbon Composites

For years, Raytheon Technologies has invested in the development of industry-leading carbon/carbon aircraft brake systems, where internal temperatures can reach up to 3,000 degrees during an emergency stop — enough to melt steel.

Similar temperatures will be encountered during high-speed flight — providing an opportunity to use carbon/carbon composites in a whole new platform.

Influenced by the work we've done on brakes for commercial aircraft, we are developing processes to tailor carbon/carbon material properties for high-speed applications where stability, light weight, strength and functionality at high temperatures are required.

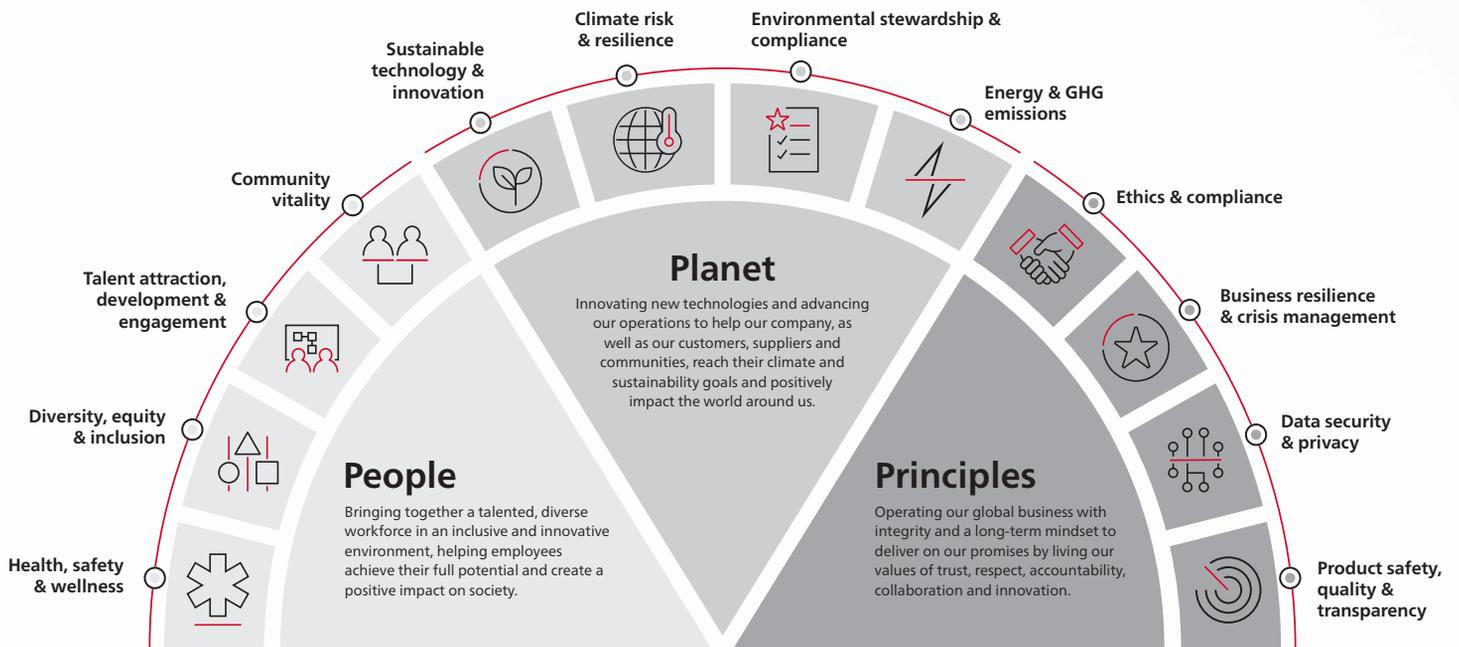
Early signs are encouraging. In 2022, the teams developed a process to create high-quality carbon/carbon that will not only differentiate future high-speed programs but will also contribute to other harsh environmental structural applications across Raytheon Technologies.

Environmental, Social and Governance at Raytheon Technologies

Our commitment to innovation and collaboration drives our vision for a safer, more connected world, and it also underpins our ESG strategy. Our ESG pillars — People, Planet and Principles — are essential components of the mission-critical work that we perform.

We intentionally and actively integrate our ESG strategy throughout our business. Our CEO has ultimate accountability for our ESG strategy and performance, and our Board of Directors oversees all ESG efforts. ESG-related risks are considered in our enterprise risk management program, further integrating ESG issues into our long-range strategic planning and business operations.

Our ESG strategy





OUR ESG ASPIRATIONS

To guide our efforts, we have set forward-looking aspirations aligned with our impact areas and business strategy.

By 2030, we aspire to:

- **Decarbonize our operations** by reducing our greenhouse gas emissions by 46 percent from 2019 levels, in line with the Paris Agreement
- **Achieve our Workforce 2030 goals, inclusive of our DE&I aspirations**, with focused talent and community investments, ensuring all current and future employees have an equitable opportunity to work, grow and belong

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 percent of air transport carbon dioxide (CO₂) emissions through the engines, aircraft systems and services in our 2050 civil fleet, relative to 2015 technology levels and the associated emissions baseline

OUR 2022 ESG EFFORTS

Raytheon Technologies continued to drive toward our ESG goals, with notable initiatives and progress achieved throughout the year.

In 2022, we:

- Launched an Environmental Sustainability Technology Roadmap to chart an actionable path to 2050, with attention to products and services in both aerospace and defense markets, and to improving operations within our company
- Transitioned our Employee Resource Groups (ERGs) to build more effective employee communities, driving our company's inclusive culture and creating positive change
- Collaborated and increased accountability across all areas of our supply chain to help ensure that our products are made using quality and responsibly sourced materials, and that our suppliers operate in ways aligned to our values and environmental commitments
- Supported our nonprofit partners through grants, mentorship, volunteer support and programmatic advisory support, and helped partners improve the quality of their impact reporting and build more effective programming

Board of Directors

Gregory J. Hayes

Chairman and Chief Executive Officer,
Raytheon Technologies Corporation

Tracy A. Atkinson

Retired Executive Vice President
and Chief Administrative Officer,
State Street Corporation

Leanne G. Caret

Retired Executive Vice President,
The Boeing Company and Former
CEO, Boeing Defense, Space and
Security

Bernard A. Harris, Jr.

Chief Executive Officer and Managing
Partner, Vesalius Ventures, Inc.

George R. Oliver

Chairman and Chief Executive Officer,
Johnson Controls International plc

Robert K. (Kelly) Ortberg

Retired Chairman, President and Chief
Executive Officer, Rockwell Collins, Inc.

Margaret (Meghan) L. O'Sullivan*

Professor, Harvard University
Kennedy School

Dinesh C. Paliwal

Lead director

Partner, Americas Private Equity,
KKR and Retired Chairman and CEO,
Harman International

Ellen M. Pawlikowski

General, U.S. Air Force (Retired)
and Former Commander, Air Force
Materiel Command

Denise L. Ramos

Retired Chief Executive Officer
and President, ITT Inc.

Fredric G. Reynolds

Retired Executive Vice President
and Chief Financial Officer,
CBS Corporation

Brian C. Rogers

Retired Chairman,
T. Rowe Price Group, Inc.

James A. Winnefeld, Jr.

Admiral, U.S. Navy (Retired)
and Former Vice Chairman
of the Joint Chiefs of Staff

Robert O. Work

Retired Deputy Secretary of Defense,
U.S. Department of Defense

Leadership

Gregory J. Hayes

Chairman, Chief Executive Officer

Christopher T. Calio

President, Chief Operating Officer

Roy Azevedo

President, Raytheon
Intelligence & Space**

Shane G. Eddy

President, Pratt & Whitney

Wesley D. Kremer

President, Raytheon
Missiles & Defense

Stephen J. Timm

President, Collins Aerospace

Barbara J. Borgonovi

Senior Vice President, Corporate
Strategy and Development

Vincent M. Campisi

Senior Vice President,
Enterprise Services,
Chief Digital Officer

Paolo Dal Cin

Senior Vice President,
Operations, Supply Chain,
Quality, EH&S

Pamela M. Erickson

Senior Vice President,
Chief Communications Officer

Ramsaran Maharajh, Jr.

Executive Vice President,
General Counsel

Neil G. Mitchell, Jr.

Executive Vice President,
Chief Financial Officer

Mark E. Russell

Senior Vice President,
Chief Technology Officer

Jeffrey Shockey

Senior Vice President,
Global Government Relations

Dantaya M. Williams

Executive Vice President,
Chief Human Resources Officer

* Margaret O'Sullivan is retiring from the Raytheon Technologies board in May 2023.

** Roy Azevedo retired as president of RI&S on February 1, 2023.

Cautionary note concerning factors that may affect future results

This 2022 Annual Report to Shareowners contains statements which, to the extent they are not statements of historical or present fact, constitute “forward-looking statements” under the securities laws. These forward-looking statements are intended to provide management’s current expectations or plans for our future operating and financial performance, based on assumptions currently believed to be valid, and are not statements of historical fact. Forward-looking statements can be identified by the use of words such as “believe,” “expect,” “expectations,” “plans,” “strategy,” “prospects,” “estimate,” “project,” “target,” “anticipate,” “will,” “should,” “see,” “guidance,” “outlook,” “goals,” “objectives,” “confident,” “on track,” “seek,” “aspire” and other words of similar meaning. All forward-looking statements involve a wide range of risks, uncertainties, assumptions and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. Such risks, uncertainties and

other factors are described under the captions “Cautionary Note Concerning Factors That May Affect Future Results” and “Risk Factors” beginning on pages 11 and 13, respectively, in the Annual Report on Form 10-K within this report, and other important factors disclosed previously and from time to time in our other filings with the Securities and Exchange Commission (SEC). Given these factors, as well as other variables that may affect our operating results, you should not rely on forward-looking statements, assume that past financial performance will be a reliable indicator of future performance, or use historical trends to anticipate results or trends in future periods. We expressly disclaim any obligation or intention to provide updates to the forward-looking statements and the estimates, except as required by law.

Use and definitions of non-GAAP financial measures

Raytheon Technologies Corporation (RTC) reports its financial results in accordance with accounting principles generally accepted in the United States (GAAP). We supplement the reporting of our financial information determined under GAAP with certain non-GAAP financial information. The non-GAAP information presented provides investors with additional useful information, but should not be considered in isolation or as substitutes for the related GAAP measures. Moreover, other companies may define non-GAAP measures differently, which limits the usefulness of these measures for comparisons with such other companies. We encourage investors to review our financial statements and publicly filed reports in their entirety and not to rely on any single financial measure.

Adjusted operating profit, adjusted earnings per share (EPS), and adjusted net income from continuing operations attributable to common shareowners are non-GAAP financial measures. Adjusted operating profit represents operating profit from continuing operations (a GAAP measure), excluding restructuring costs, acquisition accounting adjustments, and other significant non-operational items and/or significant operational items that may occur at irregular intervals (other significant items). Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions, the amortization of customer contractual obligations related to loss making or below market contracts acquired, and goodwill impairment. Adjusted EPS represents diluted

earnings per common share from continuing operations (a GAAP measure), excluding restructuring costs, acquisition accounting adjustments, and other significant items. Adjusted net income from continuing operations attributable to common shareowners represents net income from continuing operations attributable to common shareowners (a GAAP measure), excluding restructuring costs, acquisition accounting adjustments, and other significant items. For the business segments, when applicable, adjustments of operating profit similarly reflect continuing operations, excluding restructuring costs, and other significant items. Management believes that the non-GAAP measures just mentioned are useful in providing period-to-period comparisons of the results of RTC’s ongoing operational performance.

Free cash flow is a non-GAAP financial measure that represents cash flow from operating activities of continuing operations (a GAAP measure) less capital expenditures. Management believes free cash flow is a useful measure of liquidity and an additional basis for assessing RTC’s ability to fund its activities, including the financing of acquisitions, debt service, repurchases of RTC’s common stock and distribution of earnings to shareowners.

A reconciliation of the non-GAAP measures to the corresponding amounts prepared in accordance with GAAP appears in the tables following on page 14. The tables on page 14 provide additional information as to the items and amounts that have been excluded from the adjusted measures.

Reconciliation of Non-GAAP Measures to Corresponding GAAP Measures

Reconciliation of earnings per share (GAAP) to adjusted earnings per share (non-GAAP)

(dollars in millions, except per share amounts)	2022
Net income from continuing operations attributable to common shareowners	\$5,216
Adjustments to net income from continuing operations attributable to common shareowners:	
Restructuring costs	115
Acquisition accounting adjustments	1,893
Other significant items included in operating profit	401
Other significant items included in non-service pension income	2
Tax effect of restructuring and other significant items above	(518)
Other significant items included in noncontrolling interest	(11)
Total adjustments to net income from continuing operations attributable to common shareowners	1,882
Adjusted net income from continuing operations attributable to common shareowners	\$7,098
Weighted average diluted shares outstanding	1,485.9
Diluted earnings per share from continuing operations	\$3.51
Impact of other significant items on diluted earnings per share	1.27
Adjusted diluted earnings per share from continuing operations	\$4.78

Reconciliation of cash flow from operating activities (GAAP) to free cash flow (non-GAAP)

(dollars in millions)	2022
Net cash flows provided by operating activities from continuing operations	\$7,168
Less: Capital expenditures	2,288
Free cash flow from continuing operations	\$4,880

Reconciliation of segment results (GAAP) to adjusted segment results (non-GAAP)

(dollars in millions)	2022			
	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense
2022 Segment operating profit	\$2,343	\$1,075	\$1,342	\$1,519
Adjustments to segment operating profit:				
Restructuring costs	21	20	–	8
Impairment charges and reserve adjustments related to Russia sanctions	141	155	–	–
Charges associated with disposition of businesses	69	–	–	42
2022 Adjusted segment operating profit	\$2,574	\$1,250	\$1,342	\$1,569

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2022

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-00812

**RAYTHEON TECHNOLOGIES
CORPORATION**

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

06-0570975

(I.R.S. Employer Identification No.)

1000 Wilson Boulevard, Arlington, Virginia 22209

(Address of principal executive offices) (Zip Code)

(781) 522-3000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock (\$1 par value) (CUSIP 75513E 101)	RTX	New York Stock Exchange
2.150% Notes due 2030 (CUSIP 75513E AB7)	RTX 30	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging Growth Company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting Common Stock held by non-affiliates at June 30, 2022 was approximately \$141,816,683,821, based on the New York Stock Exchange closing price for such shares on that date. For purposes of this calculation, the Registrant has assumed that its directors and executive officers are affiliates.

At January 31, 2023, there were 1,464,954,584 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement for its 2023 Annual Meeting of Shareowners are incorporated by reference in Part III of this Form 10-K.

INDEX

PART I

Item 1.	Business	4
Item 1A.	Risk Factors	13
Item 1B.	Unresolved Staff Comments	26
Item 2.	Properties	26
Item 3.	Legal Proceedings	27
Item 4.	Mine Safety Disclosures	27

PART II

Item 5.	Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	28
Item 6.	Reserved	29
Item 7.	Management’s Discussion and Analysis of Financial Condition and Results of Operations	30
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	58
Item 8.	Financial Statements and Supplementary Data	59
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	116
Item 9A.	Controls and Procedures	116
Item 9B.	Other Information	116
Item 9C.	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	116

PART III

Item 10.	Directors, Executive Officers and Corporate Governance	117
Item 11.	Executive Compensation	118
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	118
Item 13.	Certain Relationships and Related Transactions, and Director Independence	119
Item 14.	Principal Accountant Fees and Services	119

PART IV

Item 15.	Exhibits, Financial Statement Schedules	120
Item 16.	Form 10-K Summary	127

SIGNATURES

Raytheon Technologies Corporation and its subsidiaries’ names, abbreviations thereof, logos, and products and services designators are all either the registered or unregistered trademarks or tradenames of Raytheon Technologies Corporation and its subsidiaries. Names, abbreviations of names, logos, and products and services designators of other companies are either the registered or unregistered trademarks or tradenames of their respective owners. References to internet web sites in this Form 10-K are provided for convenience only. Information available through these web sites is not incorporated by reference into this Form 10-K.

PART I

ITEM 1. BUSINESS

General

Raytheon Technologies Corporation is an aerospace and defense company that provides advanced systems and services for commercial, military and government customers worldwide. The terms “we,” “us,” “our,” “Raytheon Technologies,” “RTC” and the “Company” mean Raytheon Technologies Corporation, unless the context indicates another meaning. We serve commercial and government customers in both the original equipment and aftermarket parts and services segments of the aerospace industry. Our defense business serves both domestic and international customers as a prime contractor or subcontractor on a broad portfolio of defense and related programs for military and government customers. Raytheon Technologies, formerly known as United Technologies Corporation (UTC), was incorporated in Delaware in 1934.

The following description of our business should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” within Item 7 of this Form 10-K, including the information contained therein under the heading “Business Overview.”

Business Segments

Our operations are classified into four principal business segments: Collins Aerospace (Collins), Pratt & Whitney, Raytheon Intelligence & Space (RIS) and Raytheon Missiles & Defense (RMD), with each segment comprised of groups of similar operations. The Company recently announced its intention to streamline the structure of its core businesses into three principal business segments: Collins Aerospace, Pratt & Whitney and Raytheon. The Company plans to determine the exact composition of each segment and implement the reorganization in the second half of 2023. All segment information included in this Form 10-K is reflective of the existing four segments of Collins, Pratt & Whitney, Raytheon Intelligence & Space and Raytheon Missiles & Defense in accordance with the management structure in place as of December 31, 2022.

Collins Aerospace. Collins is a leading global provider of technologically advanced aerospace and defense products and aftermarket service solutions for aircraft manufacturers, airlines, and regional, business and general aviation, as well as for defense and commercial space operations. Collins’ product lines include integrated avionics systems, aviation systems, communications systems, navigation systems, electric power generation, management and distribution systems, environmental control systems, flight control systems, air data and aircraft sensing systems, engine control systems, engine components, engine nacelle systems, including thrust reversers and mounting pylons, interior and exterior aircraft lighting, aircraft seating and cargo systems, evacuation systems, landing systems, including landing gear, wheels and braking systems, hoists and winches, fire and ice detection and protection systems, actuation systems, and propeller systems. Collins also designs, manufactures, and supports cabin interior, oxygen systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management systems. Collins’ solutions support human space exploration with environmental control and power systems and extravehicular activity suits and support government and defense customer missions by providing airborne intelligence, surveillance and reconnaissance systems, test and training range systems, crew escape systems, and simulation and training solutions. Collins also provides connected aviation solutions and services through worldwide voice and data communication networks and solutions. Aftermarket services include spare parts, overhaul and repair, engineering and technical support, training and fleet management solutions, asset management services and information management services.

Collins sells aerospace and defense products and services to aircraft manufacturers, airlines and other aircraft operators, the U.S. and foreign governments, defense contractors, maintenance, repair and overhaul providers, and independent distributors around the world. Collins’ largest commercial customers are Boeing and Airbus with combined sales, prior to discounts and incentives, of 20%, 18% and 21% of total Collins segment sales in 2022, 2021 and 2020, respectively.

In 2022, Collins was awarded significant defense contracts for the electric power generation system on the B-52 modernization program, along with multiple awards related to enabling the Department of Defense’s Joint All Domain Command and Control (JADC2) initiatives for the connected battlespace, including a five-year contract by the U.S. Army for the Mounted Assured Positions, Navigation and Timing System (MAPS) Gen II and a contract for the mission system for the U.S. Army Air Launched Effects (ALE). Collins was also one of two companies selected to develop and produce NASA’s next-generation spacesuit for the International Space Station and for Artemis. In addition, in 2022, Collins integrated the FlightAware Foresight portfolio of industry-leading machine learning based predictive analytics, following Collins’ acquisition of FlightAware in November 2021. Collins also received numerous commercial air transport contract awards for airline selected buyer-furnished equipment installation for interiors, avionics, and wheels and brakes, along with a number of long-term FlightSense airline maintenance agreements. In addition, Collins continued its significant product development activities, including for major systems on the Airbus A321XLR, the Boeing 777X and 737 MAX 10, the Dassault Falcon 6X and the Xian MA700, final certification on COMAC’s C919, and systems in support of the Boeing T-7A trainer and the Boeing VC-25B.

Pratt & Whitney. Pratt & Whitney is among the world's leading suppliers of aircraft engines for commercial, military, business jet and general aviation customers. Pratt & Whitney's Commercial Engines and Military Engines businesses design, develop, produce and maintain families of large engines for wide- and narrow-body and large regional aircraft for commercial customers and for fighter, bomber, tanker and transport aircraft for military customers. Pratt & Whitney's small engine business, Pratt & Whitney Canada (P&WC), is among the world's leading suppliers of engines powering regional airlines, general and business aviation, as well as helicopters. Pratt & Whitney also produces, sells and services military and commercial auxiliary power units. Pratt & Whitney provides fleet management services and aftermarket maintenance, repair and overhaul services in all of these segments.

Pratt & Whitney sells products and services principally to aircraft manufacturers, airlines and other aircraft operators, aircraft leasing companies and the U.S. and foreign governments. Pratt & Whitney's largest commercial customer by sales is Airbus, with sales, prior to discounts and incentives, of 33%, 31% and 30% of total Pratt & Whitney segment sales in 2022, 2021 and 2020, respectively.

Pratt & Whitney produces the PW1000G Geared Turbofan (GTF) engine family, the first of which, the PW1100G-JM, entered into service in January 2016. The PW1000G GTF engine has demonstrated a significant reduction in fuel burn and noise levels and lower environmental emissions when compared to legacy engines. The PW1100G-JM engine is offered on the Airbus A320neo family of aircraft. PW1000G GTF engine models also power the Airbus A220 passenger aircraft and Embraer's E-Jet E2 family of aircraft. In addition, P&WC's PW800 engine has been selected to exclusively power Gulfstream's G400, G500 and G600 business jets, as well as to power Dassault's Falcon 6X business jet, which is scheduled to enter into service in 2023.

Pratt & Whitney is under contract to produce and sustain the F135 engine for the U.S. government's F-35 Joint Program Office to power the single-engine F-35 Lightning II aircraft (commonly known as the Joint Strike Fighter) produced by Lockheed Martin. F135 propulsion system configurations are used for the U.S. Air Force's F-35A, the U.S. Marine Corps' F-35B and the U.S. Navy's F-35C jets. F135 engines are also used on F-35 aircraft purchased by Joint Strike Fighter partner countries and other countries through foreign military sales arrangements. Pratt & Whitney is also under contract to build engines for the U.S. Air Force's B-21 long-range strike bomber and to develop next-generation adaptive engines for the U.S. Air Force.

The development of new engines and improvements to current production engines present important growth opportunities for Pratt & Whitney. In view of the risks and costs associated with developing new engines, Pratt & Whitney has entered into collaboration arrangements in which revenues, costs and risks are shared with third parties. At December 31, 2022, the interests of third-party collaboration participants in Pratt & Whitney-directed jet engine programs ranged, in the aggregate per program, from 13% to 49%. See "Note 1: Basis of Presentation and Summary of Accounting Principles" within Item 8 of this Form 10-K for a description of our accounting for collaboration arrangements. Pratt & Whitney also continues to enhance its programs through performance improvement measures and product base expansion, utilizing similar collaboration arrangements.

In 2022, Pratt & Whitney reached significant milestones on the GTF engine program, including surpassing a billion gallons of fuel saved and 10 million metric tons of carbon emissions avoided since entry into service. The GTF Advantage engine for the A320neo family began Federal Aviation Regulations Part 33 (FAR33) certification and development flight testing on the A320neo aircraft, and successfully ran on 100% sustainable aviation fuel (SAF). The GTF Advantage configuration extends the economic and environmental benefits of today's GTF engine, as it reduces fuel consumption by an additional 1 percent, extending the engine's lead as the most efficient powerplant for the A320neo family. The GTF family now powers more than 1,400 aircraft across 64 airlines and three aircraft platforms: Airbus A320neo family, Airbus A220 and Embraer E-Jets E2. The year also saw the entry into service of multiple new platforms, including the Cessna SkyCourier, Daher Kodiak 900 and TBM960, and ATR's next generation 42 & 72 aircraft powered by the new PW127XT-M engines, with Transport Canada engine certifications of the PW127XT-M, PW812GA and PW812D engines to power the ATR 72-600 regional turboprop, Gulfstream G400 and Dassault Falcon 6X aircraft respectively. In addition, Pratt & Whitney received a significant number of contract awards for the F135 program, which powers all three variants of the F-35 Lightning II fighter aircraft including an undefinitized contract action for Lots 15-17 and funding to begin work on an F135 engine core upgrade. The F135 program also achieved several F135 production milestones, including the delivery of the 1,000th production engine, and Pratt & Whitney added new customers, Switzerland, Canada, and Germany to the program. Significant activity continued on development programs including the Adaptive Engine Testing Program, as well as the rollout ceremony for the Northrop Grumman B-21 Raider, powered by Pratt & Whitney engines.

Raytheon Intelligence & Space. RIS is a leading provider of integrated space, communication and sensor systems, and cyber and software solutions to intelligence, defense, federal and commercial customers. RIS's Sensing and Effects business provides intelligence, surveillance and reconnaissance, precision targeting radars, and electronic warfare solutions across all domains, as well as end-to-end space solutions, including missile warning and intelligence, weather, and navigation. RIS Sensing and Effects products include the Multi-Spectral Targeting System (MTS) product family of sensors, Electro Optical Distributed Aperture System (EODAS), AN/APG-79 AESA Radar, AN/APG-82(V)1 AESA Radar, Next Generation Jammer Mid-Band

(NGJ-MB), Global Positioning System (GPS) Next-Generation Operational Control System (GPS-OCX), Next Generation Overhead Persistent Infrared (OPIR), and Future Operationally Resilient Ground Evolution (FORGE). RIS's Command, Control and Communications business provides automated battle management and secure, resilient communications systems, including terminals providing satellite communications connecting submarines, ships, aircraft and ground stations for the U.S. Department of Defense (DoD), identification friend or foe interrogators and transponders, and automation, surveillance, navigation, and landing solutions including the Joint Precision Approach Landing System (JPALS). RIS's Cyber, Training and Services provides full-spectrum cyber and service solutions in every domain, including offensive and defensive cyber services for certain classified and department of defense customers, cyber protection solutions which secure and monitor information technology (IT) systems and networks across the federal and commercial domains, and high consequence missions which provide classified special mission support and IT intelligence services to certain classified customers.

RIS serves as a prime contractor or major subcontractor on contracts with the U.S. Intelligence Community, DoD, Department of Homeland Security, the Federal Aviation Administration (FAA), National Aeronautics and Space Administration, and other international and classified customers.

In 2022, RIS continued to grow its classified business, receiving a number of significant contracts. RIS was selected as the prime contractor to develop a prototype Missile Track Custody system, a Medium Earth Orbit missile tracking system, for the U.S. Space Force. In addition, RIS won a competitive contract from the Federal Aviation Administration to upgrade the Wide-Area Augmentation System (WAAS), a space-based precision navigation system that will enhance safer air travel in support of the National Airspace System. RIS continued to invest in advancing its products and services, as well as developing next generation capabilities to meet evolving customer missions. RIS achieved significant advancements in key capabilities across its portfolio, including tactical airborne radars for current and future manned and unmanned aircraft, intelligence surveillance and reconnaissance electro-optical/infrared (EO/IR) radar frequency products, laser technologies, and classified space mission systems.

Raytheon Missiles & Defense. RMD is a leading provider of end-to-end solutions for U.S. and foreign government customers designed to detect, track and engage threats. RMD's systems span air, land, sea and space, and are designed to defend against the most sophisticated threats. RMD's Air Power business provides air-to-air and air-to-ground weapons that deliver power and precision to fourth- and fifth-generation fighters including the Advanced Medium Range Air-to-Air Missile (AMRAAM) and StormBreaker smart weapon, and ground-based sensors for persistent wide-area defense and space surveillance including Early Warning Radar. RMD's Land Warfare and Air Defense business provides capabilities ranging from precision weapons including Excalibur, Javelin, Stinger and TOW to integrated air and missile defense, including the proven Patriot air and missile defense system, the Guidance Enhanced Missile (GEM-T), the National Advanced Surface-to-Air Missile System (NASAMS) and the GhostEye family of radars, including the Lower Tier Air and Missile Defense Sensor (LTAMDS). RMD's Naval Power business provides advanced sensors, command and control and weapons to protect ships and sailors around the world, including AIM-9X Sidewinder, Tomahawk, Standard Missile 2 (SM-2) and Standard Missile 6 (SM-6) missiles, and the SPY-6 family of radars. RMD's Strategic Missile Defense business provides technologically advanced sensors, satellites and interceptors including the AN/TPY-2 radar, Standard Missile 3 (SM-3) Block IA/IB/IIA missiles and development of future integrated missile defense solutions. RMD's Advanced Technology business focuses on the development and early introduction of next-generation technologies and systems, including hypersonics, counter-hypersonics, directed energy, advanced weapons and next-generation radars.

RMD serves as a prime contractor or major subcontractor on numerous programs with the DoD, including the U.S. Navy, U.S. Army, Missile Defense Agency (MDA), and U.S. Air Force, and international governments.

In 2022, RMD achieved key advancements in, or received contract awards for, the following programs: the Next Generation Interceptor (NGI); Long Range Stand Off Weapon (LRSO); Hypersonic Air-breathing Weapon Concept (HWAC); the Standard Missile Family (SM-2, SM-3 and SM-6); and AMRAAM. Major new awards in 2022 include a contract to develop the first Hypersonic Attack Cruise Missile (HACM) for the U.S. Air Force; a contract to manufacture and deliver GEM-T for an international customer; a contract for NASAMS for Ukraine; a contract for the SPY-6 Hardware Production and Sustainment base for the U.S. Navy; a contract for Stinger for the U.S. Army and a contract for the SM-3 for the MDA. RMD also received a number of classified contract awards, including a strategic competitive award.

Sales and Customers

We have substantial U.S. government sales, which we conduct through all four of our business segments. RIS and RMD together represent a significant portion of those sales. In addition, as a global company, all four of our business segments have substantial international sales.

U.S. Government Sales. Our U.S. government sales were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Sales to the U.S. government ⁽¹⁾	\$ 30,317	\$ 31,177	\$ 25,962
Sales to the U.S. government as a percentage of Total Net Sales ⁽¹⁾	45 %	48 %	46 %

(1) Excludes foreign military sales through the U.S. government. See “Note 21: Segment Financial Data” within Item 8 of this Form 10-K for additional information.

International Sales. Our sales to international customers, based on customer end use location, were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Total international sales ⁽¹⁾	\$ 25,884	\$ 24,377	\$ 22,027
Total international sales as a percentage of Total Net Sales ⁽¹⁾	39 %	38 %	39 %

(1) Includes foreign military sales through the U.S. government. See “Note 21: Segment Financial Data” within Item 8 of this Form 10-K for additional information.

Backlog. Backlog, which is equivalent to our remaining performance obligations (RPO) for our sales contracts, represents the aggregate dollar value of firm orders for which products have not been provided or service has not been performed and excludes unexercised contract options and potential orders under ordering-type contracts (e.g., indefinite-delivery, indefinite-quantity (IDIQ) type contracts).

Total backlog was \$175 billion and \$156 billion as of December 31, 2022 and 2021, respectively. Of the total RPO as of December 31, 2022, we expect approximately 25% will be recognized as sales over the next 12 months.

Competition

All of our businesses are subject to significant competition. Our businesses compete on a variety of factors such as price, delivery schedule, past performance, reliability, customer service, product development, innovation and technology. Many of our competitors have substantial financial resources and significant technological capabilities. Further, some non-U.S. competitors receive government research and development assistance, marketing subsidies and other assistance for their products beyond the assistance that may be available to us as a U.S. company. In addition, the competitive landscape in the industry segments we serve continues to evolve with trends such as increased vertical integration by competitors and customers and the emergence of more commercial competitors on defense development programs.

Our aerospace businesses compete with numerous domestic and foreign manufacturers, customers and companies that obtain regulatory agency approval to manufacture spare parts. Customer selections of aircraft engines, components and systems can also have a significant impact on future sales of parts and services. In addition, the U.S. government’s and other governments’ policies of purchasing parts from suppliers other than the original equipment manufacturer affect military spare parts sales. Some competitors may offer substantial discounts and other financial incentives, performance and operating cost guarantees, and participation in financing arrangements in an effort to compete for the aftermarket associated with these products.

Our defense businesses compete with numerous U.S. and foreign companies in most defense and government electronics, space, information technology and technical services and support segments. We frequently partner on defense programs with our major suppliers, some of whom are, from time to time, competitors on other programs.

People

As a global technology and innovation-driven company, we depend on a highly skilled workforce. Attracting, developing, advancing and retaining the best talent is critical for us to execute our strategy and grow our business. Individuals with technical, engineering, and science backgrounds, experience, or interests are particularly important for us to succeed in the industries in which we compete.

Due to macroeconomic, industry and labor market conditions, we have experienced and continue to experience a highly competitive environment with respect to hiring and retaining employees with relevant qualifications and experience, particularly personnel with specialized engineering experience and security clearances, which has negatively impacted our operating and financial performance. We continuously monitor labor market conditions and trends and are working to mitigate this issue through talent acquisition, partnership, sourcing and recruiting arrangements, workforce succession planning, talent identification, development and advancement, engagement and recognition programs, and initiatives to attract and rehire former

employees. However, we expect the current labor market conditions and highly competitive employee hiring and retention environment to continue.

Governance. The Human Capital & Compensation Committee of the RTC Board of Directors oversees the Company's human capital management.

Workforce Demographics. As of December 31, 2022, our global employee population consisted of a total of approximately 182,000 employees, including approximately 55,000 engineering professionals and approximately 31,000 employees represented by labor unions and other employee representative bodies. Our employees are located in 52 countries, with 70% of our employees located in the U.S.

Diversity, Equity and Inclusion (DE&I). We strive to advance a diverse, equitable and inclusive work environment. We believe a work environment where all individuals are respected, valued and supported enables them to focus on developing the most innovative solutions to our industry's greatest challenges. We have a DE&I advisory board of senior leaders. We review diversity in talent development and promotion, employee compensation practices and succession planning, and embed DE&I training into our leadership development programs. We have published our U.S. Equal Employment Opportunity EEO-1 report data as part of our Environmental Social Governance Report. We have nine diverse global employee resource groups, which are volunteer-run organizations that are open to all employees and are intended to foster an inclusive culture. We also invest in a more diverse workforce by supporting science, technology, engineering and mathematics initiatives for women and people of color, and providing opportunities and support to military veterans, people with disabilities and the LGBTQ+ community. As of December 31, 2022, women represented 25% of our global workforce and 33% of our global executives, and people of color represented 32% of our U.S. employee population and 17% of our U.S. executives. In addition, based on those employees who self-identified, veterans represented 12% of our U.S. employee population.

Talent Acquisition, Development and Retention; Employee Health and Safety. We continuously monitor the hiring, retention and management of our employees by business and function with a focus to attract, develop, engage, advance and retain the best talent in the industry. We invest in our workforce through internal and external education, training and development programs and tuition assistance benefits. We also provide market competitive compensation and benefits. We recognize and reward performance during our annual review process. We regularly conduct succession planning to ensure that we continue to cultivate the leadership pipeline of talent needed to execute our business strategy. We solicit employee feedback on RTC's performance as an employer via confidential surveys in the pre-hire, active and exit stages of employment, and use those results to improve our workplace and employee experience. These surveys cover various topics related to employee engagement and satisfaction.

We have industry-leading health and safety programs to help maintain a safe work environment for all employees and mitigate workplace incidents, risks and hazards. We review and monitor our performance and encourage employee input to identify opportunities to reduce incidents. Moreover, we have industry-leading ethics and compliance programs to help mitigate associated employee risks. We also provide health and wellness benefits and support flexible work arrangements for our employees.

Additional information regarding our human capital strategy is available in our "People" section of our Environmental Social Governance Report that can be found on our company website. Information on our website, including our Environmental Social Governance Report, is not incorporated by reference into this Form 10-K.

For information on the risks related to our human capital resources, see Item 1A. "Risk Factors" of this Form 10-K.

Research and Development and Operations

Our innovative products and services incorporate advanced technologies. As a result, we invest substantial amounts in research and development (R&D) activities using our own funds and under contractual arrangements with our customers, to enhance existing products and services and develop future technologies to meet our customers' changing needs and requirements, as well as to address new business opportunities.

We manufacture and service our products in over 229 manufacturing, production or overhaul facilities in approximately 30 countries, including the U.S. In addition, RTC has offices in approximately 10 other countries.

Intellectual Property

We maintain a portfolio of patents, trademarks, copyrights, trade secrets, licenses and franchises related to our businesses. We rely on a combination of these rights, along with nondisclosure agreements, IT security systems, internal controls and compliance systems and other measures to protect our intellectual property. The U.S. government and foreign governments have licenses to certain of our intellectual property, including certain patents, which are developed or used in the performance of government contracts. Commercial customers also have licenses to certain of our intellectual property largely in connection

with the sale of our products. While our intellectual property rights in the aggregate are important to the operation of each of our businesses, we do not believe that our business would be materially affected by the expiration of any particular intellectual property right or termination of any particular intellectual property patent license agreement.

Suppliers and Raw Materials

We are dependent upon the availability of materials and major components and the performance of our suppliers and subcontractors. Some of our products require relatively scarce raw materials. In some instances, we depend upon a single source of supply or participate in commodity markets that may be subject to allocations of limited supplies by suppliers. In addition, in some cases, we must comply with specific procurement requirements, which may limit the suppliers and subcontractors we may utilize. Like other users in the U.S., we are largely dependent upon foreign sources for certain raw materials, such as cobalt, tantalum, chromium, rhenium, nickel and titanium. We also have some foreign suppliers as single-source suppliers of components. Global supply chain and labor markets are continuing to experience high levels of disruption, causing significant materials and parts shortages, including raw material, microelectronics and commodity shortages, as well as delivery delays, labor shortages, distribution issues, energy cost increases and price increases. We and many of our suppliers and subcontractors have ceased operations in Russia due to sanctions and have ceased sourcing of components that are subject to sanctions. Other suppliers and subcontractors are located in areas experiencing supply impediments or are at risk of being subjected to trade restrictive actions, due to current geopolitical conditions. In addition, some suppliers and subcontractors have been, or may in the future be, impacted by credit market conditions, including higher interest rates and the availability of credit. Our supplier and subcontractor performance continues to be affected by these issues, and we have experienced difficulties receiving necessary raw materials, components, other supplies and third-party services on a timely basis or at all. Our business has been negatively impacted by the above factors, as well as price increases arising from these issues and ongoing inflation. We work continuously to mitigate the effects of these supply chain issues through targeted activities as well as through our ongoing supply chain programs. We work with our suppliers and subcontractors to assess the causes of performance failures and delays. We are providing our suppliers with access to our contract labor networks to augment supplier workforces, providing suppliers with raw materials and technical support, and leveraging our raw materials contracts to apply our negotiated rates to purchases by our suppliers. We are also working to arrange second and third supply source alternatives and have increased our inventory of available materials and parts. We regularly pursue cost reductions through a number of mechanisms, including consolidating or re-sourcing our purchased parts, expanding use of long-term agreements, reducing the number of suppliers generally (except as described above for important supply alternatives), strategic sourcing in cost competitive regions, competitions among suppliers and other low-cost sourcing initiatives. We also have a number of ongoing programs to manage our dependence on foreign raw material supply and the accompanying risk, including long-term agreements and the conservation of materials through scrap reclamation and new manufacturing processes. In addition, to help address the risk of supplier closings or bankruptcies, we monitor the liquidity of our significant supplier base. For additional information related to supply chain issues, see Item 1A. "Risk Factors" of this Form 10-K.

Other Matters Relating to Our Business

As worldwide businesses, our operations can be affected by a variety of economic, industry and other factors, including those described in this section, in Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," in Item 1. "Cautionary Note Concerning Factors That May Affect Future Results," and in Item 1A. "Risk Factors" of this Form 10-K.

Coronavirus Disease 2019 (COVID-19) Pandemic. The COVID-19 pandemic continues to negatively affect the global economy, our business and operations, the labor market, supply chains, inflation, and the industries in which we operate. Commercial air travel has been significantly disrupted by the pandemic and government, business and individual actions in response. Commercial air travel has not fully returned to pre-COVID-19 levels, although we continue to see signs of ongoing recovery. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, there continues to be uncertainty with respect to when commercial air traffic capacity will fully return to and/or exceed pre-COVID-19 levels. For additional information related to the COVID-19 pandemic, see Item 1A. "Risk Factors" of this Form 10-K.

Regulatory Matters

Our businesses are subject to extensive regulation in the industries we serve. We deal with numerous U.S. government agencies and entities, including but not limited to all of the branches of the DoD, the FAA, and the Department of Homeland Security. Similar government authorities exist in all of the countries in which we do business.

U.S. Government Contracts. As previously discussed, the U.S. government is our largest customer, representing a substantial majority of our total defense sales. U.S. government contracts are subject to termination by the government, either for convenience or for default in the event of our failure to perform under the applicable contract. In the case of a termination for

convenience, we would normally be entitled to reimbursement for our allowable costs incurred, termination costs and a reasonable profit. If terminated by the government as a result of our default, we could be liable for payments made to us for undelivered goods or services, additional costs the government incurs in acquiring undelivered goods or services from another source and any other damages it suffers. Our U.S. government contracts generally are subject to the Federal Acquisition Regulation (FAR), which sets forth policies, procedures and requirements for the acquisition of goods and services by the U.S. government; department-specific regulations that implement or supplement the FAR, such as the DoD's Defense Federal Acquisition Regulation Supplement (DFARS); and other applicable laws and regulations. These regulations impose a broad range of requirements, many of which are unique to government contracting, including various procurement, import and export, security, contract pricing and cost, contract termination and adjustment, audit and product integrity requirements. A contractor's failure to comply with these regulations and requirements could result in reductions to the value of contracts, contract modifications or termination, cash withholds on contract payments, forfeiture of profits, and/or the assessment of civil or criminal penalties and fines, and could lead to suspension or debarment, for cause, from U.S. government contracting or subcontracting for a period of time.

For further discussion of risks related to government contracting, including on-going litigation associated with U.S. government audits and investigations, see Item 1A. "Risk Factors" and Item 3. "Legal Proceedings" of this Form 10-K and "Note 18: Commitments and Contingencies" within Item 8 of this Form 10-K.

Commercial Aerospace Product Regulation. Our commercial aerospace products are subject to regulations by the FAA, foreign aviation administration authorities and international regulatory bodies, including on production and quality systems, airworthiness and installation approvals, repair procedures and continuing operational safety. In addition, commercial aerospace regulations and regulator approaches differ across jurisdictions and changes in such regulations and implementing legislation can impact our operations.

Environmental Regulation. Our operations are subject to and affected by environmental regulation by federal, state and local authorities in the U.S. and regulatory authorities with jurisdiction over our international operations, including with respect to the generation, treatment, storage, disposal and remediation of hazardous substances and wastes. We use hazardous substances and generate hazardous wastes in some of our operations and have incurred, and will likely continue to incur, costs associated with environmental compliance activities and management of remediation matters at sites with pollutants. A portion of these costs are eligible for future recovery through the pricing of our products and services under our contracts with the U.S. government. In addition, we have been identified as a potentially responsible party under the Comprehensive Environmental Response Compensation and Liability Act, also known as the Superfund law, or state law counterparts to the Superfund law, for a number of sites. The nature and extent of environmental concerns vary from site to site and our share of responsibility varies from sole responsibility to very little responsibility. We also manage various government-owned facilities on behalf of the U.S. government. At such facilities, environmental compliance and remediation costs have historically been primarily the responsibility of the U.S. government, and we have relied upon the U.S. government funding to pay such costs. We do not anticipate that compliance with current provisions or requirements relating to the protection of the environment or that any payments we may be required to make for cleanup liabilities will have a material adverse effect on our competitive position, results of operations, financial condition or liquidity. Environmental matters are further addressed in "Note 1: Basis of Presentation and Summary of Accounting Principles" and "Note 18: Commitments and Contingencies" within Item 8 of this Form 10-K.

Most of the U.S. laws governing environmental matters include criminal provisions. If we were convicted of a violation of the federal Clean Air Act or Clean Water Act, the facility or facilities involved in the violation could be deemed ineligible to be used in performing any U.S. government contract we are awarded until the Environmental Protection Agency thereafter certifies that the condition giving rise to the violation has been corrected.

In addition, we could be affected by future foreign or domestic laws or regulations imposed in response to concerns over climate change, and we monitor developments in environmental and climate-related laws and regulations and their potential impact to our business and financial condition. Changes in environmental and climate-related laws or regulations, including regulations on greenhouse gas emissions, carbon pricing, energy taxes, product efficiency standards, and mandatory disclosure obligations could lead to new or additional investment in product designs and facility upgrades and could increase our operational and environmental compliance expenditures, including increased energy and raw materials costs and costs associated with manufacturing changes.

For further discussion of risks related to environmental and climate matters and other government regulations, see Item 1A. "Risk Factors" of this Form 10-K.

Other Applicable Regulations. We conduct our businesses through subsidiaries and affiliates worldwide. As a result, our businesses and operations are subject to both U.S. and non-U.S. government laws, regulations and procurement policies and

practices, including regulations relating to import-export controls, tariffs, taxes, investment, sanctions, exchange controls, anti-corruption, and cash repatriation. Our international sales are also subject to varying currency, political and economic risks.

Cautionary Note Concerning Factors That May Affect Future Results

This Form 10-K contains statements which, to the extent they are not statements of historical or present fact, constitute “forward-looking statements” under the securities laws. From time to time, oral or written forward-looking statements may also be included in other information released to the public. These forward-looking statements are intended to provide management’s current expectations or plans for our future operating and financial performance, based on assumptions currently believed to be valid, and are not statements of historical fact. Forward-looking statements can be identified by the use of words such as “believe,” “expect,” “expectations,” “plans,” “strategy,” “prospects,” “estimate,” “project,” “target,” “anticipate,” “will,” “should,” “see,” “guidance,” “outlook,” “goals,” “objectives,” “confident,” “on track” and other words of similar meaning. Forward-looking statements may include, among other things, statements relating to future sales, earnings, cash flow, results of operations, uses of cash, share repurchases, tax payments and rates, research and development spending, cost savings, other measures of financial performance, potential future plans, strategies or transactions, credit ratings and net indebtedness, other anticipated benefits to RTC of the Rockwell Collins acquisition, the Raytheon merger or the separation of UTC’s business into three independent, publicly traded companies (UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis)) (the Separation Transactions), including estimated synergies and customer cost savings resulting from the Raytheon merger and the anticipated benefits and costs of the Separation Transactions, and other statements that are not solely historical facts. All forward-looking statements involve risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995. Such risks, uncertainties and other factors include, without limitation:

- the effect of changes in economic, capital market and political conditions in the U.S. and globally, such as from the global sanctions and export controls with respect to Russia, and any changes therein, including related to financial market conditions, fluctuations in commodity prices or supply (including energy supply), inflation, interest rates and foreign currency exchange rates, disruptions in global supply chain and labor markets, and geopolitical risks;
- risks associated with U.S. government sales, including changes or shifts in defense spending due to budgetary constraints, spending cuts resulting from sequestration, a continuing resolution, a government shutdown, the debt ceiling or measures taken to avoid default, or otherwise, and uncertain funding of programs;
- challenges in the development, production, delivery, and support of RTC advanced technologies and new products and services and the realization of the anticipated benefits (including our expected returns under customer contracts), as well as the challenges of operating in RTC’s highly-competitive industries;
- risks relating to RTC’s reliance on U.S. and non-U.S. suppliers and commodity markets, including the effect of sanctions, delays and disruptions in the delivery of materials and services to RTC or its suppliers and price increases;
- risks relating to RTC international operations from, among other things, changes in trade policies and implementation of sanctions, foreign currency fluctuations, economic conditions, political factors, sales methods, and U.S. or local government regulations;
- the condition of the aerospace industry;
- the ability of RTC to attract, train and retain qualified personnel and maintain its culture and high ethical standards, and ability of our personnel to continue to operate our facilities and businesses around the world;
- the effect of and risks relating to the coronavirus disease 2019 (COVID-19) pandemic on RTC’s business, supply chain, operations and the industries in which it operates, including the decrease in global air travel, and the timing and extent of the recovery from COVID-19;
- the scope, nature, timing and challenges of managing acquisitions, investments, divestitures and other transactions, including the realization of synergies and opportunities for growth and innovation, the assumption of liabilities and other risks and incurrence of related costs and expenses;
- compliance with legal, environmental, regulatory and other requirements, including, among other things, export and import requirements such as the International Traffic in Arms Regulations and the Export Administration Regulations, anti-bribery and anticorruption requirements, such as the Foreign Corrupt Practices Act, industrial cooperation agreement obligations, and procurement and other regulations in the U.S. and other countries in which RTC and its businesses operate;
- the outcome of pending, threatened and future legal proceedings, investigations and other contingencies, including those related to U.S. government audits and disputes;
- factors that could impact RTC’s ability to engage in desirable capital-raising or strategic transactions, including its capital structure, levels of indebtedness, capital expenditures and research and development spending, and the availability of credit, credit market conditions including the cost of debt, and other factors;

- uncertainties associated with the timing and scope of future repurchases by RTC of its common stock or declarations of cash dividends, which may be discontinued, accelerated, suspended or delayed at any time due to various factors, including market conditions and the level of other investing activities and uses of cash;
- risks relating to realizing expected benefits from RTC strategic initiatives such as cost reduction, restructuring, digital transformation and other operational initiatives;
- risks relating to the integration of the legacy businesses of UTC and Raytheon Company in connection with the Raytheon merger, and the realization of the anticipated benefits of those transactions;
- risks of additional tax exposures due to new tax legislation or other developments in the U.S. and other countries in which RTC and its businesses operate;
- risks relating to a RTC product safety failure or other failure affecting RTC's or its customers' or suppliers' products or systems;
- risks relating to cyber-attacks on RTC's information technology infrastructure, products, suppliers, customers and partners, threats to RTC facilities and personnel, as well as other events outside of RTC's control such as public health crises, damaging weather or other acts of nature;
- the effect of changes in accounting estimates for our programs on our financial results;
- the effect of changes in pension and other postretirement plan estimates and assumptions and contributions;
- risks relating to an impairment of goodwill and other intangible assets;
- the effects of climate change and changing or new climate-related regulations, customer and market demands, products and technologies; and
- the intended qualification of (1) the Raytheon merger as a tax-free reorganization and (2) the Carrier and Otis Separation Transactions and other internal restructurings as tax-free to UTC and former UTC shareowners, in each case, for U.S. federal income tax purposes.

In addition, this Form 10-K includes important information as to risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. See "Note 18: Commitments and Contingencies" within Item 8 of this Form 10-K, the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Critical Accounting Estimates," "Results of Operations," and "Liquidity and Financial Condition," within Item 7 of this Form 10-K, and the sections titled Item 1A. "Risk Factors" and Item 3. "Legal Proceedings," of this Form 10-K. This Form 10-K also includes important information as to these factors in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the heading "Government Matters," within Item 7 of this Form 10-K, and in the "Business" section under the headings "General," "Business Segments", "Other Matters Relating to Our Business" and "Regulatory Matters." The forward-looking statements speak only as of the date of this report or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additional information as to factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements is disclosed from time to time in our other filings with the Securities and Exchange Commission (SEC).

ITEM 1A. RISK FACTORS

Our business, operating results, financial condition and liquidity can be impacted by the factors set forth below, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results.

INDUSTRY RISKS

Our business may be adversely affected by changes in global economic, capital market and political conditions. Our business, operating results, financial condition and liquidity may be adversely affected by changes in global economic conditions, international relations and geopolitical events and actions, including inflation, credit market conditions, levels of consumer and business confidence, commodity (including energy) prices and supply, trade policies, exchange rates, changing policy positions or priorities, levels of government spending and deficits, the threat environment, political conditions, and actual or anticipated default on sovereign debt. The current global supply chain and labor market challenges and inflationary pressures have negatively affected, and we expect will continue to negatively affect, our performance as well as the performance of our suppliers and subcontractors. In addition, due to the nature of our government and commercial aerospace businesses, and their respective customer and supplier contracts, we may be unable to increase our contract value or pricing to offset cost increases, in particular on our fixed price contracts. Our operating profits and margins under our contracts could be adversely affected by these factors. Similarly, interest rate increases have created financial market volatility and could further negatively impact financial markets, lead to an economic downturn or recession, and tighten the availability of, and increase the cost of capital for, the Company, which could have an adverse effect on our operating results, financial condition and liquidity. Tightening of credit in financial markets also could adversely affect the ability of our customers and suppliers to obtain financing for significant purchases and operations, could result in a decrease in or cancellation of orders for our products and services, could impact the ability of our customers to make payments, and could increase the risk of supplier financial distress. Our global business is also adversely affected by decreases in the general level of economic activity, such as decreases in business and consumer spending, air travel, the financial strength of airlines and business jet operators, and government procurement. In addition, geopolitical risks could affect government priorities, budgets and policies, such as U.S. approvals of our foreign defense sales as well as sanctions and other trade-restrictive activities, which could impact sales of defense and other products and services.

Changes in U.S. government defense spending could negatively impact our financial position, results of operations, liquidity and overall business. U.S. government sales constitute a significant portion of our consolidated sales. Our U.S. government revenues largely result from contracts awarded under various U.S. government programs, primarily defense-related programs with the U.S. Department of Defense (DoD), and a broad range of programs with the U.S. Intelligence Community and other departments and agencies. Changes in U.S. government defense spending for various reasons, including as a result of potential changes in policy or budgetary positions or priorities, could negatively impact our results of operations, financial condition and liquidity. Our programs are subject to U.S. government policies, budget decisions and appropriation processes which are driven by numerous factors including U.S. domestic and broader geopolitical events, macroeconomic conditions, and the ability of the U.S. government to enact relevant legislation, such as appropriations bills. In recent years, U.S. government appropriations have been affected by larger U.S. government budgetary issues and related legislation, and the U.S. government has been unable to complete its budget process before the end of its fiscal year, resulting in both governmental shutdowns and continuing resolutions (CRs) providing only enough funds for U.S. government agencies to continue operating at prior-year levels. Further, if the U.S. government debt ceiling is not raised and the national debt reaches the statutory debt ceiling, the U.S. government could default on its debts. As a result, U.S. government defense spending levels are subject to a wide range of outcomes and are difficult to predict beyond the near-term due to numerous factors, including the external threat environment, future governmental priorities and the state of governmental finances. Significant changes in U.S. government defense spending or changes in U.S. government priorities, policies and requirements could have a material adverse effect on our results of operations, financial condition and liquidity.

We face risks relating to our U.S. government contracts and the mix of our U.S. government contracts and programs. The termination of one or more of our U.S. government contracts, or the occurrence of performance delays, cost overruns (due to inflation or otherwise), product failures, shortages in materials, components or labor, or contract definitization delays, could negatively impact our competitive position, results of operations, financial condition and liquidity. U.S. government contracts generally permit the government to terminate the contract, in whole or in part, without prior notice, at the U.S. government's convenience or for default based on performance. If one of our contracts is terminated for convenience, we would generally be entitled to payments for our allowable costs and would receive some allowance for profit on the work performed. If one of our contracts is terminated for default, we would generally be entitled to payments for work accepted by the U.S. government. A termination arising out of our default could expose us to liability and have a negative impact on our ability to obtain future contracts and orders. In addition, we are a subcontractor on some contracts, and the U.S. government could terminate the prime contract for convenience or otherwise, without regard to our performance as a subcontractor. We may not be able to offset lost revenues resulting from contract termination. Moreover, because the funding of U.S. government programs is subject to

congressional appropriations made on a fiscal year basis even for multi-year programs, programs are often only partially funded initially and may not continue to be funded in future years. Appropriation bills may be delayed, which may result in delays to funding, the collection of receivables and our contract performance due to lack of authorized funds to procure related products and services. The timing of contract definitization can be affected by factors specific to the U.S. government, including staffing limitations. Under certain circumstances, we may use our own funds to meet our customer's desired delivery dates or other requirements, but we may not be reimbursed. Further, if appropriations for one of our programs become unavailable, reduced or delayed, the U.S. government may terminate for convenience our contract or subcontract under that program. In addition, our U.S. government contracts typically involve the development, application and manufacture of advanced defense and technology systems and products aimed at achieving challenging goals. As a result of untested or unproven technologies, or modified requirements or specifications, we may experience technological and other performance difficulties (including delays, setbacks, cost overruns, or product failures), our attention or resources may be diverted from other projects and our future sales opportunities may be impacted. Additionally, as our customers demand more mature and proven solutions, we may be required to invest in development prior to contract award with no guarantee of award.

Our U.S. government contracts are typically either fixed-priced contracts or cost reimbursement contracts. Fixed-price contracts are predominantly either firm fixed-price (FFP) contracts or fixed-price incentive (FPI) contracts. Under FFP contracts, we receive a fixed price irrespective of the actual costs we incur, and we therefore carry the burden of any cost overruns. Under FPI contracts, we generally share with the U.S. government savings for cost underruns less than target costs and expenses for cost overruns exceeding target costs up to a negotiated ceiling price. We carry the entire burden of cost overruns exceeding the ceiling price amount under FPI contracts. Under cost reimbursable contracts, we are reimbursed for allowable costs and paid a fixed or performance-based fee, but we are generally not reimbursed for unauthorized costs exceeding a cost ceiling amount or costs not allowable under the contract or applicable regulations. If we are unable to control costs or if our initial cost estimates are incorrect, our profitability could be negatively affected, particularly under fixed-price development contracts. We may also experience cost underruns which would reduce contract value and related expected revenues, and we may be unable to expand the contract scope or secure additional work to offset the resulting lost revenues. While contracts for development programs with complex design and technical challenges are typically cost reimbursable, they can be FFP or FPI, which can significantly increase our risk of a potential negative profit adjustment, as development contracts by nature involve elements that have not been undertaken before and, thus, are highly subject to future unexpected cost growth. In addition, other contracts in backlog are for the transition from development to production, which includes starting and stabilizing a manufacturing and test line while the final design is still being validated. Moreover, over the past several years, the DoD has increased its use of Other Transaction Authority (OTA) contracts, under which it awards certain prototypes, research and production contracts without all of the procurement requirements that typically apply to DoD contracts, including justification of sole source awards. OTAs may use fixed-price contracting during all phases of the contract, or mandated contract cost sharing (e.g., one-third of program costs). They may also require non-traditional subcontractor participation and impose other requirements that differ from our other DoD contracts. Our business may be negatively impacted if we are unable to perform on our OTA contracts, including any applicable non-traditional requirements. In addition, in order to support U.S. government priorities, we may begin performance prior to completing contract negotiations for an undefinitized contract action with a not-to-exceed price. Uncertainties in final contract price, specifications and terms, or loss of negotiating leverage associated with particularly long delays in contract definitization may negatively affect our profitability. Our U.S. government contracts also require us to comply with extensive and evolving procurement rules and regulations and subject us to potential U.S. government audits, investigations, and disputes. We are also involved in programs that are classified by the U.S. government, which have security requirements that place limits on our ability to discuss our performance on these programs, including any risks, disputes and claims.

Our international business is subject to economic, regulatory, competition and other risks. Our international sales and operations are subject to risks associated with political and economic factors, regulatory requirements, competition and other risks. A significant portion of our sales are international, including U.S. export sales. Our non-U.S. operations transactions may be denominated in local currencies. Foreign currency exchange rate fluctuations (including their impact on supplier prices) may negatively affect demand for our products and our reported profits, as well as our operating margins. The majority of our commercial aerospace sales are in U.S. Dollars, while the majority of their non-U.S. costs are incurred in the applicable local currency. Pratt & Whitney Canada is especially susceptible to fluctuations in exchange rates for this reason. In addition, because our financial statements are denominated in U.S. Dollars, currency fluctuations may cause translation gains or losses for non-U.S. operating unit financial statements.

Our international sales and operations are also subject to risks associated with local government laws, regulations and policies, including with respect to investments, taxation, exchange controls, capital controls, employment regulations and repatriation of earnings. Differing legal systems, customs and contract laws and regulations pose additional risk. International transactions may include contractual terms that differ from those of similar contracts in the U.S. or that may be interpreted differently in foreign countries. In addition, in certain foreign countries, we engage foreign non-employee representatives and consultants for

international sales and teaming with international subcontractors, partners and suppliers for international programs. While we have robust policies and controls in place, these engagements expose us to various challenges including risks associated with the Foreign Corrupt Practices Act (FCPA) and local antibribery laws and regulations. From time to time, we have disputes with such representatives regarding claimed commissions and other matters which can result in litigation or arbitration. In addition, we face risks related to the unintended or unauthorized use of our products.

Our international business faces substantial competition from both U.S. companies and foreign companies. In some instances, foreign companies may be owned by foreign governments or may receive loans, marketing subsidies and other assistance from their governments that may not be available to U.S. companies or our foreign subsidiaries. In addition, foreign companies may be subject to fewer restrictions on technology transfer than U.S. companies.

Our international contracts, particularly for sales of defense products and services, may include offset or industrial cooperation obligations requiring specific local purchases, manufacturing agreements, technology transfer agreements or financial support obligations, sometimes in the form of in-country industrial participation (ICIP) agreements. Approvals of offset or ICIP thresholds and requirements may be subjective and time-consuming and may delay contract awards. Certain customers' demands are increasing for greater offset or ICIP commitment levels, higher-value content, including the transfer of technologies and capabilities, and local production and economic development.

As a result of the above factors, we could experience financial penalties and award and funding delays on international programs, our profitability on these programs could be negatively affected, and we could incur losses on these programs that could negatively impact our results of operations, financial condition and liquidity.

Geopolitical factors and changes in policies and regulations could adversely affect our business. Our international sales and operations are sensitive to changes in foreign national priorities, foreign government budgets, and regional and local political and economic factors, including volatility in energy prices or supply, political or civil unrest, changes in threat environments and political relations, geopolitical uncertainties, and changes in U.S. foreign policy. Our international sales and operations are also sensitive to changes in foreign government laws, regulations and policies, including those related to tariffs, sanctions, embargoes, export and import controls and other trade restrictions. Events such as increased trade restrictions or retaliatory trade policies, renegotiation of existing trade agreements, or regime change can affect demand for our products and services, the competitive position of our products, our supply chain, and our ability to manufacture or sell products in certain countries. Further, operations in emerging market countries are subject to additional risks, including volatility in gross domestic product and rates of economic growth, government instability, cultural differences (such as employment and business practices), the imposition of exchange and capital controls, and risks associated with exporting components manufactured in those countries for incorporation into finished products completed in other countries. While these factors and their impact are difficult to predict, any one or more of them could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

In addition, given the role of our defense businesses in the support of the national security interests of the U. S. and its allies, we are subject to risks and uncertainties relating to policies of the U.S. and its allies, as well as other countries, including those that are or become regarded as potential adversaries or threats. We engage in both direct commercial sales, which generally require U.S. government licenses and approvals, as well as foreign military sales, which are government-to-government transactions initiated by, and carried out at the direction of, the U.S. government. Changes in budgets and spending levels, policies, or priorities, which are subject to geopolitical risks and threats, may impact our defense businesses, including the timing of and delays in U.S. government licenses and approvals for sales, the risk of sanctions or other restrictions, as well as potential human rights issues associated with the use of our defense products. These risks and uncertainties may directly or indirectly impact our commercial businesses as well.

Of note, China previously announced it may take measures against Raytheon Technologies Corporation (RTC) in connection with certain foreign military sales to Taiwan involving RTC products and services. In addition, China has indicated that it decided to sanction our Chairman and Chief Executive Officer Gregory Hayes, in connection with another potential foreign military sale to Taiwan involving RTC products and services. RTC is not aware of any specific sanctions against Mr. Hayes or RTC, or the nature or timing of any future potential sanctions or countermeasures. If China were to impose sanctions or take other regulatory action against RTC, our suppliers, affiliates or partners, it could potentially disrupt our business operations. The impact of potential sanctions or other actions by China cannot be determined at this time. From time to time, our businesses have sold, and are expected to sell in the future, additional defense products to Taiwan, and we are unable to determine the potential impact, if any, of any future sanctions or other actions by China in response to these sales. Moreover, the Chinese government has generally expanded its ability to restrict China-related import, export and investment activities, which may have an adverse impact on our ability to conduct business or sell our commercial aerospace products in China. In addition, in response to the Russian military's invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have

imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate, including certain members of the Company's management team and Board of Directors. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected and could continue to adversely affect the Company and/or our supply chain, business partners or customers.

Our financial performance is dependent on the condition of the aerospace industry. Our aerospace businesses constitute a substantial portion of our financial results, and the performance of those businesses is directly tied to economic conditions in the commercial aerospace industry, which is cyclical in nature. Capital spending and demand for aircraft engines, aerospace products and component aftermarket parts and services by commercial airlines, lessors, other aircraft operators and aircraft manufacturers are influenced by a wide variety of factors, including current and predicted traffic levels, load factors, aircraft fuel prices, labor issues, airline consolidation, bankruptcies and restructuring activities, competition, the retirement of older aircraft, regulatory changes, terrorism and related safety concerns, general economic conditions, tightening of credit in financial markets, corporate profitability, cost reduction efforts and remaining performance obligations levels. Any of these factors could reduce the sales and margins of our aerospace businesses. Other factors, including future terrorist actions, aviation safety concerns, pandemic health issues or major natural disasters, could also dramatically reduce the demand for commercial air travel, which could negatively impact the sales and margins of our aerospace businesses. Additionally, because a substantial portion of product deliveries to commercial aerospace customers are scheduled for delivery in the future, changes in economic conditions may cause customers to request that firm orders be rescheduled or canceled. At times, our aerospace businesses also enter into firm fixed-price or cost-share development contracts with customers, which may require us to bear cost overruns related to unforeseen technical and design challenges that arise during the development and early production stages of the program. Spare parts sales and aftermarket service trends are affected by similar factors, including usage, pricing, technological improvements, regulatory changes and the retirement of older aircraft. Furthermore, because of the lengthy research and development cycle involved in bringing products in these business segments to market, we cannot predict the economic conditions that will exist when any new product is ready to enter into service. A reduction in spending in the commercial aviation industry could have a significant effect on the demand for our products, which could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

We design, manufacture and service products that incorporate advanced technologies; the introduction of new products and technologies involves risks, and we may not realize the degree or timing of benefits initially anticipated. The design, development, production, sale and support of innovative commercial aerospace and defense systems and products involves advanced technologies. We invest substantial amounts in research and development efforts to pursue advancements in a wide range of technologies, products and services aimed at meeting the ever-evolving product, program and service needs of our customers. Our ability to realize the anticipated benefits of our investments depends on a variety of factors, including meeting development, production, certification and regulatory approval schedules; receiving regulatory approvals; execution of internal and external performance plans; achieving cost and production efficiencies; availability and quality of supplier- and internally-produced parts and materials; availability of supplier and internal facility capacity to perform maintenance, repair and overhaul services; availability of test equipment; development of complex software; hiring and training of qualified personnel; identification of emerging technological trends for our target end-customers; the level of customer interest in new technologies and products and customer acceptance of our products and technologies. For example, our customers manufacture or acquire end products and systems that incorporate certain of our products. These end products and systems may also incorporate additional technologies manufactured by third parties and involve additional risks and uncertainties. As a result, the performance and industry acceptance of these larger systems and end products could affect the level of customer interest in and acceptance of our products in the marketplace. In addition, many of our products must adhere to strict regulatory and market-driven safety and performance standards in a variety of jurisdictions. The evolving nature of these standards, along with the long duration of development, production and aftermarket support programs, creates uncertainty regarding program profitability, particularly with our aircraft engine products. Development efforts divert resources from other potential investments in our businesses, and these efforts may not lead to the development of new technologies or products on a timely basis or meet the needs of our customers as fully as competitive offerings. In addition, the industries for our products or products that incorporate our technologies may not develop or grow as we anticipate. We or our customers, suppliers or subcontractors may encounter difficulties in developing and producing new products and services, and may not realize the degree or timing of benefits initially anticipated or may otherwise suffer significant adverse financial consequences. Due to the design complexity of our products or those of our customers or third party manufacturers that incorporate our products into theirs or our customers' products, we may experience delays in completing the development and introduction of new products or we may experience the suspension of production after these products enter into service due to safety concerns. Delays and/or

suspension of production could result in increased development costs or deflect resources from other projects. Any of the foregoing could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

In particular, Pratt & Whitney is currently producing and delivering the Geared Turbofan engine to power various aircraft. The level of orders received for the Geared Turbofan family of engines, coupled with a requirement to achieve mature production levels in a very short time frame, require significant additional manufacturing and supply chain capacity. If any of our production ramp-up efforts are delayed, if suppliers cannot timely deliver or perform to our standards, and/or if we identify or experience issues with in-service engines, we may not meet customers' delivery schedules, which could result in material additional costs, including liquidated damages or other liabilities that could be assessed under existing contracts.

Competition may reduce our revenues and limit our future opportunities. We operate in highly competitive industries and our competitors may have more extensive or more specialized engineering, manufacturing, marketing and servicing capabilities than we do. Our contracts are typically awarded on a competitive basis. Our bids are based in part upon the cost to provide the products and services. If we fail to accurately estimate these costs, the profitability of our contracts may be adversely affected. In addition, we may face customer-directed cost reduction targets that could have a material adverse effect on the profitability of our contracts if these targets are not achieved when required. We have also experienced highly competitive pricing, in which a bidder may anticipate making a substantial investment in a program in order to win the work. Moreover, bid protests from unsuccessful bidders on new program awards are frequent with respect to DoD awards in particular. Generally, a bid protest will delay the start of contract activities, delay earnings, and could result in the award decision being overturned and require a re-bid of the contract. Highly competitive activity within the commercial aerospace industry has included substantial discounts and other financial incentives, performance and operating cost guarantees, and participation in financing arrangements, in order to secure both new engine business and the aftermarket revenues associated with these products. Further, our competitors, including our customers, may develop competing technologies which gain industry acceptance in advance of or instead of our products, or meet particular in-demand technological needs before us or with technology that is superior to our existing or new technologies. In addition, our competitors or customers might develop new technologies or offerings that might cause our existing technologies and offerings to become obsolete or otherwise decrease demand for our offerings. In addition, the possibility exists that competitors or customers will develop aftermarket services and parts for our products that attract customers and adversely impact our return on investment on new products. We also anticipate companies continuing to enhance their competitive position against our defense businesses as a result of continued domestic and cross-border defense industry consolidation and the expansion of competitors' capabilities throughout the supply chain through vertical integration. We are also facing heightened competition domestically and internationally from foreign and multinational firms. Additionally, some customers, including the DoD, are increasingly turning to commercial contractors, rather than traditional defense contractors, for space-related technologies and for information technology and other support work. If we are unable to continue to compete successfully against our current or future competitors in our core businesses, we may experience declines in revenues and industry segment share which could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

The Coronavirus Disease 2019 (COVID-19) pandemic has affected our business, and we continue to face risks associated with it. The COVID-19 pandemic continues to negatively affect the global economy, our business and operations, and the industries in which we operate. The pandemic and government, business and individual actions in response, including lockdowns, quarantines, border closings and other travel restrictions and requirements, remote working, facilities closures and reduced business and leisure travel, led to significant declines in demand for commercial air travel in 2020 and 2021 and, therefore, for our commercial aerospace products and services. While we have seen signs of ongoing recovery in the overall demand for commercial air travel and currently expect that recovery to continue, some commercial aviation segments have recovered less quickly than others, and it remains uncertain when commercial air traffic will fully return to and/or exceed pre-pandemic levels. The resulting financial impact is highly uncertain and subject to a wide range of factors and future developments. In addition, a resurgence of the pandemic (including COVID-19 variants), regional lockdowns or other negative developments associated with the pandemic could hinder or reverse the commercial air traffic recovery. Negative developments concerning the effect of the pandemic or additional variants, the efficacy and acceptance of vaccines, new or continued actions to contain the pandemic's spread or treat its impact, and governmental, business and individual actions taken in response to the pandemic (lockdowns, quarantines, border closings and other travel restrictions and requirements, remote working, facilities closures, and reduced business and leisure travel patterns and work environments) could create significant business disruption for us and our suppliers, subcontractors and customers, exacerbate existing supply chain and labor shortages, redirect government funds and decrease defense budgets, and negatively affect global economic conditions. These factors could hinder or delay our production capabilities, impede our ability to perform on our obligations to our customers, result in increased costs to us and decreased demand for our products and services, and could negatively affect our performance on our customer

contracts and our business, results of operations, financial condition and liquidity. The ultimate duration and financial impact of the COVID-19 pandemic remains unknown at this time.

OPERATIONAL RISKS

We depend on the availability of materials and performance of our suppliers, and the impacts of global supply chain and labor market disruptions on our supply chain have negatively affected and will continue to negatively affect our business.

Our performance requires a variety of raw materials, supplier-provided parts, components, sub-systems and contract manufacturing services, and we rely on U.S. and non-U.S. suppliers (including third-party manufacturing suppliers, subcontractors and service providers) and commodity markets for these materials and services. In some instances, we depend upon a single source of supply, manufacturing, services support or assembly, or participate in commodity markets that may be subject to allocations of limited supplies by suppliers. In addition, our defense businesses are subject to specific procurement requirements that limit the types of materials they use. Our defense businesses also must require suppliers to comply with various DoD requirements, including cybersecurity requirements, any of which requirements may further limit the suppliers and subcontractors they may utilize. Identifying and qualifying second- or third- source suppliers can be difficult, time-consuming and may result in increased costs.

In addition, global supply chain and labor markets are continuing to experience high levels of disruption, causing significant materials and parts shortages, as well as delivery delays, labor shortages, distribution issues, energy cost increases and price increases. Current geopolitical conditions, including sanctions and other trade restrictive activities and strained intercountry relations, are contributing to these issues. Certain of our suppliers and subcontractors have been unable to hire and retain sufficient qualified personnel for their performance. We and our suppliers and subcontractors have also experienced difficulties in procuring necessary raw materials and components, including microelectronics. All of the above have contributed to price increases. These issues have led to significant supplier and subcontractor performance failures and delays. As a result of these various problems, we have had difficulties receiving necessary materials, components, other supplies and third-party services timely or at all, which have negatively impacted production flow in our factories, hindered our ability to perform on our commitments to customers and negatively affected our results of operations, financial condition and liquidity. Our supply costs have increased due to the above factors. Continuing high inflation has exacerbated these increases and increased our operating costs. In addition, we are largely dependent upon foreign sources for certain raw materials, such as cobalt, tantalum, chromium, rhenium, nickel and titanium. Moreover, some of our single-source components are sourced from foreign countries. Some raw materials and components have been in the past sourced from areas now under sanctions, such as Russia, or are currently sourced from areas which are at risk of sanctions or other trade restrictive actions, such as China. We work continuously to mitigate the effects of these supply chain issues and risks, including providing raw materials and technical support to our suppliers and subcontractors, as well as providing them with access to our contract labor networks to augment supplier and subcontractor workforces; seeking alternate supply sources; increasing our inventory of available materials and parts; pursuing various cost reductions such as long-term agreements; and leveraging our raw materials supply contracts to apply our negotiated rates to our suppliers' purchases.

The timing of the impacts of these supply chain risks and issues and our ability to mitigate them are uncertain and difficult to predict. However, we expect the current supply chain, labor availability and price issues, and their negative impacts on our business, to continue. In particular, we expect to experience prolonged delays for certain critical component parts and sub-systems. Furthermore, the existing supply chain and labor market issues could be compounded by other events, such as an economic downturn; supplier capacity constraints for other reasons; supplier quality issues (for example, defects or fraudulent parts); supplier closing, bankruptcy or financial difficulties; price increases for various reasons; worsening shortages of raw materials or commodities; and energy supply constraints, including as a result of war or other geopolitical actions, natural disaster (including the effects of climate change), health pandemic or other business continuity events, or transport and distribution issues, any of which could further negatively impact our ability to meet our commitments to customers or increase our operating costs and therefore incrementally affect our results of operations, financial condition and liquidity.

Due to the nature of our products and services, a product safety failure or other failure affecting our or our customers' or suppliers' products or systems could seriously harm our business. Our products and services are highly sophisticated and specialized, involve complex advanced technologies, are often integrated with third-party products and services and are utilized for specific purposes that require precision, reliability and durability. Many of our products and services include both hardware and software that involve industrial machinery and intricate aviation and defense systems, including commercial and military jet engines, power and control systems and other aircraft parts, air and missile defense systems, and military sensors and command and control systems. Technical, mechanical and other failures may occur from time to time, whether as a result of manufacturing or design defect, operational process or production issue attributable to us, our customers, suppliers, third party integrators or others. In addition, our products could fail as a result of cyber-attacks, such as those that seize control and result in misuse or unintended use of our products, or other intentional acts. The impact of a catastrophic product or system failure or similar event affecting our or our customers' or suppliers' products or services could be significant, and could result in injuries

or death, property damage, loss of strategic capabilities, loss of intellectual property, loss of reputation, and other significant negative effects. A product or system failure could lead to negative publicity, a diversion of management attention and damage to our reputation that could reduce demand for our products and services. It could also result in product recalls and product liability and warranty claims (including claims related to the safety or reliability of our products) and related expenses, other service, repair and maintenance costs, significant damages and other costs, including fines and other remedies and regulatory and environmental liabilities. We may also incur increased costs, delayed payments, reputational harm or lost equipment or services revenue in connection with a significant issue with a third party's product with which our products are integrated. Further, our insurance coverage may not be adequate to cover all related costs and we may not otherwise be fully indemnified for them. Any of the foregoing could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

We depend on the recruitment and retention of qualified personnel, and our failure to attract, train and retain such personnel could seriously harm our business. Due to the specialized nature of our business, our future performance is highly dependent upon the continued services of our key technical personnel and executive officers, and the hiring, development and retention of qualified technical, engineering, manufacturing, marketing, sales and management personnel for our operations. Our defense business in particular requires qualified personnel with security clearances due to our classified programs. In addition, we experienced personnel reductions when the COVID-19 pandemic caused significant declines in demand for our commercial aerospace products and services, but current demand for our products and services across our businesses has created a significant need for us to hire additional and replacement personnel. Moreover, a significant percentage of our current workforce is nearing or eligible for retirement. To the extent that we lose experienced personnel in the future, it is critical that we develop other employees, hire new qualified personnel and successfully manage the transfer of knowledge.

Current macroeconomic, industry and labor market conditions have exacerbated an already highly competitive market for hiring and retaining employees with relevant qualifications and experience. There is an ongoing labor shortage, particularly for highly qualified personnel including engineers, skilled laborers and security clearance holders. Labor market trends also include high attrition and wage inflation, and some candidates and new personnel may have different expectations from our current workforce. As a result of the above factors, we have experienced, and expect to continue to experience, significant difficulties in hiring and retaining personnel with relevant qualifications and experience, which has negatively impacted, and may continue to negatively impact, our results of operations, financial condition and liquidity.

In addition, certain existing personnel may be required to receive various security clearances and substantial training in order to work on certain programs or perform certain tasks. Necessary security clearances may be delayed, which may impact our ability to perform on our U.S. government contracts. We also may not be successful in training or developing qualified personnel with the requisite relevant skills or security clearances. Loss of key employees, increased attrition for various reasons, failure to adequately train newly hired employees, delays in receiving required security clearances, or delays in hiring key personnel could also seriously harm our business.

Moreover, we believe that a critical element of our ability to successfully attract, train and retain qualified personnel is our corporate culture, which we believe fosters innovation, collaboration, diversity and inclusion, and a focus on execution, all in an environment of high ethical standards. Our global operations may present challenges in maintaining these important aspects of our corporate culture, and a failure to maintain our corporate culture could negatively impact us. Further, we rely on our key personnel to lead with integrity and to meet our high ethical standards that promote excellent performance and cultivate diversity, equity and inclusion. To the extent any of our key personnel were to behave in a way that is inconsistent with our values, including with respect to product safety or quality, legal or regulatory compliance, financial reporting or people management, we could experience a materially adverse impact to our reputation and our operating results. In addition, failure or perceived failure to meet increasing stakeholder expectations on environmental, social and governance (ESG) matters could harm our reputation and impact demand for our products and services.

Our business and financial performance may be adversely affected by cyber-attacks on information technology infrastructure and products. Our business may be impacted by disruptions to our own or third-party information technology (IT) infrastructure, which could result from, among other causes, cyber-attacks on or failures of such infrastructure or compromises to its physical security. We also encounter attempts to infiltrate our products and services and sabotage or disable their use by our customers. Cybersecurity threats are evolving and include, but are not limited to, both attacks on our IT infrastructure and attacks on the IT infrastructure of our customers, suppliers, subcontractors and other third parties with whom we do business routinely, both on premises and in the cloud, attempting to gain unauthorized access to our confidential or other proprietary information, classified information, or information relating to our employees, customers and other third parties, or to disrupt our systems or the systems of third parties. Cybersecurity threats also include attacks targeting the security, integrity and/or availability of the hardware, software and information installed, stored or transmitted in our products, including after the purchase of those products and when they are incorporated into third-party products, facilities or infrastructure. We are also exposed to the risk of insider threat attacks. Any such attacks could disrupt our systems or those of third parties (including

mission critical systems), impact business operations, result in unauthorized release of confidential or otherwise protected information, and corrupt our data or that of third parties. We have experienced cyber-based attacks, and due to the evolving threat landscape, may continue to experience them going forward, potentially with more frequency. The threats we face are continuous and evolving, and vary from attacks common to most industries to more advanced and persistent, highly organized adversaries, including nation states, which target us and other defense contractors. We continue to make investments and adopt measures designed to enhance our protection, detection, response, and recovery capabilities, and to mitigate potential risks to our technology, products, services and operations from potential cybersecurity threats. However, given the unpredictability, nature and scope of cyber-attacks, it is possible that we are unable to defend against all cyber attacks, that potential vulnerabilities could go undetected and persist in the environment for an extended period, or that we may otherwise be unable to mitigate customer losses and other potential consequences of these attacks. In addition, some products and services that we provide to customers, particularly those related to public security, may raise potential liabilities related to privacy and intellectual property. In some cases we must rely on the safeguards put in place by our customers, suppliers, subcontractors and other third parties to protect against and report cyber threats. We could potentially be subject to production downtimes, operational delays, other detrimental impacts on our operations or ability to provide products and services to our customers, the compromise of confidential information, intellectual property or otherwise protected information, misappropriation, destruction or corruption of data, security breaches, other manipulation or improper use of our or third-party systems, networks or products, financial losses from remedial actions, loss of business, or potential liability, penalties, fines and/or damage to our reputation. Any of these could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity. Some of these risks may be heightened due to the Company and its suppliers and other third parties operating with a significant number of employees working remotely. Due to the evolving nature of such risks, the impact of any potential incident cannot be predicted. Further, our insurance coverage may not be adequate to cover all related costs and we may not otherwise be fully indemnified for them.

Exports and imports of certain of our products are subject to various export control, sanctions and import regulations and may require authorization from regulatory agencies of the U.S. or other countries. We must comply with various laws and regulations relating to the export and import of products, services and technology from and into the U.S. and other countries having jurisdiction over our operations. In the U.S., these laws and regulations include, among others, the Export Administration Regulations (EAR) administered by the U.S. Department of Commerce, the International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State, embargoes and sanctions regulations administered by the U.S. Department of the Treasury, and import regulations administered by the U.S. Department of Homeland Security and the U.S. Department of Justice. Certain of our products, services and technologies have military or strategic applications and are on the U.S. Munitions List of the ITAR, the Commerce Control List of the EAR or are otherwise subject to the EAR, and/or the U.S. Munitions Import List and we are required to obtain licenses and authorizations from the appropriate U.S. government agencies before selling these products outside of the U.S. or importing these products into the U.S. U.S. foreign policy or foreign policy of other licensing jurisdictions may affect the licensing process or otherwise prevent us from engaging in business dealings with certain individuals, entities or countries. Any failure by us, our customers or our suppliers to comply with these laws and regulations could result in civil or criminal penalties, fines, seizure of our products, adverse publicity, restrictions on our ability to export or import our products, or the suspension or debarment from doing business with the U.S. government. Moreover, any changes in export control, sanctions or import regulations may further restrict the export or import of our products or services, and the possibility of such changes requires constant monitoring to ensure we remain compliant. Our ability to obtain required licenses and authorizations on a timely basis or at all is subject to risks and uncertainties, including changing U.S. government laws, regulations or foreign policies, delays in Congressional action, or geopolitical and other factors. If we are not successful in obtaining or maintaining the necessary licenses or authorizations in a timely manner, our sales relating to those approvals may be prevented or delayed, and revenue and profit previously recognized may be reversed. Any restrictions on the export or import of our products or product lines could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

Our business and financial performance may be adversely affected by threats to our physical security and other events outside our control. We could encounter threats to our physical security, including our facilities and personnel, and threats from, workplace violence, civil unrest, terrorism or similar acts, any of which could disrupt our business. In addition, our business, and the businesses of our suppliers, subcontractors and service providers and customers, could be disrupted by public health crises, such as pandemics and epidemics (including the COVID-19 pandemic), damaging weather or other acts of nature, cyber-attacks on IT infrastructure and products or other events outside of our control. Any such business disruption could subject us to production downtimes, operational delays, other detrimental impacts on our operations or ability to provide products and services to our customers, financial losses from remedial actions, the diversion of management's attention and resources, or loss of business, any of which could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity. The impact of any such business disruption is difficult to predict.

We depend on our intellectual property and have access to certain third party intellectual property; infringement or failure to protect our intellectual property or access to third party intellectual property could adversely affect our future growth and success. We rely on a combination of patents, trademarks, copyrights, trade secrets, nondisclosure agreements, IT security systems, internal controls and compliance systems and other measures to protect our intellectual property. We also rely on nondisclosure agreements, confidentiality obligations in contracts, IT security systems and other measures to protect certain customer and supplier information and intellectual property that we have in our possession or to which we have access. The U.S. government and foreign governments have licenses under certain of our intellectual property, including certain patents, which are developed or used in performance of government contracts. Governments may use or authorize others (including our competitors) to use such patents and intellectual property for government and other purposes. Governments may challenge the sufficiency of intellectual property rights we have granted in government contracts and attempt to obtain greater rights, which could reduce our ability to protect our intellectual property rights and to compete. In some instances, we have augmented our technology base by licensing the proprietary intellectual property of others. Intellectual property obtained from third parties is also subject to challenge, invalidation, misappropriation or circumvention by third parties. In addition, we may not be able to obtain necessary licenses on commercially reasonable terms. In other instances, our ability to procure and perform government contracts requires us to obtain certain rights in the intellectual property of others through government grants. Governments may deny us the right to obtain such rights in the intellectual property of others, which may affect our ability to perform government contracts. Moreover, our efforts to protect intellectual property and proprietary rights may not be sufficient. We cannot be sure that our pending patent applications will result in the issuance of patents to us, that patents issued to or licensed by us in the past or in the future will not be challenged or circumvented by competitors, or that these patents will be found to be valid or sufficiently broad to preclude our competitors from introducing technologies similar to those covered by our patents and patent applications. Our ability to protect and enforce our intellectual property rights may be limited in certain countries outside the U.S. In addition, we may be the target of competitor or other third-party patent enforcement actions seeking substantial monetary damages or seeking to prevent our sale and marketing of certain of our products or services. Our competitive position also may be adversely impacted by limitations on our ability to obtain possession of, and ownership of necessary licenses concerning, data important to the development or provision of our products or service offerings, or by limitations on our ability to restrict the use by others of data related to our products or services. We may also be subject to disruptions, losses and liability resulting from various cybersecurity attacks or information technology failures, as described above. Any of these events or factors could have a material adverse effect on our competitive position, subject us to judgments, penalties and significant litigation costs, or temporarily or permanently disrupt our sales and marketing of the affected products or services. Any of the foregoing could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

LEGAL, ENVIRONMENTAL AND REGULATORY RISKS

As a U.S. government contractor, we are subject to risks relating to U.S. government audits, investigations, and disputes. We are subject to U.S. government investigations relating to our U.S. government contracts. Such U.S. government investigations often take years to complete and could result in administrative, civil or criminal liabilities, including repayments, fines, treble and other damages, forfeitures, restitution or penalties, or could lead to suspension or debarment of U.S. government contracting or of export privileges. For instance, if we or one of our business units were charged with wrongdoing in connection with a U.S. government investigation (including fraud, or violation of certain environmental or export laws, as further described below), the U.S. government could suspend us from bidding on or receiving awards of new U.S. government contracts pending the completion of legal proceedings. If convicted or found liable, the U.S. government could fine and debar us from new U.S. government contracting for a period generally not to exceed three years and could void any contracts found to be tainted by fraud. We also could suffer reputational harm if allegations of impropriety were made against us, even if such allegations are later determined to be unsubstantiated. Further, our U.S. government contracts are subject to audit and we have received audit reports recommending the reduction of certain contract prices because, for example, cost or pricing data disclosures or cost accounting practices used to price and negotiate those contracts may not have conformed to government regulations. Some of these audit reports recommend that certain payments be repaid, delayed, or withheld, and may involve substantial amounts, which could, if the audit reports' theories were to prevail in litigation, also have future impacts such as increasing the costs absorbed by our commercial businesses. We have made voluntary refunds in those cases we believe appropriate, have settled some allegations and, in some cases, continue to negotiate and/or litigate. We may be, and have been, required to make significant payments into escrow of disputed liabilities while the related litigation is pending. If the litigation is resolved in our favor, any such payments will be returned to us with interest. The Defense Contract Audit Agency (DCAA) and the Defense Contract Management Agency (DCMA) also review the adequacy of and our compliance with our internal control systems and policies, including our accounting, purchasing, government property, estimating, earned value management and material management accounting systems. Our final allowable incurred costs for each year are subject to audit and have from time to time resulted in disputes between us and the U.S. government, including DCMA claims to recover payments for alleged noncompliance with cost accounting standards. In some cases, the Department of Justice (DOJ) has convened grand juries to

investigate possible irregularities in our costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed by the U.S. government or must be refunded by us to the U.S. government if already reimbursed. An adverse outcome of any audit or investigation could result in civil and criminal penalties and fines, which could negatively impact our results of operations, financial condition and liquidity. In addition, if allegations of impropriety were made against us, we could suffer serious reputational harm, which could negatively affect our financial position, results of operations and liquidity.

We are subject to litigation, environmental, anti-corruption and other legal and compliance risks. We are subject to a variety of litigation and legal compliance risks. These risks relate to, among other things, product safety and reliability, personal injuries, intellectual property rights, contract-related claims, government contracts, taxes, environmental matters, export control, employment matters, competition laws and laws governing improper business practices. We or one of our businesses could be charged with wrongdoing as a result of such matters. If convicted or found liable, we could be subject to significant fines, penalties, repayments, or other damages (in certain cases, treble damages). Product recalls and product liability and warranty claims can result in significant damages and costs, including fines as well as other harm to our business as discussed above. As a global business, we are subject to complex laws and regulations in the U.S. and in other countries in which we operate. Those laws and regulations may be interpreted in different ways. They may also change from time to time, as may related interpretations and other guidance. Changes in laws or regulations could result in higher expenses. Uncertainty relating to laws or regulations may also affect how we conduct our operations and structure our investments and could limit our ability to enforce our rights.

We use hazardous substances and generate hazardous wastes in our operations. As a result, we are subject to potentially material liabilities related to personal injuries or property damage that may be caused by hazardous substance releases and exposures. Personal injury lawsuits may involve individual and purported class actions alleging that contaminants originating from our current or former products or operating facilities caused or contributed to medical conditions, including cancers incurred by employees, former employees, third-parties' employees or residents in the area, and environmental damage or diminution of real estate values. For example, we are investigating and remediating contamination related to past practices at a number of properties and, in some cases, have been named as a defendant in related "toxic tort" claims. We are also subject to laws and regulations that: (1) impose requirements for the proper management, treatment, storage and disposal of hazardous substances and wastes; (2) restrict air and water emissions from our operations (including U.S. government-owned facilities we manage); and (3) require maintenance of a safe workplace. These laws and regulations can lead to substantial fines and criminal sanctions for violations, and may require the installation of costly equipment or operational changes to limit pollution emissions, decrease the likelihood of accidental hazardous substance releases, and/or reduce the risks of injury to people. We incur, and expect to continue to incur, capital and other expenditures to comply with these laws and regulations. A criminal violation of certain U.S. environmental statutes such as the Clean Air Act and Clean Water Act could result in suspension, debarment or disqualification by the U.S. Environmental Protection Agency (EPA). A facility determined to be in violation of the criminal provisions of these statutes can be prohibited from performing any U.S. government contract work until the violation has been corrected and the EPA approves the reinstatement of the facility. Even in litigation where we believe our liability is remote, there is a risk that a negative finding or decision in a matter involving multiple plaintiffs or a purported class action could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity, in particular with respect to environmental claims in regions where we have, or previously had, significant operations. In addition, new laws, regulations, or governmental policies, sudden changes in the interpretation and enforcement of existing laws and regulations, the discovery of previously unknown contamination, or the imposition of new clean-up standards could require us to incur additional costs in the future that would have a negative effect on our results of operations, financial condition and liquidity.

In addition, the FCPA and other anti-bribery and -corruption laws generally prohibit companies and their intermediaries from making improper payments to U.S. and non-U.S. officials for the purpose of obtaining or retaining business. These laws apply to companies, individual directors, officers, employees and agents. U.S. companies also may be held liable for actions taken by strategic or local partners or representatives. The FCPA also imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments. Certain of our customer relationships outside of the U.S. are with governmental entities and are, therefore, subject to the FCPA and other anti-bribery and -corruption laws, including the anti-bribery and -corruption laws of non-U.S. countries. Our policies mandate compliance with these anti-bribery and -corruption laws. Despite meaningful measures that we undertake to ensure lawful conduct, which include training and internal control policies, these measures may not always prevent violations of the FCPA or similar laws. We have been subject to regulatory investigations for alleged violations of anti-bribery and -corruption laws, and could be subject to such investigations in the future, which could result in criminal and civil penalties, disgorgement, further changes or enhancements to our procedures, policies and controls, personnel changes or other remedial actions. Violations of these laws, or allegations of such violations, could disrupt our operations, cause reputational harm, involve significant management attention and result in a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

Cybersecurity and data security and protection laws and regulations are evolving and present increasing compliance challenges, which may increase our costs, affect our competitiveness, cause reputational harm, and expose us to substantial fines or other penalties.

Our business and financial performance may be adversely affected by climate change, including changes in regulations, customer demand, technologies and extreme weather. Our business may be impacted by climate change and governmental and industry actions taken in response, which present short, medium and long-term risks to our business and financial condition. Changes in environmental and climate-related laws or regulations, including regulations on greenhouse gas emissions, carbon pricing, energy taxes, product efficiency standards, mandatory disclosure obligations and U.S. government procurement requirements, could increase our operational and compliance expenditures and those of our suppliers, including increased energy and raw materials costs and costs associated with manufacturing changes, and lead to new or additional investments in product designs and facility upgrades. In addition, we continue to see ever-increasing demands for offerings focused on addressing climate change, transitioning to lower emission technologies, including low to no carbon products and services, the use of alternative energy sources and other sustainable aviation technologies, and climate adaptation products and services. Customers, shareholders and institutional investors continue to increase their focus on ESG, including our environmental sustainability practices and commitments with respect to our operations, products and suppliers. As a result, we anticipate that we will need to make additional investments in new technologies and capabilities and devote additional management and other resources in response to the foregoing. We may not realize, on a timely basis or at all, the anticipated benefits of these investments and actions for a variety of reasons, including technological challenges, evolving government and customer requirements and our ability to anticipate them and develop in-demand technologies on a timely basis, and other risks related to the development of advanced technologies described above. In addition, certain technologies will be dependent upon government action, such as investments in infrastructure, creating appropriate market incentives and making certain raw materials available for development of certain technologies. Moreover, we rely on our suppliers to timely and effectively adapt and meet our evolving technological supply needs, and they may be unable to fully respond to our requirements in a timely manner or at all. We also face competition risks as our competitors also respond to advancing sustainable technologies. Our competitors may develop these in-demand technologies before we do, their new technologies may be deemed by our customers to be superior to technologies we may develop, and their technologies may otherwise gain industry acceptance in advance of or instead of our products. In addition, as we and our competitors develop increasingly sustainable technologies, demand for our older offerings may decrease or become nonexistent. Our reputation may also be damaged if we or our industry fail, or are perceived to fail, to achieve sustainability goals or commitments or to comply with evolving climate-related regulations. In addition, climate-related litigation and government investigations could be commenced against us, could be costly to defend and could adversely affect our business. Moreover, our business, the businesses of our suppliers, subcontractors, service providers, distributors and customers, and the industries in which we operate could be negatively impacted by increasing frequency and severity of acute extreme weather events caused by climate change, including hurricanes, tornadoes, floods, snow and ice storms, fires, heat waves, and mud slides, and by chronic changes in weather patterns, such as temperature increases, drought and sea level rise. These events could damage our and our suppliers' facilities, products and other assets, and cause disruptions to our business and operations, supply chain and distribution networks, and the businesses of our customers, and require an increase in expenditures to improve climate resiliency of our operations. Any of the foregoing could materially decrease our revenues and materially increase our costs and expenses.

FINANCIAL, TAX AND INSURANCE RELATED RISKS

We use estimates in accounting for many of our programs, and changes in our estimates could adversely affect our future financial results. Accounting for long-term contracts and related assets requires estimates and judgments related to our progress toward completion and the long-term performance on the contract. Significant judgments include potential risks associated with the ability and cost to achieve program schedule, including customer-directed delays or reductions in scheduled deliveries, and technical and other specific contract requirements including customer activity levels and variable consideration based upon that activity. Due to the nature of the work required to be performed on many of our performance obligations, the estimation of total revenues and cost at completion is complex and subject to many variables. Management must make assumptions and estimates regarding contract revenue and cost (such as estimates of variable consideration, including award fees and penalties), including with respect to: (1) labor productivity and availability; (2) the complexity and scope of the work to be performed; (3) the availability and cost of materials; (4) the length of time to complete the performance obligation; (5) execution by our subcontractors; (6) the availability and timing of funding from our customer; (7) overhead cost rates; and (8) current and past service cost and frequency driven by estimated aircraft and engine utilization and estimated useful lives of components, among other variables. Cost estimates may also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or ICIP agreements, required under certain contracts. Because of the significance of management's judgments and estimation processes described above, it is likely that materially different amounts could be recorded if we used different assumptions or if the underlying circumstances were to change. Changes in

underlying assumptions, circumstances or estimates may adversely affect our future results of operations and financial condition.

Significant changes in key estimates and assumptions with respect to our retirement plans, such as discount rate, expected return on plan assets (EROA), and other actuarial factors, could affect our future earnings, equity and pension contributions. We must determine our pension and other postretirement benefit plans' expense or income, which involves significant judgment particularly with respect to our discount rate, EROA and other actuarial assumptions. These assumptions are evaluated annually at December 31 and when significant events require a mid-year remeasurement. They may change significantly due to changes in economic, legislative, regulatory, and/or demographic experience or circumstances. Changes in our assumptions or actual experience that differs from these assumptions could impact our pension and postretirement net periodic benefit (income) expense, the plans' funded status, and/or the required cash contributions to such plans, which could negatively impact our results of operations, financial condition or liquidity. Our plan assets are invested in accordance with our investment management objectives and are subject to market volatility and other conditions.

Additional tax expense or exposures could affect our future profitability. We are subject to income taxes in the United States and international jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are transactions and calculations where the ultimate tax determination is uncertain. Changes in tax laws and regulations, as well as changes and conflicts in related interpretations and other tax guidance, and fluctuations in taxable income could materially impact our tax receivables and liabilities and our deferred tax assets and deferred tax liabilities, as well as our income tax expense and tax payments. Additionally, in the ordinary course of business, we are subject to examinations by various tax authorities. In addition to ongoing examinations, there could be additional examinations launched in the future by governmental authorities in various jurisdictions, and existing examinations could be expanded. The final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals. Additionally, changes in the geographic mix of our sales could impact our tax liabilities and affect our income tax expense and profitability. The global and diverse nature of our operations means that these risks will continue to exist and additional examinations, proceedings and contingencies will arise from time to time. Our competitive position, results of operation, financial condition or liquidity may be affected by the outcome of examinations, proceedings and other contingencies that cannot be predicted with certainty.

Goodwill and other intangible assets represent a significant portion of our assets, and any impairment of these assets could negatively impact our results of operations and financial condition. A significant portion of our assets consists of goodwill and other intangible assets, primarily recorded as the result of historical acquisitions or investments in businesses. We may subsequently experience unforeseen events that could adversely affect the value of our goodwill or intangible assets. Our goodwill and indefinite-lived intangible assets are subject to an impairment test annually and are also tested for impairment whenever facts and circumstances indicate that goodwill or indefinite-lived intangible assets may be impaired. In the event of an impairment, any excess of the carrying value of these assets over the fair value must be written off in the period of determination. Finite-lived intangible assets are generally amortized over the useful life of such assets. Future determinations of significant impairments of goodwill or indefinite-lived intangible assets as a result of an impairment test or accelerated amortization of finite-lived intangible assets could have a negative impact on our results of operations and financial condition.

We may be unable to obtain debt at competitive rates, on commercially reasonable terms or in sufficient amounts. We depend, in part, upon the issuance of debt to fund our business requirements. If we require additional funding in order to meet our business requirements, a number of factors could cause us to incur increased borrowing costs and to have greater difficulty accessing public and private markets for debt. These factors include disruptions or declines in the global capital markets and/or a decline in our financial performance, outlook or credit ratings. The occurrence of any or all of these events may adversely affect our ability to fund our business requirements.

Quarterly cash dividends and share repurchases are subject to uncertainties and may affect our common stock price. Quarterly cash dividends and share repurchases under our share repurchase program generally constitute components of our capital allocation strategy, which we fund through a combination of operating free cash flow, borrowings and proceeds from divestitures. However, we are not required to declare dividends or make any share repurchases under our share repurchase program. Dividends and share repurchases may be discontinued, accelerated, suspended or delayed at any time without prior notice. Even if not discontinued, the amount of such dividends and repurchases may be changed, and the amount, timing and frequency of such dividends and repurchases may vary from historical practice or from the company's stated expectations. Decisions with respect to dividends and share repurchases are subject to the discretion of our Board of Directors and are based on a variety of factors. Important factors that could cause us to discontinue, limit, suspend, increase or delay our quarterly cash dividends or share repurchases include market conditions, the price of our common stock, the nature and timing of other investment opportunities, changes in our business strategy, the terms of our financing arrangements, our outlook as to the ability to obtain financing at attractive rates, the impact on our credit ratings, the availability of domestic cash and overall business expectations. The reduction or elimination of our cash dividend, or suspension or elimination of our share repurchase

program could adversely affect the market price of our common stock. Additionally, there can be no assurance that any share repurchases will enhance shareowner value because the market price of our common stock may decline below the levels at which we repurchased shares of common stock, and short-term stock price fluctuations could reduce the program's effectiveness.

We face certain significant risk exposures and potential liabilities that may not be adequately covered by indemnity or insurance. A significant portion of our business relates to designing, developing and manufacturing advanced aerospace, defense and technology systems and products. New technologies may be untested or unproven. In addition, we may incur significant liabilities that are unique to our products and services. In some, but not all, circumstances, we may be entitled to indemnification from our customers through contractual provisions, and we may obtain limitations of liability and additional defenses for various reasons including the qualification of our products and services by the Department of Homeland Security (DHS) under the SAFETY Act provisions of the Homeland Security Act of 2002. The insurance coverage we maintain or indemnification to which we may be contractually or otherwise entitled may not be adequate to cover all claims or liabilities. Accordingly, we may be forced to bear substantial costs resulting from risks and uncertainties of our business, which would negatively impact our results of operations, financial condition and liquidity. Any accident, failure of, or defect in our products and services, even if fully indemnified or insured, could negatively affect our reputation among our customers and the public, and make it more difficult for us to compete effectively. It could also affect the cost and availability of insurance in the future.

STRATEGIC INITIATIVE AND TRANSACTION RISKS

We may be unable to realize expected benefits from strategic initiatives. In order to operate more effectively and efficiently, from time to time we undertake strategic and other operational initiatives. For example, we are undergoing a significant, multi-year digital transformation initiative to improve our business and reduce costs. Under this initiative, we are leveraging digital capabilities throughout the way in which we conduct our business and provide our products and services to customers, including how we design, build and maintain our products and services. We also continue to engage our Customer Oriented Results Excellence (CORE) operating system to drive continuing improvement into our processes and facilities. In addition, we continue to invest in structural cost reduction in our facilities, including aligning work to more efficient manufacturing centers, implementing advanced manufacturing capabilities including automation, and closing facilities that are not required to meet future capacity and work needs. Other initiatives include the pursuit of advanced technologies and new business acquisitions and subsequent integrations. We also implement restructuring plans from time to time. For example, we recently announced our plans to reorganize our current business segment structure from four to three business segments in the second half of 2023. Restructuring activities include or may result in workforce reductions, global facility reductions, procurement cost reduction activities, legal entity and operational reorganizations and other cost reduction initiatives. These strategic activities are complex and require the investment of resources including in personnel and systems. If we do not successfully manage our current or future strategic initiatives, expected efficiencies and benefits might be delayed or not realized, and our operations and business could be disrupted. In addition, certain U.S. government contracts and programs have begun to require digital engineering and other digital capabilities, and our inability to achieve these capabilities with respect to these programs timely may result in loss of revenues. Risks associated with workforce management issues include unfavorable political responses to such actions, unforeseen delays in the implementation of anticipated workforce reductions, additional unexpected costs, adverse effects on employee morale and the failure to meet operational targets due to the loss of employees or work stoppages. Any of the above factors may impair our ability to achieve anticipated benefits, or otherwise harm our business, or have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

We may be unable to successfully complete the integration of the legacy businesses of United Technologies Corporation (UTC) and Raytheon Company and realize the anticipated benefits of the Raytheon merger. The ultimate success of the Raytheon merger continues to depend, in part, on our ability to successfully combine and integrate UTC and Raytheon Company's legacy businesses, and realize the anticipated benefits, including synergies, cost savings, innovation and technological opportunities (including technology-driven revenue synergies) and operational efficiencies from the Raytheon merger in a manner that does not materially disrupt existing customer, supplier and employee relations and does not result in decreased revenues due to losses of, or decreases in orders by, customers. We continue to be exposed to risks associated with our ability to identify and achieve revenue synergy opportunities among the legacy businesses. In addition, we may be unable to consolidate all of the corporate and administrative infrastructures and eliminate all of the duplicative operations which we intend, and continue to be at risk for unanticipated issues in integrating information technology, communications and other systems. Any one of these challenges could result in delays, increased costs, decreases in the amount of expected revenues, reduced expected cash generation, and diversion of management's time and energy, which could materially affect our financial condition, results of operations and liquidity.

If we fail to manage potential future acquisitions, investments, divestitures, joint ventures and other transactions successfully, these activities could adversely affect our future financial results. In pursuing our business strategies, we continually review, evaluate and consider potential investments, acquisitions, divestitures, joint ventures and other teaming and

collaborative arrangements. We undertake to identify opportunities that will complement our existing products and services or customer base, as well as expand our offerings and business opportunities into new areas that naturally extend from our core capabilities. In evaluating such transactions, we are required to make difficult judgments regarding the value of business opportunities, technologies and other assets, and the risks and cost of potential liabilities. Further, these transactions involve certain other risks and uncertainties including: (1) the risks involved with entering new markets; (2) the difficulty in integrating newly-acquired businesses and managing or monitoring other collaborative business arrangements; (3) the complexity of separating a portion of our business to enable a divestiture; (4) challenges and failures in achieving strategic objectives and other expected benefits, which may result in certain liabilities to us for guarantees and other commitments; (5) unidentified issues not discovered in RTC's due diligence; (6) the diversion of our attention and resources from our operations and other initiatives; (7) the potential impairment of acquired assets; (8) the performance of underlying products, capabilities or technologies; and (9) the potential loss of key employees and customers of acquired businesses. In addition, future transactions may impact our deployment of capital, including dividends, stock repurchases, pension contributions, and investments.

If either distribution of the stock of Carrier or Otis, together with certain related transactions, were to fail to qualify as a transaction that is generally tax-free, including as a result of subsequent acquisitions of our stock (including pursuant to the Raytheon merger), we could be subject to significant tax liabilities. On April 3, 2020, UTC completed the Separation Transactions. UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020, the record date for the distributions (the Distributions) effective at 12:01 a.m., Eastern Time, on April 3, 2020. We received (1) a private letter ruling from the Internal Revenue Service (IRS) regarding certain U.S. federal income tax matters relating to the Separation Transactions and Distributions and (2) an opinion of outside counsel regarding the qualification of certain elements of the Distributions under Section 355 of the Code. Although we intend for the Distributions generally to be tax-free for U.S. federal income tax purposes, there can be no assurance that they will so qualify. Even if the Distributions were to otherwise qualify as tax-free transactions under Sections 355 and 368(a)(1)(D) of the Code, either Distribution or both Distributions may result in taxable gain to us (but not our stockholders) under Section 355(e) of the Code if such Distribution(s) were deemed to be part of a plan (or series of related transactions) pursuant to which one or more persons acquire, directly or indirectly, shares representing a 50% or greater interest (by vote or value) in shares of Carrier, Otis, or us, as applicable. If the IRS were to determine that any post-Distribution acquisitions of Carrier stock, Otis stock, or our stock, as applicable, pursuant to such a plan (when aggregated with any pre-Distribution acquisitions of Carrier stock, Otis stock, or our stock, as applicable, pursuant to such a plan) would represent a 50% or greater interest in shares of Carrier, Otis, or us, as applicable, such determination could result in significant tax liabilities to us. For purposes of this test, even if the Raytheon merger were treated as part of such plan, it did not result in an acquisition of a 50% or greater interest in us. Any such tax liabilities imposed on us may adversely affect an investment in us. In addition, we obtained tax rulings in certain non-U.S. jurisdictions and/or opinions of external tax advisors, in each case, regarding the tax treatment of certain Separation Transactions. Notwithstanding the receipt of such tax rulings and opinions, there can be no assurance that the relevant taxing authorities will not assert that the tax treatment of the relevant Separation Transactions differs from the conclusions reached therein. In the event the relevant taxing authorities prevail with any challenge in respect of any relevant Separation Transaction, we would be subject to significant tax liabilities, which may adversely affect an investment in us. Further, under a tax matters agreement that we entered into with Carrier and Otis in connection with the Separation Transactions and Distributions, each of Carrier and Otis generally is required to indemnify us for certain taxes we may incur resulting from the Separation Transactions and/or the Distributions failing to qualify for the intended tax treatment. In addition, under the tax matters agreement, each of Carrier and Otis is responsible for (i) a specified portion of any installment payment we are required to make pursuant to Section 965(h)(2) of the Code and (ii) specified taxes that exclusively relate to the Carrier business or the Otis business, as applicable. The amount of any such taxes for which we would be responsible may be significant, and if we were unable to obtain indemnification payments from Carrier or Otis to which we are entitled under the tax matters agreement and/or other agreements entered into in connection with the Separation Transactions and the Distributions, we would incur significant losses.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We have significant properties in approximately 25 countries, with approximately 515 significant properties comprising approximately 75 million square feet of productive space. Approximately 30% of our square footage related to our significant properties is leased, and 70% is owned. Approximately 60% of our square footage related to our significant properties is located in the United States.

Our fixed assets as of December 31, 2022 include manufacturing facilities and non-manufacturing facilities such as warehouses, laboratories, office space, and a substantial quantity of machinery and equipment, including general purpose machinery and equipment using special jigs, tools and fixtures and in many instances having automatic control features and special adaptations. The facilities, warehouses, machinery and equipment in use as of December 31, 2022 are in good operating condition, are well-maintained and substantially all are generally in regular use.

ITEM 3. LEGAL PROCEEDINGS

We are subject to a number of lawsuits, investigations and claims (some of which involve substantial amounts). For a discussion of contingencies related to certain legal proceedings, see “Note 18: Commitments and Contingencies” within Item 8 of this Form 10-K. Except as otherwise noted, while we are unable to predict the final outcome, based on information currently available, we do not believe that resolution of any of these matters will have a material adverse effect upon our competitive position, results of operations, financial condition or liquidity.

A further discussion of government contracts and related investigations, as well as a discussion of our environmental liabilities, can be found under the heading “Other Matters Relating to Our Business – Regulatory matters” within Item 1. “Business” of this Form 10-K and in Item 1A. “Risk Factors” of this Form 10-K.

737 MAX Aircraft Litigation

Multiple lawsuits have been filed in U.S. courts relating to the October 29, 2018 Lion Air Flight 610 and the March 10, 2019 Ethiopian Airlines Flight 302 accidents. Collins Aerospace (Collins) sold certain aircraft parts and systems to The Boeing Company for the 737 MAX aircraft involved in these accidents. Certain of our Collins businesses have been named, along with other third parties, as parties in many of these lawsuits. We have also fully supported all governmental investigations and inquiries relating to the accidents. We do not expect that the lawsuits or governmental investigations or inquiries will have a material adverse effect on our results of operations, financial condition or liquidity.

ITEM 4. MINE SAFETY DISCLOSURE

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Raytheon Technologies’ common stock is listed on the New York Stock Exchange under the ticker symbol “RTX.” There were 41,554 registered shareowners at December 31, 2022. The information required by Item 5 with respect to securities authorized for issuance under equity compensation plans is contained within Item 12 of this Form 10-K.

Stock Performance Graph

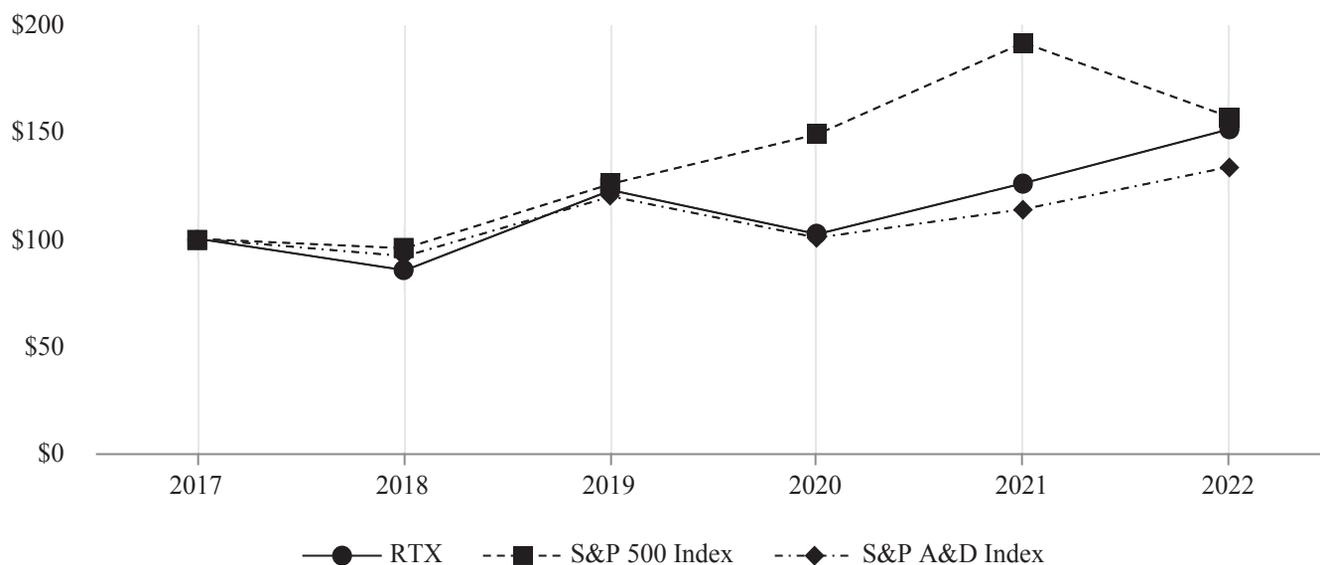
The following graph presents the cumulative total shareowner return for the five years ending December 31, 2022 for our common stock as compared to the Standard & Poor’s 500 Stock Index and the S&P Aerospace & Defense (A&D) Index. These figures assume that all dividends paid over the five-year period were reinvested, and that the starting value of each index and the investment in common stock was \$100.00 on December 31, 2017.

Comparison of Cumulative Five Year Total Return

Company/Index	Annual Return Percentage Years Ending				
	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Raytheon Technologies Common Stock	(14.66)	43.82	(16.73)	23.27	20.01
S&P 500 Index	(4.38)	31.49	18.40	28.71	(18.11)
S&P Aerospace & Defense Index	(8.07)	30.33	(16.06)	13.22	17.37

Company/Index	Base Period 12/31/2017	Indexed Returns Years Ending				
		12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Raytheon Technologies Common Stock	\$ 100.00	\$ 85.34	\$ 122.74	\$ 102.21	\$ 125.99	\$ 151.21
S&P 500 Index	100.00	95.62	125.72	148.85	191.58	156.88
S&P Aerospace & Defense Index	100.00	91.93	119.81	100.56	113.86	133.64

Comparison of Cumulative Five Year Total Return



Issuer Purchases of Equity Securities

The following table provides information about our purchases during the quarter ended December 31, 2022 of equity securities that are registered by us pursuant to Section 12 of the Exchange Act.

2022	Total Number of Shares Purchased (000's)	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Program (000's)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (dollars in millions)
October 1 - October 31	2,134	\$ 85.81	2,134	\$ 3,363
November 1 - November 30	1,244	95.87	1,244	3,244
December 1 - December 31	869	99.59	869	5,968
Total	4,247	\$ 91.58	4,247	

On December 12, 2022, our Board of Directors authorized a share repurchase program for up to \$6 billion of our common stock, replacing the previous program announced on December 7, 2021. Under the 2022 program, shares may be purchased on the open market, in privately negotiated transactions, under accelerated share repurchase programs, and under plans complying with Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended. We may also reacquire shares outside of the program from time to time in connection with the surrender of shares to cover taxes on vesting of restricted stock and as required under our employee savings plan. Our ability to repurchase shares is subject to applicable law. No shares were reacquired in transactions outside the program during the quarter ended December 31, 2022.

ITEM 6.

Reserved.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to provide information to the reader in understanding our consolidated financial statements and notes thereto included in Item 8. Financial Statements and Supplementary Data of this Form 10-K, the changes in certain key items in those financial statements between select periods and the primary factors that accounted for those changes. In addition, we discuss certain accounting principles, policies and critical estimates that affect our financial statements. Our discussion also contains some additional context regarding our business, including industry considerations and the business environment, as well as certain forward-looking statements related to future events and expectations. This MD&A should be read in conjunction with the other sections of this Form 10-K, including Item 1A. “Risk Factors.”

BUSINESS OVERVIEW

We are a global premier systems provider of high technology products and services to the aerospace and defense industries. We operate in four principal business segments: Collins Aerospace (Collins), Pratt & Whitney, Raytheon Intelligence & Space (RIS) and Raytheon Missiles & Defense (RMD). The Company recently announced its intention to streamline the structure of its core businesses into three principal business segments: Collins Aerospace, Pratt & Whitney and Raytheon. The Company plans to determine the exact composition of each segment and implement the reorganization in the second half of 2023. All segment information included in this Form 10-K is reflective of the existing four segments of Collins, Pratt & Whitney, RIS and RMD in accordance with the management structure in place as of December 31, 2022. Unless the context otherwise requires, the terms “we,” “our,” “us,” “the Company,” “Raytheon Technologies,” and “RTC” mean Raytheon Technologies Corporation and its subsidiaries.

Industry Considerations

Our worldwide operations can be affected by industrial, economic and political factors on both a regional and global level. Our operations include original equipment manufacturer (OEM) and extensive related aftermarket parts and services related to our aerospace operations. Our defense business serves both domestic and international customers primarily as a prime contractor or subcontractor on a broad portfolio of defense and related programs for government customers. Our business mix also reflects the combination of shorter cycles in our commercial aerospace spares contracts and certain service contracts in our defense business primarily at RIS, and longer cycles in our aerospace OEM and aftermarket maintenance contracts and on our defense contracts to design, develop, manufacture or modify complex equipment. Our customers are in the public and private sectors, and our businesses reflect an extensive geographic diversification that has evolved with continued globalization.

Collins and Pratt & Whitney serve both commercial and government aerospace customers. Revenue passenger miles (RPMs), available seat miles and the general economic health of airline carriers are key barometers for our commercial aerospace operations. Performance in the general aviation sector is closely tied to the overall health of the economy and is positively correlated to corporate profits. Many of our aerospace customers are covered under long-term aftermarket service agreements at both Collins and Pratt & Whitney, which are inclusive of both spare parts and services.

RIS, RMD, and the defense operations of Collins and Pratt & Whitney are affected by U.S. Department of Defense (DoD) budget and spending levels, changes in demand, changes in policy positions or priorities, the domestic and global political environment and the evolving nature of the global and national security threat environment. In addition, our defense businesses engage in both direct commercial sales, which generally require U.S. government licenses and approvals, as well as foreign military sales, which are government-to-government transactions initiated by, and carried out at the direction of, the U.S. government. Changes in these budget and spending levels, policies, or priorities, which are subject to U.S. domestic and foreign geopolitical risks and threats, may impact our defense businesses, including the timing of and delays in U.S. government licenses and approvals for sales, the risk of sanctions or other restrictions.

Government legislation, policies and regulations can impact our business and operations. Changes in environmental and climate change laws or regulations, including regulations on greenhouse gas emissions, carbon pricing, and energy taxes, could lead to new or additional investment in product designs and facility upgrades and could increase our operational and environmental compliance expenditures, including increased energy and raw materials costs and costs associated with manufacturing changes. In addition, government and industry-driven safety and performance regulations, restrictions on aircraft engine noise and emissions, government-imposed travel restrictions and limitations, and government procurement practices can impact our businesses.

Business Environment

Global economic and political conditions, changes in raw material and commodity prices and supply, labor availability and costs, inflation, interest rates, international and domestic tax law changes, foreign currency exchange rates, energy costs and

supply, levels of air travel, the financial condition of commercial airlines, and the impact from natural disasters and weather conditions create uncertainties that could impact our businesses.

Global Supply Chain and Labor Markets. Global supply chain and labor markets are continuing to experience high levels of disruption, causing significant materials and parts shortages, including raw material, microelectronics and commodity shortages, as well as delivery delays, labor shortages, distribution problems and price increases. Current geopolitical conditions, including sanctions and other trade restrictive activities and strained intercountry relations, are contributing to these issues. We have had difficulties procuring necessary materials, including raw materials, components and other supplies, and services on a timely basis or at all. We have also had difficulties hiring qualified personnel, particularly personnel with specialized engineering experience and security clearances. Our suppliers and subcontractors have been impacted by the same issues, as well as ongoing pandemic-related issues, compounding the shortages for us because we rely on them, sometimes as sole-source providers. In addition, as the ongoing recovery in commercial air travel continues, the anticipated increase in new aircraft deliveries and increased demand for our products and services will add to these supply chain and labor market challenges.

We work continuously to mitigate the effects of these supply chain and labor constraints through targeted activities and ongoing programs. We work with our suppliers and subcontractors to assist in mitigation, arrange supply source alternatives, increase our inventory of available materials and parts, and regularly pursue cost reductions through a number of mechanisms. We also continuously monitor labor market conditions and trends and work to mitigate constraints through talent acquisition, partnership, sourcing and recruiting arrangements, workforce succession planning, and initiatives to attract, retain and rehire former employees.

Coronavirus Disease 2019 (COVID-19) Pandemic. The COVID-19 pandemic continues to negatively affect the global economy, our business and operations, the labor market, supply chains, inflation, and the industries in which we operate, although we continue to see signs of ongoing recovery in commercial air travel. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, uncertainty continues with respect to when commercial air traffic capacity will fully return to and/or exceed pre-COVID-19 levels. The pace of the commercial aerospace recovery is tied to general economic conditions and may be impacted by inflation, an economic downturn, or government budget deficits, among other factors, and may also be impacted by a resurgence of the pandemic and corresponding travel restrictions and protocols. Our expectations regarding the COVID-19 pandemic and ongoing recovery and their potential financial impact are based on available information and assumptions that we believe are reasonable at this time; however, the actual financial impact is highly uncertain and subject to a wide range of factors and future developments.

Geopolitical Matters. In response to the Russian military's invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate, including certain members of the Company's management team and Board of Directors. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected, and could continue to adversely affect, the Company and/or our supply chain, business partners or customers. In the quarter ended March 31, 2022, we reversed \$1.3 billion of backlog, which would have been recognized over a span of approximately 10 years, and recorded certain impairment charges and increases to reserves related to operations at our Pratt & Whitney and Collins businesses, as discussed further in "Note 1: Basis of Presentation and Summary of Accounting Principles" within Item 8 of this Form 10-K. These adverse impacts have been mitigated in part by the identification of alternative suppliers and an increase in the global demand for our products as a result of the current geopolitical environment. Based on information available to date, we do not currently expect these issues will have a material adverse effect on our financial results.

China previously announced that it may take measures against RTC in connection with certain foreign military sales to Taiwan. In addition, China has indicated that it decided to sanction our Chairman and Chief Executive Officer Gregory Hayes, in connection with another potential foreign military sale to Taiwan involving RTC products and services. RTC is not aware of any specific sanctions against Mr. Hayes or RTC, or the nature or timing of any future potential sanctions or countermeasures. If China were to impose sanctions or take other regulatory action against RTC, our suppliers, affiliates or partners, it could potentially disrupt our business operations. The impact of potential sanctions or other actions by China cannot be determined at this time.

We have direct commercial sales contracts for products and services to certain foreign customers, for which U.S. government review and approval have been pending. The U.S. government's approval of these sales is subject to a range of factors, including its foreign policies related to these customers, which are subject to continuing review and potential changes.

Likewise, regulatory approvals previously granted for prior sales can be paused or revoked if the products and services have not yet been delivered to the customer. If we ultimately do not receive all of the regulatory approvals, or those approvals are revoked, it could have a material effect on our financial results. In particular, as of December 31, 2022, our Contract liabilities include approximately \$385 million of advance payments received from a Middle East customer on contracts for which we no longer believe we will be able to execute or obtain required regulatory approvals. These advance payments may become refundable to the customer if the contracts are ultimately terminated.

See Item 1A. “Risk Factors” within Part I of this Form 10-K for further discussion.

New Legislation. In August 2022, the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Sciences Act and the Inflation Reduction Act were signed into law, each effective as of January 1, 2023. These new pieces of legislation include the implementation of a new corporate alternative minimum tax, an excise tax on stock buybacks, and tax incentives for energy and climate initiatives, among other provisions. We are evaluating the legislation and currently do not expect the legislation to have a material impact on our operations, financial condition or liquidity.

FINANCIAL SUMMARY

We use the following key financial performance measures to manage our business on a consolidated basis and by business segment, and to monitor and assess our results of operations:

- Net Sales: a growth metric that measures our revenue for the current year;
- Operating Profit (Loss): a measure of our profit (loss) for the year, before non-operating expenses, net and income taxes; and
- Operating Profit (Loss) Margin: a measure of our Operating profit (loss) as a percentage of Total Net Sales.

<i>(dollars in millions)</i>	2022	2021	2020
Total net sales	\$ 67,074	\$ 64,388	\$ 56,587
Operating profit (loss)	5,414	4,958	(1,889)
Operating profit (loss) margins	8.1 %	7.7 %	(3.3)%
Operating cash flow from continuing operations	\$ 7,168	\$ 7,142	\$ 4,334

In order to better assess the underlying performance of our business, we also focus on the change in organic net sales on both a consolidated basis and business segment basis, and the change in organic operating profit (loss) on a business segment basis, which allows for better year-over-year comparability. See Results of Operations below for our definition of the organic change in Net sales and Operating profit (loss), which are not defined measures under U.S. Generally Accepted Accounting Principles (GAAP) and may be calculated differently by other companies.

We also focus on backlog as a key financial performance measure of our forward-looking sales growth. Total backlog was \$175 billion and \$156 billion as of December 31, 2022 and 2021, respectively. Backlog, which is equivalent to our remaining performance obligations (RPO) for our sales contracts, represents the aggregate dollar value of firm orders for which products have not been provided or service has not been performed and excludes unexercised contract options and potential orders under ordering-type contracts (e.g., indefinite-delivery, indefinite-quantity (IDIQ) type contracts). Backlog generally increases with bookings and/or orders and generally decreases as sales are recognized on these bookings and is affected by changes in foreign exchange rates, as well as contract cancellations and terminations, and cost underruns on cost-type contracts.

In addition, we maintain a strong focus on program execution and the prudent management of capital and investments in order to maximize operating income and cash. We focus on adjusted earnings per share (EPS) and measures to assess our cash generation and the efficiency and effectiveness of our use of capital, such as free cash flow, both of which are not defined measures under U.S. GAAP and may be calculated differently by other companies.

Considered together, we believe these metrics are strong indicators of our overall performance and our ability to create shareowner value. We also use these and other performance metrics for executive compensation purposes.

A discussion of our results of operations and financial condition follows below in Results of Operations, Segment Review, and Liquidity and Financial Condition.

RESULTS OF OPERATIONS

As described in our “Cautionary Note Concerning Factors That May Affect Future Results” of this Form 10-K, our period-to-period comparisons of our results, particularly at a segment level, may not be indicative of our future operating results. The following discussions of comparative results among periods, including the discussion of segment results, should be viewed in this context. The results of RIS and RMD reflect the period subsequent to the completion of the Raytheon merger on April 3, 2020. As such, the results of RIS and RMD for the second quarter of 2020 exclude results prior to the date of completion of the

Raytheon merger, the estimated impact of which is approximately \$400 million of sales and approximately \$45 million of operating profit. These amounts, in addition to the first quarter of 2021 results, have been excluded from the organic changes for the year ended December 31, 2021 disclosed throughout our Results of Operations discussion. In addition, as a result of the separation of United Technologies Corporation's (UTC's) business into three independent, publicly traded companies – UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) (the Separation Transactions) and the Distributions, the historical results of Carrier and Otis are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented.

We provide the organic change in Net sales and Cost of sales for our consolidated results of operations as well as the organic change in Net sales and Operating profit (loss) for our segments. We believe that these non-Generally Accepted Accounting Principles (non-GAAP) measures are useful to investors because they provide transparency to the underlying performance of our business, which allows for better year-over-year comparability. The organic change in Net sales, Cost of sales and Operating profit (loss) excludes Acquisitions and divestitures, net, and the effect of foreign currency exchange rate translation fluctuations and other significant non-operational items and/or significant operational items that may occur at irregular intervals (Other). Additionally, the organic change in Cost of sales and Operating profit (loss) excludes restructuring costs, the FAS/CAS operating adjustment and costs related to certain acquisition accounting adjustments. Restructuring costs generally arise from severance related to workforce reductions and facility exit costs. We are continuously evaluating our cost structure and have implemented restructuring actions in an effort to keep our cost structure competitive. Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions, the amortization of customer contractual obligations related to loss making or below market contracts acquired, and goodwill impairment.

Net Sales

<i>(dollars in millions)</i>	2022	2021	2020
Total net sales	\$ 67,074	\$ 64,388	\$ 56,587

The factors contributing to the total change year-over-year in Total Net Sales are as follows:

<i>(dollars in millions)</i>	2022	2021
Organic ⁽¹⁾	\$ 3,660	\$ 724
Acquisitions and divestitures, net	(676)	6,961
Other	(298)	116
Total change	\$ 2,686	\$ 7,801

(1) See “Results of Operations” for definition of organic. A reconciliation of this measure to reported U.S. GAAP amounts is provided in the table above.

Net sales increased \$3.7 billion organically in 2022 compared to 2021 primarily due to higher organic sales of \$2.5 billion at Pratt & Whitney and \$2.4 billion at Collins, partially offset by lower organic sales of \$0.6 billion at RMD. The \$0.7 billion decrease in net sales related to Acquisitions and divestitures, net in 2022 compared to 2021, was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021. The decrease in other net sales of \$0.3 billion in 2022 compared to 2021 represents the impact of foreign exchange.

Net sales increased \$0.7 billion organically in 2021 compared to 2020 primarily due to higher organic sales of \$1.3 billion at Pratt & Whitney, partially offset by lower organic sales of \$0.6 billion at Collins. The \$7.0 billion sales increase in Acquisitions and divestitures, net in 2021 compared to 2020, was primarily driven by the Raytheon merger on April 3, 2020, partially offset by the sale of the Collins military Global Positioning System (GPS) and space-based precision optics businesses in the third quarter of 2020 and the sale of our Forcepoint business in the first quarter of 2021.

See “Segment Review” below for further information by segment.

<i>(dollars in millions)</i>	2022	2021	2020	<u>% of Total Net Sales</u>		
				2022	2021	2020
Net sales						
Products sales	\$ 50,773	\$ 49,270	\$ 43,319	76 %	77 %	77 %
Services sales	16,301	15,118	13,268	24 %	23 %	23 %
Total net sales	\$ 67,074	\$ 64,388	\$ 56,587	100 %	100 %	100 %

Refer to “Note 21: Segment Financial Data” within Item 8 of this Form 10-K for the composition of external net sales by products and services by segment.

Net products sales increased \$1.5 billion in 2022 compared to 2021 primarily due to increases in external products sales of \$1.5 billion at Collins and \$1.2 billion at Pratt & Whitney, partially offset by decreases in external products sales of \$0.7 billion at RMD and \$0.5 billion at RIS. Net services sales increased \$1.2 billion in 2022 compared to 2021 primarily due to increases in external services sales of \$1.2 billion at Pratt & Whitney and \$0.5 billion at Collins, partially offset by a decrease in external services sales of \$0.5 billion at RIS primarily driven by the sale of the global training and services business in the fourth quarter of 2021.

Net products sales increased \$6.0 billion in 2021 compared to 2020 primarily due to an increase in external products sales of \$3.7 billion at RMD and \$3.0 billion at RIS, both primarily due to the Raytheon merger on April 3, 2020, and an increase in external products sales of \$1.0 billion at Pratt & Whitney, partially offset by a decrease in external products sales of \$1.3 billion at Collins. Net services sales grew \$1.9 billion in 2021 compared to 2020 primarily due to an increase in external services sales of \$0.8 billion at RIS and \$0.4 billion at RMD, both primarily due to the Raytheon merger on April 3, 2020, and an increase in external services sales of \$0.4 billion at Pratt & Whitney and \$0.3 billion at Collins.

Our sales to major customers were as follows:

<i>(dollars in millions)</i>	2022	2021	2020	% of Total Net Sales		
				2022	2021	2020
Sales to the U.S. government ⁽¹⁾	\$ 30,317	\$ 31,177	\$ 25,962	45 %	48 %	46 %
Foreign military sales through the U.S. government	5,042	5,546	4,585	8 %	9 %	8 %
Foreign government direct commercial sales	4,327	4,993	3,974	6 %	8 %	7 %
Commercial aerospace and other commercial sales	27,388	22,672	22,066	41 %	35 %	39 %
Total net sales	\$ 67,074	\$ 64,388	\$ 56,587	100 %	100 %	100 %

(1) Excludes foreign military sales through the U.S. government.

Cost of Sales

<i>(dollars in millions)</i>	2022	2021	2020
Total cost of sales	\$ 53,406	\$ 51,897	\$ 48,056
Percentage of net sales	80 %	81 %	85 %

The factors contributing to the change year-over-year in total Cost of sales are as follows:

<i>(dollars in millions)</i>	2022	2021
Organic ⁽¹⁾	\$ 2,368	\$ (1,293)
Acquisitions and divestitures, net	(552)	5,829
Restructuring	3	(363)
FAS/CAS operating adjustment	234	(643)
Acquisition accounting adjustments	(348)	345
Other	(196)	(34)
Total change	\$ 1,509	\$ 3,841

(1) See "Results of Operations" for definition of organic. A reconciliation of this measure to reported U.S. GAAP amounts is provided in the table above.

The organic increase in total Cost of sales in 2022 compared to 2021 of \$2.4 billion was primarily due to the organic sales increases at Collins and Pratt & Whitney noted above. The decrease related to Acquisitions and divestitures, net of \$0.6 billion in 2022 compared to 2021 was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021. The decrease in other cost of sales of \$0.2 billion in 2022 compared to 2021 was primarily driven by the impact of foreign exchange, partially offset by charges recorded during the first quarter of 2022 at Pratt & Whitney and Collins related to impairment of customer financing assets for products under lease, inventory reserves, purchase order obligations, and the impairment of contract fulfillment costs that are no longer recoverable, all due to global sanctions on and export controls with respect to Russia. See "Note 1: Basis of Presentation and Summary of Accounting Principles" within Item 8 of this Form 10-K for additional information.

The organic decrease in total Cost of sales in 2021 compared to 2020 of \$1.3 billion was primarily due to an organic Cost of sales decrease at Collins and RMD. The Collins decrease was primarily due to the sales decrease noted above, the benefit of cost reduction initiatives, and the absence of prior year significant unfavorable adjustments. The RMD decrease was primarily due to the absence of an unfavorable profit impact of \$516 million related to inventory reserves, contract asset impairments and

recognition of supplier related obligations for certain international contracts as further described in “Segment Review” below. These decreases in Cost of sales were partially offset by an increase in organic Cost of sales at Pratt & Whitney due to the organic sales increases noted above. The increase related to Acquisitions and divestitures, net of \$5.8 billion in 2021 compared to 2020 was primarily driven by the Raytheon merger on April 3, 2020, partially offset by the sale of the Collins military GPS and space-based precision optics businesses in the third quarter of 2020, and the sale of our Forcepoint business in the first quarter of 2021 as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K. The \$0.4 billion decrease in Restructuring is primarily due to the absence of 2020 severance and restructuring actions at Pratt & Whitney and Collins related to the economic environment primarily caused by the COVID-19 pandemic, and ongoing cost reduction efforts.

For further discussion on FAS/CAS operating adjustment see the “FAS/CAS operating adjustment” subsection under the “Segment Review” section below. For further discussion on Acquisition accounting adjustments, see the “Acquisition accounting adjustments” subsection under the “Segment Review” section below.

<i>(dollars in millions)</i>	2022	2021	2020	% of Total Net Sales		
				2022	2021	2020
Cost of sales						
Products	\$ 41,927	\$ 41,095	\$ 38,137	63 %	64 %	67 %
Services	11,479	10,802	9,919	17 %	17 %	18 %
Total cost of sales	\$ 53,406	\$ 51,897	\$ 48,056	80 %	81 %	85 %

Net products cost of sales increased \$0.8 billion in 2022 compared to 2021 primarily due to increases at Collins and Pratt & Whitney, partially offset by decreases in Acquisition Accounting Adjustments and RIS. The changes at Collins, Pratt & Whitney and RIS were related to the changes in products sales noted above. Net services cost of sales increased \$0.7 billion in 2022 compared to 2021 primarily due to increases in external services cost of sales at Pratt & Whitney and Collins, partially offset by a decrease in external services sales at RIS, all driven by the services sales changes noted above.

Net products cost of sales increased \$3.0 billion in 2021 compared to 2020 primarily due to increases in external products cost of sales at RIS and RMD principally due to the Raytheon merger on April 3, 2020, and an increase in external products cost of sales at Pratt & Whitney, principally driven by the products sales increase noted above, partially offset by a decrease in external products cost of sales at Collins, principally driven by the products sales decrease noted above, the benefit of cost reduction initiatives and the absence of prior year significant unfavorable adjustments. Net services cost of sales grew \$0.9 billion in 2021 compared to 2020 primarily due to an increase in external services cost of sales at RIS and RMD principally due to the Raytheon merger on April 3, 2020.

Research and Development

<i>(dollars in millions)</i>	2022	2021	2020
Company-funded	\$ 2,711	\$ 2,732	\$ 2,582
Percentage of net sales	4.0 %	4.2 %	4.6 %
Customer-funded ⁽¹⁾	\$ 4,376	\$ 4,485	\$ 4,111
Percentage of net sales	6.5 %	7.0 %	7.3 %

(1) Included in Cost of sales in our Consolidated Statement of Operations.

Research and development spending is subject to the variable nature of program development schedules and, therefore, year-over-year fluctuations in spending levels are expected.

Company-funded research and development in 2022 was relatively consistent with 2021. The increase in company-funded research and development of \$0.2 billion in 2021 compared to 2020, was primarily driven by \$0.2 billion related to the Raytheon merger on April 3, 2020.

The decrease in customer-funded research and development of \$0.1 billion in 2022 compared to 2021, was primarily driven by lower expenses on various programs at RMD, partially offset by an increase in expenses on the Next Generation Interceptor (NGI) program at RMD. The increase in customer-funded research and development of \$0.4 billion in 2021 compared to 2020, was primarily driven by \$0.6 billion related to the Raytheon merger on April 3, 2020, partially offset by lower expenses of \$0.2 billion on various military and commercial programs at Pratt & Whitney and lower expenses of \$0.1 billion at Collins primarily related to the sale of the military GPS and space-based precision optics businesses in the third quarter of 2020.

Selling, General and Administrative

<i>(dollars in millions)</i>	2022	2021	2020
Selling, general and administrative	\$ 5,663	\$ 5,224	\$ 5,540
Percentage of net sales	8.4 %	8.1 %	9.8 %

Selling, general and administrative expenses increased \$0.4 billion in 2022 compared to 2021, primarily driven by higher information technology-related costs at Corporate, Collins and Pratt & Whitney, and higher combined expenses at Collins and Pratt & Whitney principally driven by higher employee-related costs and \$0.1 billion of charges related to increased estimates for credit losses due to global sanctions on and export controls with respect to Russia. See “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 8 of this Form 10-K for additional information on Russia sanctions.

Selling, general and administrative expenses decreased \$0.3 billion in 2021 compared to 2020, primarily driven by the absence of \$0.4 billion of prior year charges related to increased estimates of expected credit losses due to customer bankruptcies and additional allowances for credit losses at our Pratt & Whitney and Collins segments, lower costs of \$0.3 billion due to the sale of our Forcepoint business in the first quarter of 2021, and lower general and administrative restructuring costs of \$0.3 billion primarily related to 2020 severance and restructuring actions at Collins and Corporate related to the economic environment primarily caused by the COVID-19 pandemic, the Raytheon merger and ongoing cost reduction efforts, partially offset by an increase in expenses of \$0.4 billion related to the Raytheon merger, and higher employee-related costs.

Other Income, Net

<i>(dollars in millions)</i>	2022	2021	2020
Other income, net	\$ 120	\$ 423	\$ 885

Other income, net includes equity earnings in unconsolidated entities, royalty income, foreign exchange gains and losses, and other ongoing and nonrecurring items.

The decrease in Other income, net of \$0.3 billion in 2022 compared to 2021 was primarily due to the absence of a gain of \$269 million on the sale of RIS’s global training and services business in the fourth quarter of 2021, as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K, \$69 million of charges associated with the disposition of two non-core businesses at Collins in the second quarter of 2022, a \$42 million charge in the fourth quarter of 2022 associated with a divestiture of a small non-core Naval Power business at RMD, and the absence of prior year foreign government wage subsidies related to COVID-19 at Pratt & Whitney of \$41 million, partially offset by the absence of an accrual of \$147 million in the fourth quarter of 2021 related to the ongoing Department of Justice (DOJ) investigation into contract pricing matters at RMD.

The decrease in Other income, net of \$0.5 billion in 2021 compared to 2020, was primarily due to the absence of \$595 million of gains on the sales of the Collins businesses, in the third quarter of 2020, a decrease of \$178 million of foreign government wage subsidies related to COVID-19 at Pratt & Whitney and Collins and an accrual of \$147 million in the fourth quarter of 2021 related to the ongoing DOJ investigation into contract pricing matters at RMD, partially offset by a gain of \$269 million on the sale of RIS’s global training and services business in the fourth quarter of 2021. The remaining change was spread across multiple items with no common or significant driver.

Operating Profit (Loss)

<i>(dollars in millions)</i>	2022	2021	2020
Operating profit (loss)	\$ 5,414	\$ 4,958	\$ (1,889)
Operating profit (loss) margin	8.1 %	7.7 %	(3.3)%

The increase in Operating profit (loss) of \$0.5 billion in 2022 compared to 2021 was primarily driven by a decrease in Acquisition accounting adjustments, the operating performance at our operating segments and a decrease in Corporate and Eliminations and other, partially offset by the change in our FAS/CAS operating adjustment, all of which are described below in “Segment Review.”

The change in Operating profit (loss) of \$6.8 billion in 2021 compared to 2020 was primarily driven by the operating performance at our operating segments, including the impact of the Raytheon merger, the absence of the \$3.2 billion goodwill impairment in the second quarter of 2020 related to two Collins reporting units, and an increase in our FAS/CAS operating adjustment of \$690 million primarily as a result of the Raytheon merger. Included in the increase in Operating profit was a decrease in restructuring costs of \$625 million primarily related to 2020 restructuring actions taken at our Collins and Pratt & Whitney segments and the absence of 2020 unfavorable profit impact of \$516 million related to inventory reserves, contract

asset impairments and recognition of supplier related obligations for certain international contracts at RMD as further described in “Segment Review” below.

Non-service Pension Income

<i>(dollars in millions)</i>	2022	2021	2020
Non-service pension (income)	\$ (1,889)	\$ (1,944)	\$ (902)

The change in Non-service pension income of \$0.1 billion in 2022 compared to 2021 was primarily driven by the impact of an increase in discount rates, partially offset by prior years’ pension asset returns exceeding our expected return on plan assets (EROA) assumption.

The change in Non-service pension income of \$1.0 billion in 2021 compared to 2020 was primarily driven by the decrease in the discount rates at December 31, 2020 compared to the prior period, the Raytheon Company domestic defined benefit pension plan amendment described below and prior years’ pension asset returns exceeding our EROA assumption.

In December 2020, we approved a change to the Raytheon Company domestic defined benefit pension plans for non-union participants to cease future benefit accruals based on an employee’s years of service and compensation under the historical formula effective December 31, 2022. The plan change does not impact participants’ historical benefit accruals. Benefits for service after December 31, 2022 will be based on a cash balance formula.

Interest Expense, Net

<i>(dollars in millions)</i>	2022	2021	2020
Interest expense	\$ 1,300	\$ 1,330	\$ 1,430
Interest income	(70)	(36)	(42)
Other non-operating expense (income) ⁽¹⁾	46	28	(22)
Interest expense, net	\$ 1,276	\$ 1,322	\$ 1,366
Total average interest expense rate - average outstanding borrowings during the year:	4.0 %	4.1 %	4.0 %
Total average interest expense rate - outstanding borrowings as of December 31:	4.0 %	4.0 %	4.2 %

(1) Primarily consists of the gains or losses on assets associated with certain of our nonqualified deferred compensation and employee benefit plans, as well as the gains or losses on liabilities associated with certain of our nonqualified deferred compensation plans.

Interest expense, net in 2022 was relatively consistent with 2021.

Interest expense, net in 2021 was relatively consistent with 2020. Included in Interest expense, net was a decrease in interest expense primarily due to the repayment of long-term debt.

Income Taxes

	2022	2021	2020
Effective income tax rate	11.6 %	15.9 %	(24.4)%

The 2022 effective tax rate includes a benefit of \$214 million related to the Foreign Derived Intangible Income (FDII) benefit, \$207 million associated with legal entity and operational reorganizations implemented in 2022, and \$164 million associated with U.S. research and development credits. The increase in the FDII benefit from 2021 is primarily attributable to the capitalization of research or experimental expenditures for tax-purposes, enacted as part of the Tax Cuts and Jobs Act of 2017 effective beginning January 1, 2022.

The 2021 effective tax rate includes tax benefits of \$244 million associated with legal entity and operational reorganizations implemented in 2021, \$172 million associated with U.S. research and development credits and \$121 million associated with FDII, and tax charges of \$73 million ###. In the first quarter of 2021, we recorded \$148 million of tax charges associated with the sale of the Forcepoint business, and subsequently recognized a \$104 million tax benefit due to the revaluation of that tax benefit as a result of completing the divestiture of RIS’s global training and services business for a gain in the fourth quarter of 2021.

The 2020 negative effective tax rate is a result of having tax expense of \$575 million on a loss from continuing operations before income taxes of \$2.4 billion. The loss from continuing operations before income taxes in 2020 includes the \$3.2 billion goodwill impairment, most of which was non-deductible for tax purposes. Tax expense includes net deferred tax charges of \$416 million resulting from the Separation Transactions and the Raytheon merger primarily related to the impairment of deferred tax assets and the revaluation of certain international tax incentives, and incremental tax expense of \$177 million related to the disposal of businesses, including the sales of businesses at Collins, the airborne tactical radios business at RIS and the entry into a definitive agreement to sell Forcepoint. Also included in the 2020 effective tax rate are tax benefits of \$142 million associated with U.S. research and development credits and \$83 million associated with FDII.

For additional discussion of income taxes and the effective income tax rate, see “Income Taxes” within Critical Accounting Estimates, below, and “Note 13: Income Taxes” within Item 8 of this Form 10-K.

Net Income (Loss) from Continuing Operations Attributable to Common Shareowners

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Net income (loss) from continuing operations attributable to common shareowners	\$ 5,216	\$ 3,897	\$ (3,109)
Diluted earnings (loss) per share from continuing operations	\$ 3.51	\$ 2.58	\$ (2.29)

Net income from continuing operations attributable to common shareowners for 2022 includes the following:

- acquisition accounting adjustments of \$1.5 billion, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.99;
- impairment charges and reserve adjustments related to the global sanctions on and export controls with respect to Russia of \$210 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.14;
- combined charges associated with disposition of businesses at Collins and RMD of \$102 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.07; and
- restructuring charges of \$91 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.06.

Net income from continuing operations attributable to common shareowners for 2021 includes the following:

- acquisition accounting adjustments primarily related to the Raytheon merger of \$1.7 billion, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$1.13;
- net debt extinguishment costs of \$524 million, net of tax, in connection with the early repayment of outstanding principal, which had an unfavorable impact on diluted EPS from continuing operations of \$0.35;
- tax benefits of \$244 million associated with legal entity and operational reorganizations implemented in the third quarter 2021, which had a favorable impact on diluted EPS from continuing operations of \$0.16;
- tax expense of \$148 million related to the sale of our Forcepoint business in the first quarter of 2021, which had an unfavorable impact on diluted EPS from continuing operations of \$0.10, and the subsequent revaluation of that tax benefit of \$104 million in the fourth quarter of 2021, due to the completion of the divestiture of RIS’s global training and services business for a gain, which had an favorable impact on diluted EPS from continuing operations of \$0.07;
- accrual of \$147 million related to the ongoing DOJ investigation into contract pricing matters at RMD, which had an unfavorable impact on diluted EPS from continuing operations of \$0.10;
- restructuring charges of \$121 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.08; and
- gain on the sale of our global training and services business within our RIS segment of \$126 million, net of tax, which had a favorable impact on diluted EPS from continuing operations of \$0.08.

Net loss from continuing operations attributable to common shareowners for 2020 includes the following:

- \$3.2 billion of primarily non-deductible goodwill and intangibles impairment charges related to our Collins segment, which had an unfavorable impact on diluted EPS from continuing operations of \$2.37;
- acquisition accounting adjustments primarily related to the Raytheon merger of \$1.4 billion, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$1.06;
- significant unfavorable contract adjustments at Pratt & Whitney and Collins of \$667 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.49;
- restructuring charges of \$598 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.44;
- \$415 million of tax charges in connection with the Separation Transactions, including the impairment of deferred tax assets not expected to be utilized, which had an unfavorable impact on diluted EPS from continuing operations of \$0.31;

- unfavorable profit impact at RMD of \$412 million, net of tax, related to certain direct commercial sales contracts for precision guided munitions with a certain Middle East customer, which had an unfavorable impact on diluted EPS from continuing operations of \$0.30;
- increased estimates of expected credit losses driven by customer bankruptcies and additional allowances for credit losses of \$300 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of \$0.22; and
- gains on the sales of the Collins businesses of \$240 million, net of tax, which had a favorable impact on diluted EPS from continuing operations of \$0.18.

Loss from Discontinued Operations Attributable to Common Shareowners

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Loss from discontinued operations attributable to common shareowners	\$ (19)	\$ (33)	\$ (410)
Diluted loss per share from discontinued operations	\$ (0.01)	\$ (0.02)	\$ (0.30)

On April 3, 2020, we completed the separation of our commercial businesses, Carrier and Otis. Effective as of that date, the historical results of the Carrier and Otis segments were reclassified to discontinued operations for all periods presented. See “Note 3: Discontinued Operations” within Item 8 of this Form 10-K for additional information.

Loss from discontinued operations attributable to common shareowners and the related change in diluted loss per share from discontinued operations in 2022 was relatively consistent with 2021.

The change in Loss from discontinued operations attributable to common shareowners of \$377 million and the related change in diluted loss per share from discontinued operations of \$0.28 in 2021 compared to 2020 was primarily due to higher prior year costs associated with the separation of our commercial businesses, including debt extinguishment costs of \$611 million, net of tax, in connection with the early repayment of outstanding principal, partially offset by prior year Carrier and Otis operating activity, as the Separation Transactions occurred on April 3, 2020.

Net Income (Loss) Attributable to Common Shareowners

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Net income (loss) attributable to common shareowners	\$ 5,197	\$ 3,864	\$ (3,519)
Diluted earnings (loss) per share from operations	\$ 3.50	\$ 2.56	\$ (2.59)

The changes in Net income (loss) attributable to common shareowners and diluted EPS from operations for 2022 compared to 2021 and for 2021 compared to 2020 were driven by the changes in continuing operations, as discussed above in Net Income (Loss) from Continuing Operations Attributable to Common Shareowners and the changes from discontinued operations, as discussed above in Loss from Discontinued Operations Attributable to Common Shareowners.

SEGMENT REVIEW

We operate in four principal business segments: Collins, Pratt & Whitney, RIS and RMD. The results of RIS and RMD reflect the period subsequent to the completion of the Raytheon merger on April 3, 2020. The historical results of Carrier and Otis are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. The Company recently announced its intention to streamline the structure of its core businesses into three principal business segments: Collins Aerospace, Pratt & Whitney and Raytheon. The Company plans to determine the exact composition of each segment and implement the reorganization in the second half of 2023. All segment information included in this Form 10-K is reflective of the existing four segments of Collins, Pratt & Whitney, RIS and RMD in accordance with the management structure in place as of December 31, 2022.

For a detailed description of our businesses, see “Business” within Item 1 of this Form 10-K.

We present a FAS/CAS operating adjustment outside of segment results, which represents the difference between the service cost component of our pension and postretirement benefit (PRB) expense under the Financial Accounting Standards (FAS) requirements of U.S. GAAP and our pension and PRB expense under U.S. government Cost Accounting Standards (CAS) primarily related to our RIS and RMD segments. While the ultimate liability for pension and PRB costs under FAS and CAS is similar, the pattern of cost recognition is different. Over time, we generally expect to recover the related RIS and RMD pension and PRB liabilities through the pricing of our products and services to the U.S. government. Collins and Pratt & Whitney generally record pension and PRB expense on a FAS basis.

Segments are generally based on the management structure of the businesses and the grouping of similar operations, based on capabilities and technologies, where each management organization has general operating autonomy over diversified products

and services. Segment Total Net Sales and Operating profit (loss) include intercompany sales and profit, which are ultimately eliminated within Eliminations and other, which also includes certain smaller non-reportable segments. Segment results exclude certain acquisition accounting adjustments, the FAS/CAS operating adjustment and certain corporate expenses, as further discussed below.

We provide the organic change in Net sales and Operating profit (loss) for our segments as discussed above in “Results of Operations”. We believe that these non-GAAP measures are useful to investors because they provide transparency to the underlying performance of our business, which allows for better year-over-year comparability. For Pratt & Whitney only, Other also includes the transactional impact of foreign exchange hedging at Pratt & Whitney Canada due to its significance to Pratt & Whitney’s overall operating results.

Given the nature of our business, we believe that Total Net Sales and Operating profit (loss) (and the related operating profit (loss) margin percentage), which we disclose and discuss at the segment level, are most relevant to an understanding of management’s view of our segment performance, as described below.

Total Net Sales. Total Net Sales by segment were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Collins Aerospace	\$ 20,597	\$ 18,449	\$ 19,288
Pratt & Whitney	20,530	18,150	16,799
Raytheon Intelligence & Space	14,312	15,180	11,069
Raytheon Missiles & Defense	14,863	15,539	11,396
Total segment	70,302	67,318	58,552
Eliminations and other ⁽¹⁾	(3,228)	(2,930)	(1,965)
Consolidated	\$ 67,074	\$ 64,388	\$ 56,587

(1) Includes the operating results of certain smaller non-reportable business segments. 2020 amounts include Forcepoint, LLC, which was acquired as part of the Raytheon merger, and subsequently disposed of on January 8, 2021.

Operating Profit (Loss). Operating profit (loss) by segment was as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Collins Aerospace	\$ 2,343	\$ 1,759	\$ 1,466
Pratt & Whitney	1,075	454	(564)
Raytheon Intelligence & Space	1,342	1,833	1,020
Raytheon Missiles & Defense	1,519	2,004	880
Total segment	6,279	6,050	2,802
Eliminations and other ⁽¹⁾	(174)	(133)	(107)
Corporate expenses and other unallocated items ⁽²⁾	(318)	(552)	(590)
FAS/CAS operating adjustment	1,520	1,796	1,106
Acquisition accounting adjustments ⁽³⁾	(1,893)	(2,203)	(5,100)
Consolidated	\$ 5,414	\$ 4,958	\$ (1,889)

(1) Includes the operating results of certain smaller non-reportable business segments. 2020 amounts include Forcepoint, LLC, which was acquired as part of the Raytheon merger, and subsequently disposed of on January 8, 2021.

(2) Includes the net expenses related to the U.S. Army’s Lower Tier Air and Missile Defense Sensor (LTAMDS) project.

(3) 2020 includes the \$3.2 billion goodwill impairment loss in the second quarter of 2020 related to two Collins reporting units. Refer to “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” in Item 8 of this Form 10-K for additional information.

Included in segment Operating profit (loss) are Estimate at Completion (EAC) adjustments, which relate to changes in Operating profit (loss) and margin due to revisions to total estimated revenues and costs at completion. These changes may reflect improved or deteriorated operating performance, as well as changes in facts and assumptions related to contract options, contract modifications, incentive and award fees associated with program performance, customer activity levels, and other customer-directed changes. For a full description of our EAC process, refer to “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 8 of this Form 10-K. Given that we have thousands of individual contracts and given the types and complexity of the assumptions and estimates we must make on an on-going basis and the nature of the work required to be performed under our contracts, we have both favorable and unfavorable EAC adjustments in the ordinary course.

We had the following aggregate EAC adjustments for the periods presented:

<i>(dollars in millions)</i>	2022	2021	2020
Gross favorable	\$ 1,368	\$ 1,286	\$ 994
Gross unfavorable	(1,405)	(1,176)	(1,637)
Total net EAC adjustments	\$ (37)	\$ 110	\$ (643)

As a result of the Raytheon merger, RIS's and RMD's long-term contracts that are accounted for on a percentage of completion basis, were reset to zero percent complete as of the merger date because only the unperformed portion of the contract at the merger date represented an obligation of the Company. This had the impact of reducing gross favorable and unfavorable EAC adjustments for these segments in the short term period following the merger, most notably in 2020.

The change in net EAC adjustments of \$147 million in 2022 compared 2021 was primarily due to unfavorable changes in net EAC adjustments of \$183 million at RMD and \$108 million at RIS, including the impact of acquisitions and dispositions, both spread across numerous individual programs, with no individual or common significant driver, and includes the impact of continued supply chain and labor market constraints. These unfavorable changes were partially offset by a favorable change in net EAC adjustments of \$119 million at Collins, spread across numerous individual programs, with no individual or common significant driver, and a favorable change in net EAC adjustments of \$26 million at Pratt & Whitney primarily due to a \$50 million favorable contract adjustment resulting from a contract modification on a commercial aftermarket program in the second quarter of 2022.

The change in net EAC adjustments of \$753 million in 2021 compared 2020 was primarily due to a favorable change in net EAC adjustments of \$635 million at Pratt & Whitney, due to the absence of significant unfavorable contract adjustments in 2020, and a favorable change in net EAC adjustments of \$126 million at RIS and \$40 million at RMD, primarily due to the Raytheon merger. This was partially offset by an unfavorable change in net EAC adjustments of \$48 million at Collins spread across numerous individual programs with no individual or common significant driver.

Significant EAC adjustments, when they occur, are discussed in each business segment's discussion below.

Backlog and Defense Bookings. Total backlog was approximately \$175 billion and \$156 billion as of December 31, 2022 and 2021. Our backlog by segment, which does not include intercompany backlog, was as follows at December 31:

<i>(dollars in billions)</i>	2022	2021
Collins Aerospace	\$ 25	\$ 24
Pratt & Whitney	100	85
Raytheon Intelligence & Space	16	18
Raytheon Missiles & Defense	34	29
Total backlog	\$ 175	\$ 156

Included in total backlog is defense backlog of \$69 billion and \$63 billion as of December 31, 2022 and 2021, respectively. Our defense operations consist primarily of our RIS and RMD businesses and operations in the defense businesses within our Collins and Pratt & Whitney segments. Defense bookings were approximately \$47 billion, \$40 billion and \$31 billion for 2022, 2021 and 2020 respectively. In the quarter ended March 31, 2022, we reversed \$1.3 billion of total backlog related to our sales contracts in Russia at Pratt & Whitney and Collins as discussed further in "Note 1: Basis of Presentation and Summary of Accounting Principles" within Item 8 of this Form 10-K.

Backlog, which is equivalent to our RPO for our sales contracts, represents the aggregate dollar value of firm orders for which products have not been provided or service has not been performed and excludes unexercised contract options and potential orders under ordering-type contracts (e.g., IDIQ type contracts). Backlog generally increases with bookings and generally decreases as sales are recognized on these bookings and is affected by changes in foreign exchange rates, as well as contract cancellations and terminations as discussed further below.

We believe defense bookings are an important measure of future performance for our defense operations and are an indicator of potential future changes in these operations' Total Net Sales, because we cannot record revenues under a new contract without first having a booking in the current or a preceding period. Defense bookings generally represent the dollar value of new external defense contracts awarded to us during the reporting period and include firm orders for which funding has not been appropriated.

Defense bookings exclude unexercised contract options and potential orders under ordering-type contracts (e.g., IDIQ type contracts). We reflect contract cancellations and terminations, as well as the impact of changes in foreign exchange rates,

directly as an adjustment to backlog in the period in which the cancellation or termination occurs and the impact is determinable. Contract cancellations and terminations also include contract underruns on cost-type programs.

Collins Aerospace

<i>(dollars in millions)</i>	2022	2021	2020	% Change	
				2022 compared with 2021	2021 compared with 2020
Net sales	\$ 20,597	\$ 18,449	\$ 19,288	12 %	(4)%
Operating profit	2,343	1,759	1,466	33 %	20 %
Operating profit margins	11.4 %	9.5 %	7.6 %		

2022 Compared with 2021

<i>(dollars in millions)</i>	Factors Contributing to Total Change				
	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	\$ 2,384	\$ (49)	\$ —	\$ (187)	\$ 2,148
Operating profit	724	(12)	19	(147)	584

2021 Compared with 2020

<i>(dollars in millions)</i>	Factors Contributing to Total Change				
	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	\$ (574)	\$ (333)	\$ —	\$ 68	\$ (839)
Operating profit	653	(91)	320	(589)	293

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

2022 Compared with 2021

The organic sales increase of \$2.4 billion in 2022 compared to 2021 primarily relates to higher commercial aerospace aftermarket sales of \$1.7 billion, including increases across all aftermarket sales channels, and higher commercial aerospace OEM sales of \$1.0 billion, both principally driven by the recovery of commercial air traffic which has resulted in an increase in flight hours, aircraft fleet utilization and narrow-body commercial OEM volume growth. These increases were partially offset by lower military sales of \$0.3 billion in 2022 compared to 2021 primarily due to lower material receipts and decreased volume.

The organic profit increase of \$0.7 billion in 2022 compared to 2021 was primarily due to higher commercial aerospace operating profit of \$1.2 billion principally driven by the higher commercial aerospace aftermarket sales discussed above, partially offset by the absence of a favorable \$52 million impact from a contract-related matter in 2021. The increase in commercial aerospace operating profit was partially offset by lower military operating profit of \$0.2 billion principally driven by the lower military sales discussed above, and higher selling, general and administrative expenses of \$0.2 billion, which includes the benefits of cost reduction initiatives.

The decrease in net sales and operating profit due to acquisitions / divestitures, net primarily relates to the disposition of two non-core businesses in the second quarter of 2022.

The decrease in Other operating profit of \$0.1 billion in 2022 compared to 2021 primarily relates to \$141 million of pretax charges related to increased estimates for credit losses, inventory reserves, recognition of purchase order obligations and a loss resulting from the exit of our investment in a Russia-based joint venture, all due to global sanctions on and export controls with respect to Russia in the first quarter of 2022. In addition, we recognized \$69 million of charges associated with the disposition of two non-core businesses in the second quarter of 2022. See “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 1 of this Form 10-K for additional information on Russia sanctions.

2021 Compared with 2020

The organic sales decrease of \$0.6 billion in 2021 compared to 2020 primarily relates to lower commercial aerospace OEM sales of \$0.8 billion, predominantly due to wide body volume declines principally driven by lower 787 deliveries. This was partially offset by higher commercial aerospace aftermarket sales of \$0.3 billion primarily due to an increase in flight hours and aircraft fleet utilization as commercial aerospace continued to recover from the unfavorable economic environment principally driven by the COVID-19 pandemic. Military sales were down slightly in 2021 compared to 2020.

The organic profit increase of \$0.7 billion in 2021 compared to 2020 was primarily due to higher commercial aerospace operating profit of \$0.5 billion and lower selling, general and administrative expenses of \$0.1 billion. The higher commercial aerospace operating profit was principally driven by the higher commercial aerospace aftermarket sales discussed above, the benefit of cost reduction initiatives, the absence of \$157 million of prior year significant unfavorable adjustments, and a \$52 million favorable impact from a contract-related matter in 2021. The significant unfavorable adjustments in 2020 were primarily driven by the expected acceleration of fleet retirements of a certain aircraft type. The lower selling, general and administrative expenses were primarily driven by the absence of a \$125 million charge for allowances for credit losses in 2020, primarily related to the impact of the COVID-19 pandemic. Included in organic profit in 2020 was \$72 million of foreign government wage subsidies related to COVID-19.

The decrease in net sales and operating profit due to acquisitions / divestitures, net primarily relates to the sale of our Collins military GPS and space-based precision optics businesses in the third quarter of 2020, as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K.

The decrease in other operating profit of \$0.6 billion in 2021 compared to 2020 primarily relates to the absence of prior year gains of \$595 million on the sales of the Collins military GPS and space-based precision optics businesses.

Pratt & Whitney

<i>(dollars in millions)</i>	2022	2021	2020	% Change	
				2022 compared with 2021	2021 compared with 2020
Net sales	\$ 20,530	\$ 18,150	\$ 16,799	13 %	8 %
Operating profit (loss)	1,075	454	(564)	137 %	180 %
Operating profit (loss) margins	5.2 %	2.5 %	(3.4)%		

2022 Compared with 2021

<i>(dollars in millions)</i>	Factors Contributing to Total Change					Total Change
	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Restructuring Costs	Other		
Net sales	\$ 2,478	\$ —	\$ —	\$ (98)	\$	2,380
Operating profit (loss)	773	—	(13)	(139)		621

2021 Compared with 2020

<i>(dollars in millions)</i>	Factors Contributing to Total Change					Total Change
	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Restructuring Costs	Other		
Net sales	\$ 1,255	\$ —	\$ —	\$ 96	\$	1,351
Operating profit (loss)	702	—	173	143		1,018

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

2022 Compared with 2021

The organic sales increase of \$2.5 billion in 2022 compared to 2021 primarily reflects higher commercial aftermarket sales of \$1.8 billion primarily due to an increase in shop visits and related spare part sales as the commercial aerospace environment continues to recover. The increase also includes higher commercial OEM sales of \$0.9 billion driven by favorable mix and higher volume on commercial engine shipments. These increases were partially offset by lower military sales of \$0.2 billion primarily due to lower sales on F135 production volume and lower volume on legacy aftermarket programs, partially offset by higher F135 sustainment volume.

The organic profit increase of \$0.8 billion in 2022 compared to 2021 was primarily driven by higher commercial aerospace operating profit of \$1.1 billion principally due to the aftermarket sales volume increase discussed above and favorable OEM mix. The organic profit increase also includes slightly higher military operating profit primarily driven by favorable mix. These increases were partially offset by a combined increase in selling, general and administrative expenses and research and development costs of \$0.3 billion. The year over year increase in commercial aerospace operating profit includes a \$50 million favorable contract adjustment on a commercial aftermarket program in the second quarter of 2022. In 2021, our organic profit included approximately \$50 million related to foreign government wage subsidies due to COVID-19.

The decrease in other operating profit of \$0.1 billion in 2022 compared to 2021 was primarily due to \$155 million of pretax charges related to impairment of customer financing assets for products under lease, increased estimates for credit losses,

inventory reserves and recognition of purchase order obligations, all due to global sanctions on and export controls with respect to Russia in the first quarter of 2022. See “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 1 of this Form 10-K for additional information on Russia sanctions.

2021 Compared with 2020

The organic sales increase of \$1.3 billion in 2021 compared to 2020 primarily reflects higher commercial aftermarket sales of \$1.2 billion, primarily due to an increase in shop visits and related spare part sales driven by the recovery from the unfavorable economic environment largely due to the COVID-19 pandemic, and higher commercial OEM sales of \$0.1 billion. Prior year commercial aftermarket sales include unfavorable EAC adjustments of \$0.4 billion, discussed further below. These increases were partially offset by lower military sales of \$0.1 billion in 2021 compared to 2020.

The organic profit increase of \$0.7 billion in 2021 compared to 2020 was primarily driven by higher commercial aerospace operating profit of \$0.7 billion principally due to favorable change in net EAC adjustments of \$0.6 billion, and lower selling, general and administrative expenses of \$0.1 billion. The higher commercial aerospace operating profit also includes the impact of the aftermarket sales volume increase discussed above, which was partially offset by lower commercial OEM operating profit due to unfavorable mix on the increased sales volume. The lower year-over-year unfavorable commercial aerospace EAC adjustments were principally driven by prior year unfavorable EAC adjustments including a \$334 million unfavorable EAC adjustment on a commercial engine aftermarket contract due to lower estimated revenues driven by a change in the estimated maintenance coverage period, an unfavorable EAC adjustment of \$129 million related to lower estimated revenues due to the restructuring of a customer contract, and \$86 million related to an unfavorable EAC adjustment and increased allowances for warranty for legacy fleet related retrofits. The lower selling, general and administrative expenses were primarily driven by the absence of a \$257 million charge in 2020 for allowances for credit losses, partially offset by higher employee-related costs. The change in organic operating profit was also impacted by \$106 million of lower government wage subsidies, and the absence of prior year unfavorable EAC adjustments on certain commercial aftermarket and military programs.

The increase in other operating profit of \$0.1 billion in 2021 compared to 2020 was primarily driven by the absence of an \$89 million impairment of commercial aircraft program assets and \$43 million of reserves related to a commercial financing arrangement, both recorded in 2020.

Defense Bookings – In addition to a number of smaller bookings, in 2022 Pratt & Whitney booked \$4.9 billion for F135 production Lots 15, 16 and 17, \$1.4 billion for F135 sustainment, \$251 million for tanker production Lots 7 and 8 and \$210 million for F117 sustainment.

Raytheon Intelligence & Space

<i>(dollars in millions)</i>	2022	2021	2020	% Change	
				2022 compared with 2021	2021 compared with 2020
Net sales	\$ 14,312	\$ 15,180	\$ 11,069	(6)%	37 %
Operating profit	1,342	1,833	1,020	(27)%	80 %
Operating profit margins	9.4 %	12.1 %	9.2 %		
Bookings	\$ 12,391	\$ 14,019	\$ 10,568	(12)%	33 %

2022 Compared with 2021

<i>(dollars in millions)</i>	Factors Contributing to Total Change in Net Sales			
	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Other	Total Change
Net sales	\$ (184)	\$ (627)	\$ (57)	\$ (868)

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

<i>(dollars in millions)</i>	Factors Contributing to Change in Operating Profit				
	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	\$ (9)	\$ (69)	\$ (118)	\$ (295)	\$ (491)

2021 Compared with 2020

Factors Contributing to Total Change in Net Sales

<i>(dollars in millions)</i>	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Other	Total Change
Net sales	\$ 86	\$ 3,991	\$ 34	\$ 4,111

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

Factors Contributing to Change in Operating Profit

<i>(dollars in millions)</i>	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	\$ (10)	\$ 132	\$ 399	\$ 292	\$ 813

2022 Compared with 2021

The organic sales decrease of \$0.2 billion in 2022 compared to 2021 was driven by lower Command, Control and Communications sales of \$0.3 billion partially offset by higher sales at both Cyber, Training and Services and Sensing and Effects. The lower Command, Control and Communications sales were primarily driven by an anticipated decrease in production volumes on certain tactical communications systems programs. The higher Cyber, Training and Services sales were driven by certain classified cyber programs. The higher Sensing and Effects sales were primarily driven by an increase in sales on classified programs and an increase due to certain electro-optical development programs transitioning into production, partially offset by a decrease in surveillance and targeting systems due to lower production volume on certain legacy programs.

The decrease in operating profit of \$0.5 billion and the related decrease in operating profit margins in 2022 compared to 2021, were primarily due to an unfavorable change in mix and other performance of \$0.3 billion driven by the absence of a prior year \$239 million gain, net of transaction costs, on the sale of the global training and services business, as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K and acquisition / divestitures, net of \$0.1 billion described below.

The decrease in net sales and operating profit due to acquisitions / divestitures, net primarily relates to the sale of the global training and services business in the fourth quarter of 2021.

2021 Compared with 2020

Organic sales in 2021 were relatively consistent with 2020. The increase in net sales due to acquisitions / divestitures, net primarily relates to the Raytheon merger on April 3, 2020.

The increase in operating profit of \$0.8 billion and the related increase in operating profit margins in 2021 compared to 2020, were primarily due to the change in acquisitions / divestitures, net of \$399 million, primarily due to the Raytheon merger on April 3, 2020, a favorable change in mix and other performance of \$292 million primarily due to a \$239 million gain, net of transaction costs, on the sale of RIS’s global training and services business in December 2021, as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K, and the net favorable change in EAC adjustments of \$132 million, which was primarily driven by the absence of \$124 million of unfavorable EAC adjustments in 2020 for loss reserves related to a domestic classified fixed price development program in a net loss position.

Backlog and Bookings – Backlog was \$16 billion at December 31, 2022 compared to \$18 billion at December 31, 2021. In addition to a number of smaller bookings, in 2022, RIS booked \$5.0 billion on a number of classified contracts, and a major award for a prototype Missile Track Custody system for the U.S. Space Force. RIS also booked \$311 million on the Next-Generation Overhead Persistent Infrared (Next-Gen OPIR) GEO missile warning and defense contract for the U.S. Space Force, \$271 million to provide communications satellite payloads to a commercial customer, and \$253 million on the Development, Operations and Maintenance (DOMino) cyber program for the Department of Homeland Security (DHS).

Raytheon Missiles & Defense

<i>(dollars in millions)</i>		2022	2021	2020	% Change	
					2022 compared with 2021	2021 compared with 2020
Net sales	\$	14,863	\$ 15,539	\$ 11,396	(4)%	36 %
Operating profit		1,519	2,004	880	(24)%	128 %
Operating profit margins		10.2 %	12.9 %	7.7 %		
Bookings	\$	20,048	\$ 15,650	\$ 9,716	28 %	61 %

2022 Compared with 2021

Factors Contributing to Total Change in Net Sales

<i>(dollars in millions)</i>	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Other	Total Change
Net sales	\$ (628)	\$ —	\$ (48)	\$ (676)

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

Factors Contributing to Change in Operating Profit

<i>(dollars in millions)</i>	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	\$ (25)	\$ (183)	\$ —	\$ (277)	\$ (485)

2021 Compared with 2020

Factors Contributing to Total Change in Net Sales

<i>(dollars in millions)</i>	Organic ⁽¹⁾	Acquisitions / Divestitures, net	Other	Total Change
Net sales	\$ 130	\$ 3,999	\$ 14	\$ 4,143

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

Factors Contributing to Change in Operating Profit

<i>(dollars in millions)</i>	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	\$ 7	\$ (14)	\$ 521	\$ 610	\$ 1,124

2022 Compared with 2021

The organic sales decrease of \$0.6 billion in 2022 compared to 2021 was primarily due to lower net sales of \$0.7 billion from our Land Warfare and Air Defense programs, lower net sales of \$0.3 billion from our Air Power programs, and lower net sales of \$0.2 billion on our Naval Power programs. These decreases were partially offset by higher net sales of \$0.4 billion from our Strategic Missile Defense programs. The decrease in Land Warfare and Air Defense programs includes lower sales on certain international air and missile defense programs primarily driven by lower material receipts as a result of supply chain constraints and anticipated decreases in production. The decrease in Air Power programs includes lower net sales on the Paveway program and the Advanced Medium Range Air-to-Air Missile (AMRAAM) program. The lower net sales in Naval Power programs was driven by lower volume across multiple programs, partially offset by higher net sales from SPY-6 programs. The increased sales in Strategic Missile Defense programs included higher net sales from the Next Generation Interceptor (NGI) program.

The decrease in operating profit of \$0.5 billion and the related decrease in operating profit margins in 2022 compared to 2021 were primarily due to a change in mix and other performance of \$0.3 billion and a net unfavorable change in EAC adjustments of \$0.2 billion. The change in mix and other performance includes unfavorable program mix and a \$42 million charge associated with a divestiture of a small non-core Naval Power business. The net unfavorable change in EAC adjustments was spread across numerous programs and includes the impact of continued supply chain and labor market constraints.

2021 Compared with 2020

Organic sales in 2021 were relatively consistent with 2020. The increase in net sales due to acquisitions / divestitures, net relates to the Raytheon merger on April 3, 2020.

The increase in operating profit of \$1.1 billion and the related increase in operating profit margins in 2021 compared to 2020 was primarily due to a change in mix and other performance of \$0.6 billion, primarily driven by the absence of an unfavorable profit impact of \$516 million in 2020 related to certain international contracts as further described below, and a change in acquisitions / divestitures, net of \$0.5 billion due to the Raytheon merger on April 3, 2020.

In the fourth quarter of 2020, RMD reversed \$119 million of sales for work performed subsequent to the date of the Raytheon merger through the end of the third quarter of 2020, and the related operating profit, on our direct commercial sales contracts for precision guided munitions with a certain Middle East customer, for which we have not yet obtained regulatory approval. Due to the U.S. presidential and congressional elections and the resulting uncertainty surrounding U.S. foreign policy on direct commercial sales for precision guided munitions with this customer, we determined that it was no longer probable that we will be able to obtain regulatory approvals for these contracts. RMD also recognized an unfavorable profit impact of \$516 million related to these contracts, primarily related to inventory reserves, contract asset impairments and recognition of supplier related obligations related to termination liability, which we do not expect to be utilized or otherwise directed to other customers.

Backlog and Bookings— Backlog was \$34 billion at December 31, 2022 compared to \$29 billion at December 31, 2021. In 2022, RMD booked \$3.5 billion on a number of classified contracts, including a strategic competitive award. RMD also booked \$1.1 billion for the SPY-6 Hardware Production and Sustainment contract for the U.S. Navy, \$1.0 billion to provide Guidance Enhanced Missile (GEM-T) for an international customer, \$1.0 billion for the first Hypersonic Attack Cruise Missile (HACM) for the U.S. Air Force, \$972 million for AMRAAM for the U.S. Air Force and Navy and international customers, \$762 million for AIM-9X Sidewinder short-range air-to-air missiles for the U.S. Navy and Air Force and international customers, \$698 million to provide National Advanced Surface-to-Air Missile System (NASAMS) for Ukraine, \$662 million on Stinger for the U.S. Army, \$648 million for Standard Missile-3 (SM-3) for the Missile Defense Agency (MDA), \$415 million on Evolved Seasparrow Missile (ESSM) for the U.S. Navy and international customers, \$405 million on a Surveillance Radar Program (SRP) for an international customer, \$384 million for Excalibur Rapid Demonstration Phase 2 for the U.S. Army, \$353 million for the Lower Tier Air and Missile Defense Sensor (LTAMDS) Pre-planned Product Improvement program for the U.S. Army, \$247 million on MIR replenishment for an international customer through our consolidated Raytheon-Rafael joint venture, \$218 million to provide Patriot engineering support services for the U.S. Army and international customers, \$217 million on Tomahawk for the U.S. Navy, \$209 million for Naval Strike Missiles (NSM) Coastal Defense System (CDS) for the U.S. Navy, and \$207 million for integrated effectors and sensors for Counter-Unmanned Aircraft Systems (C-UAS) defense system for the U.S. Army.

Corporate and Eliminations and other

Eliminations and other reflects the elimination of sales, other income and operating profit transacted between segments, as well as the operating results of certain smaller non-reportable business segments, including Forcepoint, which was acquired as part of the Raytheon merger and subsequently disposed of on January 8, 2021, as further discussed in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K.

Corporate expenses and other unallocated items consists of costs and certain other unallowable corporate costs not considered part of management’s evaluation of reportable segment operating performance including restructuring and merger costs related to the Raytheon merger, net costs associated with corporate research and development, including the LTAMDS program and certain reserves.

<i>(dollars in millions)</i>	Net Sales			Operating Profit		
	2022	2021	2020	2022	2021	2020
Eliminations and other	\$ (3,228)	\$ (2,930)	\$ (1,965)	\$ (174)	\$ (133)	\$ (107)
Corporate expenses and other unallocated items	—	—	—	(318)	(552)	(590)

The increase in eliminations and other sales in 2022 compared to 2021 was primarily due to an increase in intersegment eliminations, principally driven by Collins and RIS. Eliminations and other operating profit in 2022 was relatively consistent with 2021.

The increase in eliminations and other sales in 2021 compared to 2020 was primarily due to the sale of our Forcepoint business in the first quarter of 2021 and an increase in intersegment eliminations, principally driven by RIS. The change in eliminations and other operating profit in 2021 compared to 2020 was primarily due to the sale of our Forcepoint business in the first quarter of 2021.

The change in corporate expenses and other unallocated items of \$234 million in 2022 compared to 2021 was primarily driven by the absence of an accrual of \$147 million in the fourth quarter of 2021 related to the ongoing DOJ investigation into contract pricing matters at RMD, a decrease in expenses related to the LTAMDS project and lower restructuring costs, partially offset by an increase in information technology-related costs.

The change in corporate expenses and other unallocated items of \$38 million in 2021 compared to 2020 was primarily driven by a decrease in merger-related costs related to the Raytheon merger of \$148 million and lower restructuring costs of \$112 million, partially offset by an accrual of \$147 million in the fourth quarter of 2021 related to the ongoing DOJ investigation into contract pricing matters at RMD and an increase in net expenses related to the LTAMDS project.

FAS/CAS operating adjustment

The segment results of RIS and RMD include pension and PRB expense as determined under U.S. government Cost Accounting Standards (CAS), which we generally recover through the pricing of our products and services to the U.S. government. The difference between our CAS expense and the Financial Accounting Standards (FAS) service cost attributable to these segments under U.S. GAAP is the FAS/CAS operating adjustment. The FAS/CAS operating adjustment results in

consolidated pension expense in operating profit equal to the service cost component of FAS expense under U.S. GAAP. The segment results of Collins Aerospace and Pratt & Whitney generally include FAS service cost.

The CAS expense calculation is different from the FAS requirements and calculation methodology. While the ultimate liability for pension costs under FAS and CAS is similar, the pattern of cost recognition is different. Our CAS pension expense is comprised primarily of CAS service cost, as well as amortization amounts resulting from demographic or economic experience different than expected, changes in assumptions, or changes in plan provisions. Unlike FAS, CAS expense is only recognized for plans that are not fully funded. Consequently, if plans become or cease to be fully funded under CAS due to our asset or liability experience, our CAS expense will change accordingly.

The components of the FAS/CAS operating adjustment were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
FAS service cost (expense)	\$ (365)	\$ (405)	\$ (354)
CAS expense	1,885	2,201	1,460
FAS/CAS operating adjustment	\$ 1,520	\$ 1,796	\$ 1,106

The change in our FAS/CAS operating adjustment of \$276 million in 2022 compared to 2021 was driven by a \$316 million decrease in CAS expense, partially offset by a \$40 million decrease in FAS service cost. The decrease in CAS expense was primarily due to an increase in applicable discount rates as a result of U.S. qualified pension plan funding relief included in the American Rescue Plan Act of 2021 (ARPA).

The change in our FAS/CAS operating adjustment of \$690 million in 2021 compared to 2020 was driven by a \$741 million increase in CAS expense, partially offset by a \$51 million increase in FAS service cost. The increase in our CAS expense was primarily due to the Raytheon merger.

In December 2020, we approved a change to the Raytheon Company domestic defined benefit pension plans for non-union participants to cease future benefit accruals based on an employee's years of service and compensation under the historical formula effective December 31, 2022. The plan change does not impact participants' historical benefit accruals. Benefits for service after December 31, 2022 will be based on a cash balance formula.

Acquisition accounting adjustments

Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions, the amortization of customer contractual obligations related to loss making or below market contracts acquired, and goodwill impairment. These adjustments are not considered part of management's evaluation of segment results.

The components of Acquisition accounting adjustments were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Goodwill impairment charge	\$ —	\$ —	\$ (3,183)
Amortization of acquired intangibles	(1,912)	(2,404)	(2,142)
Amortization of property, plant and equipment fair value adjustment	(89)	(111)	(69)
Amortization of customer contractual obligations related to acquired loss-making and below-market contracts	108	312	294
Acquisition accounting adjustments	\$ (1,893)	\$ (2,203)	\$ (5,100)

Acquisition accounting adjustments related to acquisitions in each segment were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Collins Aerospace	\$ (800)	\$ (641)	\$ (3,926)
Pratt & Whitney	(243)	(160)	(117)
Raytheon Intelligence & Space	(303)	(563)	(394)
Raytheon Missiles & Defense	(547)	(838)	(607)
Total segment	(1,893)	(2,202)	(5,044)
Eliminations and other	—	(1)	(56)
Acquisition accounting adjustments	\$ (1,893)	\$ (2,203)	\$ (5,100)

The change in the Acquisition accounting adjustments of \$0.3 billion in 2022 compared to 2021, is primarily driven by a decrease in RIS and RMD intangibles amortization related to the Raytheon merger, partially offset by the absence of \$116 million of amortization of customer contractual obligations due to the accelerated liquidation of below-market contract reserves at Collins in 2021 driven by the termination of two customer contracts.

The change in the Acquisition accounting adjustments of \$2.9 billion in 2021 compared to 2020, is primarily driven by the absence of the \$3.2 billion goodwill impairment loss in the second quarter of 2020 related to two Collins reporting units partially offset by an increase of \$0.4 billion for acquisition accounting adjustments related to the Raytheon merger, primarily due to the timing of the merger in 2020. Included in Acquisition accounting adjustments in 2021 was \$116 million of amortization of customer contractual obligations due to the accelerated liquidation of below-market contract reserves at Collins driven by the termination of two customer contracts. Refer to “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K for additional information on the goodwill impairment.

LIQUIDITY AND FINANCIAL CONDITION

<i>(dollars in millions)</i>	2022	2021
Cash and cash equivalents	\$ 6,220	\$ 7,832
Total debt	31,914	31,485
Total equity	74,178	74,664
Total capitalization (total debt plus total equity)	106,092	106,149
Total debt to total capitalization	30 %	30 %

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Our principal source of liquidity is cash flows from operating activities. In addition to operating cash flows, other significant factors that affect our overall management of liquidity include: capital expenditures, customer financing requirements, investments in and divestitures of businesses, dividends, common stock repurchases, pension funding, access to the commercial paper markets, adequacy of available bank lines of credit, redemptions of debt and the ability to attract long-term capital at satisfactory terms.

At December 31, 2022, we had cash and cash equivalents of \$6.2 billion, of which approximately 34% was held by RTC’s foreign subsidiaries. We manage our worldwide cash requirements by reviewing available funds among the many subsidiaries through which we conduct our business and the cost effectiveness with which those funds can be accessed. The Company does not intend to reinvest certain undistributed earnings of its international subsidiaries that have been previously taxed in the U.S. Taxes associated with the future remittance of these earnings have been recorded. For the remainder of the Company’s undistributed international earnings, unless tax effective to repatriate, RTC will continue to permanently reinvest these earnings.

Historically, our strong credit ratings and financial position have enabled us to issue long-term debt at favorable market rates.

As of December 31, 2022, we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$7.0 billion, consisting of a \$5.0 billion revolving credit agreement, which expires in April 2025, and a \$2.0 billion revolving credit agreement, which was renewed in September 2022 and expires in September 2023. As of December 31, 2022, there were no borrowings outstanding under these agreements.

From time to time, we use commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, pension contributions, debt refinancing, dividend payments and repurchases of our common stock. The commercial paper notes have original maturities of not more than 364 days from the date of issuance. As of December 31, 2022, our maximum commercial paper borrowing limit was \$5.0 billion as the commercial paper is backed by our \$5.0 billion revolving credit agreement. We had \$0.5 billion of commercial paper outstanding at December 31, 2022, which is reflected in Short-term borrowings in our Consolidated Balance Sheet. The proceeds from these borrowings have primarily been used to

fund payments related to the impact of a provision enacted in the Tax Cuts and Jobs Act of 2017 requiring the capitalization of research and experimental expenditures for tax purposes. At December 31, 2022, short-term commercial paper borrowings outstanding had a weighted-average interest rate of 4.4%.

We have an existing universal shelf registration statement, which we filed with the Securities and Exchange Commission (SEC) on September 22, 2022, for an indeterminate amount of debt and equity securities for future issuance, subject to our internal limitations on the amount of debt to be issued under this shelf registration statement.

The Company offers voluntary supply chain finance (SCF) programs with global financial institutions which enables our suppliers, at their sole discretion, to sell their receivables from the Company to the financial institutions at a rate that leverages our credit rating, which might be beneficial to them. Our suppliers' participation in the SCF programs does not impact or change our terms and conditions with those suppliers, and therefore, we have no economic interest in a supplier's decision to participate in the programs. In addition, we do not pay for any of the costs of the programs incurred by those suppliers that choose to participate, and have no direct financial relationship with the financial institutions, as it relates to sales of receivables made by those suppliers. As such, the SCF programs do not impact our working capital, cash flows or overall liquidity.

We believe our cash on hand and future operating cash flows will be sufficient to meet our future operating cash needs. Further, we continue to have access to the commercial paper markets and our existing credit facilities, and our ability to obtain debt or equity financing, as well as the availability under committed credit lines, provides additional potential sources of liquidity should they be required or appropriate.

Cash Flow - Operating Activities

<i>(dollars in millions)</i>	2022	2021	2020
Net cash flows provided by operating activities from continuing operations	\$ 7,168	\$ 7,142	\$ 4,334
Net cash flows used in operating activities from discontinued operations	—	(71)	(728)

2022 Compared with 2021 Operating Activities - Continuing Operations

Cash flows provided by operating activities in 2022 were relatively consistent with 2021 and benefited from an improvement in working capital, which was more than offset by the net increase in tax payments resulting from a change in tax law discussed below. Included in the change in working capital was a favorable impact from accounts receivable driven by higher collections resulting from increased sales volume and a related increase in factoring as discussed below. The change in working capital also included a favorable impact from contract assets compared to 2021 primarily due to the timing of billings and collections, and increases in accounts payable and accrued liabilities primarily driven by higher inventory purchasing activity, deferred revenue and advanced payments. This impact was largely offset by an unfavorable impact from inventory principally due to current year increases to support sales volume growth.

The Company enters into various factoring agreements with third-party financial institutions to sell certain of its receivables. Higher sales volume in the current year supported increased factoring activity that resulted in approximately \$2.3 billion of increased cash flows provided by operating activities during 2022, compared to a decrease in cash flows provided by operating activities of \$0.2 billion during 2021. Factoring activity includes amounts factored on certain aerospace receivables at the customers' request for which we may be compensated by the customer.

2021 Compared with 2020 Operating Activities - Continuing Operations

Cash generated from operating activities in 2021 was \$2.8 billion higher than 2020. This increase was primarily due to higher net income of \$4.1 billion after adjustments for depreciation and amortization, deferred income tax provision, stock compensation costs, net periodic pension and other postretirement benefit, the goodwill impairment charge and debt extinguishment costs, as well as lower pension and PRB contributions to trusts of \$1.0 billion in 2021 compared to 2020. This was partially offset by an unfavorable change in working capital of \$1.1 billion in 2021 compared to 2020, primarily due to activity at the RIS and RMD segments in the first quarter of 2021 with no comparable activity in the first quarter of 2020 as a result of the Raytheon merger. This unfavorable change in working capital at RIS and RMD includes a cash outflow for accounts payable and accrued liabilities due to the timing of incentive compensation payments. Also included in the total unfavorable change in working capital was an increase in contract assets principally driven by sales in excess of billings at Pratt & Whitney and contractual billing terms on U.S. government and foreign military sales contracts at RMD, and growth in accounts payable and accounts receivable at Collins and Pratt & Whitney due to an increase in sales volume as commercial aerospace recovered.

Factoring activity resulted in a decrease of approximately \$0.2 billion in cash provided by operating activities during 2021, compared to a decrease of approximately \$1.3 billion in cash provided by operating activities during 2020. The year over year

favorable impact from factoring activity was primarily due to the significant decline in sales volume in 2020 principally driven by the economic environment primarily due to COVID-19.

Operating Activities - Continuing Operations

We made pension and PRB contributions to trusts of \$94 million, \$59 million, and \$1,025 million in 2022, 2021, and 2020, respectively. The contributions in 2020 include discretionary contributions of \$801 million. We make both required and discretionary contributions to our pension plans. Required contributions are primarily determined by Employee Retirement Income Security Act of 1974 (ERISA) funding rules, which require us to fully fund our U.S qualified pension plans over a rolling seven-year period as determined annually based on the Pension Protection Act of 2006 (PPA) calculated funded status at the beginning of each year. The funding requirements are primarily based on the year’s expected service cost and amortization of other previously unfunded liabilities, which are dependent upon many factors, including returns on invested assets, the level of market interest rates and actuarial assumptions. We can contribute cash or RTC shares to our plans at our discretion, subject to applicable regulations. As of December 31, 2022, the total investment by the U.S. qualified pension plans in RTC shares was less than 1% of total plan assets.

In response to the economic environment resulting from the COVID-19 pandemic, Congress passed the ARPA in March 2021, which included pension funding relief provisions. These provisions extended and expanded upon existing pension funding relief, most notably by increasing the liability interest rates used to determine the required cash contributions for our U.S. qualified pension plans. The Infrastructure Investment and Jobs Act passed by Congress in November 2021 further extended the interest rate pension funding relief provisions included in ARPA. Global pension and PRB cash funding requirements are expected to be approximately \$0.4 billion in 2023, which includes benefit payments to be paid directly by the company.

We made net tax payments of \$2.4 billion, \$1.1 billion, and \$1.7 billion in 2022, 2021, and 2020, respectively. A provision enacted in the Tax Cuts and Jobs Act of 2017 related to the capitalization of research and experimental expenditures for tax purposes became effective on January 1, 2022. As this provision was not deferred legislatively, we have made incremental tax payments of \$1.6 billion in 2022.

Included in cash flows from operating activities are payments related to our operating lease obligations. See “Note 12: Leases” within Item 8 of this Form 10-K for actual and expected payments on operating lease obligations.

In addition, the majority of our cash flows for purchase obligations are classified as cash flows from operating activities. We expect future payments related to our purchase obligations to be \$27.6 billion, of which \$19.4 billion is payable in 2023. Purchase obligations include current amounts committed for the purchase of goods and services under legally enforceable contracts or purchase orders, and do not represent our entire anticipated purchases in the future. Approximately 50% of our purchase obligations described above represent purchase orders for products to be delivered under firm contracts with the U.S. government for which we have full recourse under customary contract termination clauses.

Operating Activities - Discontinued Operations

Cash flows provided by operating activities from discontinued operations in 2022 and 2021 were not significant as the Separation Transactions occurred on April 3, 2020. The \$657 million increase in cash flows provided by operating activities from discontinued operations in 2021 compared to 2020 was primarily driven by the absence of prior year separation costs as the Separation Transactions occurred in 2020.

Cash Flow - Investing Activities

<i>(dollars in millions)</i>	2022	2021	2020
Net cash flows (used in) provided by investing activities from continuing operations	\$ (2,829)	\$ (1,364)	\$ 3,343
Net cash flows used in investing activities from discontinued operations	—	—	(241)

Our investing activities primarily include capital expenditures, cash investments in customer financing assets, investments in and dispositions of businesses, payments related to our collaboration intangible assets and contractual rights to provide product on new aircraft platforms, and settlements of derivative contracts not designated as hedging instruments.

2022 Compared with 2021 Investing Activities - Continuing Operations

The \$1.5 billion change in cash flows (used in) provided by investing activities in 2022 compared to 2021 primarily relates to the absence of 2021 investments in and dispositions of businesses, as discussed below.

2021 Compared with 2020 Investing Activities - Continuing Operations

The \$4.7 billion change in cash flows (used in) provided by investing activities in 2021 compared to 2020 primarily relates to the absence of cash acquired in the Raytheon merger in 2020 of \$3.2 billion, and investments in and dispositions of businesses, as discussed below.

Investing Activities - Continuing Operations

There were no material acquisitions in 2022. Investments in businesses in 2021 of \$1.1 billion primarily related to the acquisitions of FlightAware at Collins and SEAKR Engineering Inc. at RIS. Investments in businesses in 2020 of \$0.4 billion primarily related to the acquisition of Blue Canyon Technologies at RIS. For additional detail, see “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K.

There were no material dispositions of businesses in 2022. Dispositions of businesses in 2021 of \$1.9 billion, net of cash transferred, primarily related to the sale of our Forcepoint business and the sale of our global training and services business within RIS. Dispositions of businesses in 2020 of \$2.6 billion, net of cash transferred, primarily related to the sale of our Collins military GPS and space-based precision optics businesses. For additional detail, see “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 8 of this Form 10-K.

Capital expenditures were \$2.3 billion, \$2.1 billion and \$1.8 billion in 2022, 2021, and 2020, respectively. Capital expenditures increased \$154 million in 2022 compared to 2021, primarily due to investments in production facilities at Pratt & Whitney. Capital expenditures increased \$339 million in 2021 from 2020, primarily due to increases at RIS and RMD principally driven by the Raytheon merger and increases at Pratt & Whitney.

Payments on customer financing assets were \$150 million, \$231 million, and \$280 million in 2022, 2021 and 2020, respectively. The decrease in payments in 2022 compared to 2021 was primarily due to fewer engines added to our leased asset pool. The decrease in payments in 2021 compared to 2020 was due to fewer engines added to our leased asset pool, partially offset by increased customer financing. Receipts from customer financing assets were \$179 million, \$389 million and \$368 million in 2022, 2021 and 2020, respectively. The decrease in receipts in 2022 compared to 2021 was primarily driven by the absence of the prior year sale and leaseback transaction. Receipts in 2021 were relatively consistent with 2020, as both periods included similar sale and leaseback transactions for the sale of equipment. Refer to “Note 12: Leases” within Item 8 of this Form 10-K for additional discussion of these transactions.

In 2022, 2021, and 2020 we increased other intangible assets by approximately \$487 million, \$308 million, \$312 million, respectively, which primarily relates to collaboration payment commitments made under our 2012 agreement to acquire Rolls-Royce’s collaboration interests in International Aero Engines AG (IAE) and exclusivity payments made on contractual commitments included within intangible assets that are amortized over the term of the underlying economic benefit. At December 31, 2022, we had commercial aerospace financing and other contractual commitments, including exclusivity and collaboration payment commitments, of approximately \$15.3 billion, on a gross basis before reduction for our collaboration partners’ share. Refer to “Note 18: Commitments and Contingencies” within Item 8 of this Form 10-K for further details on our commercial aerospace financing and other contractual commitments.

As discussed in “Note 14: Financial Instruments” within Item 8 of this Form 10-K, we enter into derivative instruments primarily for risk management purposes, including derivatives designated as hedging instruments and those utilized as economic hedges. We operate internationally and in the normal course of business, are exposed to fluctuations in interest rates, foreign exchange rates and commodity prices. These fluctuations can increase the costs of financing, investing and operating the business. We have used derivative instruments, including swaps, forward contracts and options, to manage certain foreign currency, interest rate and commodity price exposures. During 2022, 2021, and 2020 we had net cash payments of \$205 million, \$16 million, and \$32 million, respectively, from the settlement of these derivative instruments not designated as hedging instruments.

Investing Activities - Discontinued Operations

Cash flows used in investing activities from discontinued operations in 2022 and 2021 were not significant as the Separation Transactions occurred on April 3, 2020. The \$241 million decrease in cash flows used in investing activities from discontinued operations in 2021 compared to 2020 was due to the fact that the Separation Transactions occurred in 2020.

Cash Flow - Financing Activities

<i>(dollars in millions)</i>	2022	2021	2020
Net cash flows used in financing activities from continuing operations	\$ (5,859)	\$ (6,756)	\$ (3,860)
Net cash flows provided by (used in) financing activities from discontinued operations	—	71	(1,414)

Our financing activities primarily include the issuance and repayment of commercial paper and other short-term and long-term debt, payment of dividends and stock repurchases.

2022 Compared with 2021 Financing Activities- Continuing Operations

The \$0.9 billion change in cash flows used in financing activities in 2022 compared to 2021 was primarily driven by the absence of 2021 repayments of long-term debt, including debt extinguishment costs, net of issuances of \$0.8 billion and an increase in commercial paper borrowings, net of \$0.7 billion, partially offset by an increase in share repurchases of \$0.5 billion, as discussed below.

2021 Compared with 2020 - Financing Activities- Continuing Operations

The \$2.9 billion change in cash flows used in financing activities in 2021 compared to 2020 primarily relates to an increase in share repurchases of \$2.3 billion, as discussed below. In addition, in 2021, we had debt repayments, including debt extinguishment costs, of \$4.9 billion and long-term debt issuances of \$4.1 billion.

Financing Activities- Continuing Operations

Included in cash flows from financing activities are payments related to our long term debt, including both interest and principal payments. A summary of our long-term debt commitments as of December 31, 2022 was as follows:

<i>(dollars in millions)</i>	Payments Due by Period			
	2023	2024	2025	Thereafter
Long-term debt—principal	\$ 588	\$ 1,270	\$ 1,590	\$ 27,801
Long-term debt—future interest	1,257	1,220	1,193	14,552

Our share repurchases were as follows for the years ended December 31:

<i>(dollars in millions; shares in thousands)</i>	2022		2021		2020	
	\$	Shares	\$	Shares	\$	Shares
Shares of common stock repurchased ⁽¹⁾	\$ 2,803	29,943	\$ 2,327	28,003	\$ 47	330

(1) Relates to share repurchases that were settled in cash during the period.

At December 31, 2022, management had remaining authority to repurchase approximately \$6.0 billion of our common stock under the December 12, 2022 share repurchase program. Under this program, shares may be purchased on the open market, in privately negotiated transactions, under accelerated share repurchase programs, and under plans complying with Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended. We may also reacquire shares outside of the program from time to time in connection with the surrender of shares to cover taxes on vesting of restricted stock and as required under our employee savings plan. Our ability to repurchase shares is subject to applicable law.

Our Board of Directors authorized the following cash dividends for the years ended December 31:

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Dividends paid per share of common stock	\$ 2.160	\$ 2.005	\$ 2.160
Total dividends paid	\$ 3,128	\$ 2,957	\$ 2,732

On February 3, 2023, the Board of Directors declared a dividend of \$0.55 per share payable March 23, 2023 to shareowners of record at the close of business on February 24, 2023.

Financing Activities - Discontinued Operations

Cash flows provided by financing activities from discontinued operations in 2022 and 2021 were not significant as the Separation Transactions occurred on April 3, 2020. The \$1.5 billion decrease in cash flows used in financing activities from discontinued operations in 2021 compared to 2020 was due to the fact that the Separation Transactions occurred in 2020.

CRITICAL ACCOUNTING ESTIMATES

Preparation of our financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management believes the most complex and sensitive judgments, because of their significance to the Consolidated Financial Statements, result primarily from the need to make estimates about the effects of matters that are inherently uncertain. The most significant areas involving management judgments and estimates are described below. Actual results in these areas could differ from management's estimates.

Long-Term Contract Accounting. We recognize revenue on an over-time basis for substantially all defense contracts and certain long-term aerospace aftermarket contracts. We measure progress toward completion of these contracts on a percentage of completion basis, generally using costs incurred to date relative to total estimated costs at completion. Contract costs are incurred over a period of time, which can be several years, and the estimation of these costs requires management's judgment. We review our Estimates at Completion (EACs) at least annually or when a change in circumstances warrants a modification to a previous estimate. For significant contracts, we review our EACs more frequently. Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment by management on a contract by contract basis. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities relate to management's judgment about the ability and cost to achieve the schedule, consideration of customer-directed delays or reductions in scheduled deliveries, technical requirements, customer activity levels, such as flight hours or aircraft landings, and related variable consideration. Management must make assumptions and estimates regarding contract revenue and costs, including estimates of labor productivity and availability, the complexity and scope of the work to be performed, the availability and cost of materials, including any impact from rising costs or inflation, the length of time to complete the performance obligation, execution by our subcontractors, the availability and timing of funding from our customer, overhead cost rates, and current and past maintenance cost and frequency driven by estimated aircraft and engine utilization and estimated useful lives of components, among others. In particular, fixed-price development programs involve significant management judgment, as development contracts by nature have elements that have not been done before and thus, are highly subject to future unexpected cost changes. Cost estimates may also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements, required under certain contracts. These obligations may or may not be distinct depending on their nature. If cash is paid to a customer to satisfy our offset obligations it is recorded as a reduction in the transaction price. Changes in estimates of net sales, cost of sales and the related impact to operating profit on contracts recognized over time are recognized on a cumulative catch-up basis, which recognizes the cumulative effect of the profit changes on current and prior periods based on a performance obligation's percentage of completion in the current period. A significant change in one or more of these estimates could affect the profitability of one or more of our performance obligations. Our EAC adjustments also include the establishment of and changes to loss provisions for our contracts accounted for on a percentage of completion basis.

Net EAC adjustments had the following impact on our operating results:

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Total net sales	\$ 152	\$ 296	\$ (407)
Operating profit (loss)	(37)	110	(643)
Income (loss) from continuing operations attributable to common shareowners ⁽¹⁾	(29)	87	(508)
Diluted earnings (loss) per share from continuing operations attributable to common shareowners ⁽¹⁾	\$ (0.02)	\$ 0.06	\$ (0.37)

(1) Amounts reflect a U.S. statutory tax rate of 21%, which approximates our tax rate on our EAC adjustments.

As a result of the Raytheon merger, Raytheon Company's contracts accounted for on a percentage of completion basis were reset to zero percent complete as of the merger date, because only the unperformed portion of the contract at the merger date represented the obligation of the Company. This had the impact of reducing EAC adjustments for these segments in the short term period following the merger, most notably in 2020. For additional information related to the Raytheon merger, see "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" within Item 8 of this Form 10-K.

Costs incurred for engineering and development of certain aerospace products under contracts with customers are capitalized as contract fulfillment costs, to the extent recoverable from the associated contract margin and customer funding, and subsequently amortized as the products are delivered to the customer. The estimation of contract costs, and margin, considered as part of this recoverability assessment requires significant judgment. See “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 8 of this Form 10-K for further discussion. We regularly assess capitalized contract fulfillment costs for impairment. In 2020, we recognized impairment of \$111 million related to contract fulfillment costs in conjunction with the related impacts of the COVID 19 pandemic.

Income Taxes. Management believes that our earnings during the periods when the temporary differences become deductible will be sufficient to realize the related future income tax benefits, which may be realized over an extended period of time. For those jurisdictions where the expiration date of tax carryforwards or the projected operating results indicate that realization is not likely, a valuation allowance is provided.

In assessing the need for a valuation allowance, we consider available positive and negative evidence including past operating results, projections of future taxable income, the feasibility of ongoing tax planning strategies and the realizability of tax loss carryforwards. Our projections of future taxable income include estimates and assumptions regarding our volume, pricing, and costs, as well as the timing and amount of reversals of taxable temporary differences. Valuation allowances related to deferred tax assets can be affected by changes to tax laws, changes to statutory tax rates and future taxable income levels. In the event we were to determine that we would not be able to realize all or a portion of our deferred tax assets in the future, we would reduce such amounts through an increase to tax expense in the period in which that determination is made or when tax law changes are enacted. Conversely, if we were to determine that we would be able to realize our deferred tax assets in the future in excess of the net carrying amounts, we would decrease the recorded valuation allowance through a decrease to tax expense in the period in which that determination is made.

In the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. Significant judgment is required when assessing our income tax positions and in determining our tax expense and benefits. Management assesses our tax positions based on an evaluation of the facts, circumstances, applicable tax laws, including regulations, case law, and other interpretive guidance, as well as any other relevant information. Adjustments to our tax positions are made as new information becomes available or when our assessments change. In addition, we have entered into certain internal legal entity restructuring transactions necessary to effectuate the Separation Transactions. We have accrued tax on these transactions based on our interpretation of the applicable tax laws and our determination of appropriate entity valuations. See “Note 1: Basis of Presentation and Summary of Accounting Principles” and “Note 13: Income Taxes” within Item 8 of this Form 10-K for further discussion.

Management has determined that the distributions of Carrier and Otis on April 3, 2020, and certain related internal business separation transactions, qualified as tax-free under applicable law. In making these determinations, we applied the tax law in the relevant jurisdictions to our facts and circumstances and obtained tax rulings from the relevant taxing authorities, tax opinions, and/or other external tax advice related to the concluded tax treatment. If the completed distributions of Carrier or Otis, in each case, or certain internal business separation transactions, were to fail to qualify for tax-free treatment, the Company could be subject to significant liabilities, and there could be material adverse impacts on the Company’s business, results of operations, financial condition and liquidity in future reporting periods.

Goodwill and Intangible Assets. The assets and liabilities of acquired businesses are recorded under the acquisition method of accounting at their estimated fair values at the dates of acquisition. Goodwill represents costs in excess of fair values assigned to the underlying identifiable net assets of acquired businesses. Intangible assets acquired in business combinations consist of patents, trademarks/tradenames, developed technology, customer relationships, and other intangible assets. The fair value for acquired customer relationship intangibles is determined as of the acquisition date based on estimates and judgments regarding expectations for the future after-tax cash flows arising from the follow-on revenue from customer relationships that existed on the acquisition date over their estimated lives, including the probability of expected future contract renewals and revenue, less a contributory assets charge, all of which is discounted to present value. The fair value of the trademark and tradename intangible assets are determined utilizing the relief from royalty method which is a form of the income approach. Under this method, a royalty rate based on observed market royalties is applied to projected revenue supporting the tradename and discounted to present value using an appropriate discount rate. See “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 8 of this Form 10-K for further details.

Also included within intangible assets are exclusivity assets, which are payments made to secure certain contractual rights to provide products on new commercial aerospace platforms. At December 31, 2022, our exclusivity assets, net of accumulated amortization, were approximately \$2.6 billion, and our remaining estimated commitments, net of collaborator share, were approximately \$6.2 billion. We regularly assess the recoverability of these intangibles, which is dependent upon our

assumptions around the future success and profitability of the underlying aircraft platforms including the associated aftermarket revenue streams, and the related future cash flows.

Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are subject to impairment testing annually, or more frequently if events or changes in circumstances indicate the asset might be impaired. The impairment test compares carrying values of the reporting units and indefinite-lived intangible assets to their estimated fair values. If the carrying value exceeds the fair value, then the carrying value is reduced to fair value. In testing our reporting units and indefinite-lived intangible assets for impairment, we may perform both qualitative and quantitative assessments. For the quantitative assessments that are performed for goodwill, we utilize a combination of discounted cash flows (DCF) and market-based valuation methodologies. For the quantitative assessments of indefinite-lived intangible assets, fair value is primarily based on the relief from royalty method. These quantitative assessments incorporate significant assumptions that include sales growth rates, projected operating profit, terminal growth rates, discount rates, royalty rates and comparable multiples from publicly traded companies in our industry. Such assumptions are subject to variability from year to year and are directly impacted by, among other things, global market conditions.

We completed our annual goodwill impairment testing as of October 1, 2022 and determined that no adjustments to the carrying value of goodwill were necessary. For those reporting units where we performed a quantitative test, we estimated the fair value of our reporting units using a combination of DCF and market-based valuation methodologies. As noted above, these methodologies involve significant assumptions that are subject to variability. The key assumptions used in our quantitative analysis include our business projections, including revenue growth rates and operating profit margins, the long-term growth rate used to calculate the terminal value of the reporting unit, the discount rate, and comparable multiples from publicly traded companies in our industry. We consider both internal and external factors and refresh key assumptions annually or as considered necessary. Material changes in these estimates could occur and result in impairments in future periods.

Based on our annual impairment analysis as of October 1, 2022, the reporting units that were closest to impairment were two previously combined Collins reporting units with fair values in excess of book values, including goodwill, of 15% and 17%. The combined value of goodwill allocated to these two reporting units is approximately \$9.5 billion as of the date testing was performed. All other reporting units had a fair value substantially in excess of book value. The Company continuously monitors and evaluates relevant events and circumstances that could unfavorably impact the significant assumptions noted above, including changes to U.S. treasury rates and equity risk premiums, tax rates, recent market valuations from transactions by comparable companies, volatility in the Company's market capitalization, and general industry, market and macro-economic conditions. It is possible that future changes in such circumstances or in the inputs and assumptions used in estimating the fair value of our reporting units, could require the Company to record a non-cash impairment charge.

In 2020, we recognized goodwill impairments of \$3.2 billion related to two Collins reporting units. Refer to "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" within Item 8 of this Form 10-K for additional details.

We also completed our annual indefinite-lived intangible assets impairment testing as of October 1, 2022 and determined that no adjustments to the carrying value of these assets were necessary. As noted above, our indefinite-lived intangible assets impairment analysis involves significant assumptions that are subject to variability. Material changes in these assumptions could occur and result in impairments in future periods.

Contingent Liabilities. As described in "Note 18: Commitments and Contingencies" within Item 8 of this Form 10-K, contractual, regulatory and other matters in the normal course of business may arise that subject us to claims or litigation, including with respect to matters relating to technical issues on programs, government contracts, performance and operating cost guarantees, employee benefit plans, legal, and environmental, health and safety matters. In particular, the design, development, production and support of aerospace technologies is inherently complex and subject to risk. Technical issues associated with these technologies may arise in the normal course and may result in financial impacts, including increased warranty provisions, customer contract settlements, and changes in contract performance estimates. These impacts could be material to the Company's results of operations, financial condition and liquidity. Additionally, we have significant contracts with the U.S. government, subject to government oversight and audit, which may require significant adjustment of contract prices. We accrue for liabilities associated with these matters when it is probable that a liability has been incurred and the amount can be reasonably estimated. Estimating our liability based on both the likelihood of any adverse judgments or outcomes, and the costs associated with these matters, requires significant judgment. The inherent uncertainty related to the outcome of these matters could result in amounts materially different from any provisions made with respect to their resolution.

Employee Benefit Plans. We sponsor domestic and foreign defined benefit pension and PRB plans. Assumptions used to calculate our funded status are determined based on company data and appropriate market indicators. They are evaluated annually at December 31 and when significant events require a mid-year remeasurement. A change in any of these assumptions

or actual experience that differs from these assumptions are subject to recognition in pension and postretirement net periodic benefit (income) expense reported in the Consolidated Financial Statements.

Assumptions used in the accounting for these employee benefit plans require judgement. Major assumptions include the discount rate and EROA. Other assumptions include mortality rates, demographic assumptions (such as retirement age), rate of increase in employee compensation levels, and health care cost increase projections.

The weighted-average discount rates used to measure pension and PRB liabilities are based on yield curves developed using high-quality corporate bonds, which are subject to macroeconomic factors, as well as plan specific expected cash flows. For our significant plans, we utilize a full yield curve approach in the estimation of the service cost and interest cost components of net periodic benefit expense by applying the specific spot rates along the yield curve used in determination of the benefit obligation to the relevant discounted projected cash flows.

The following table shows the sensitivity of our pension and PRB plan liabilities and net periodic benefit income to a 25 basis point change in the discount rates for benefit obligations, interest cost and service cost as of December 31, 2022:

<i>(dollars in millions)</i>	Increase in Discount Rate of 25 bps	Decrease in Discount Rate of 25 bps
Projected benefit obligation increase (decrease)	\$ (1,144)	\$ 1,194
Net periodic benefit income increase (decrease)	(23)	28

The discount rate sensitivities assume no change in the shape of the yield curve that will be applied to the projected cash outflows for future benefit payments in order to calculate interest and service cost. A flattening of the yield curve results in a narrowing of the spread between interest and obligation discount rates and would decrease our net periodic benefit income. Conversely, a steepening of the yield curve would result in an increase in the spread between interest and obligation discount rates and would increase our net periodic benefit income.

The EROA is the average rate of earnings expected over the long term on assets invested to fund anticipated future benefit payment obligations. In determining the EROA assumption, we consider the target asset allocation of plan assets, as well as economic and other indicators of future performance. We consult with and consider the opinions of financial and other professionals in determining the appropriate capital market assumptions. Return projections are validated using a simulation model that incorporates yield curves, credit spreads and risk premiums to project long-term prospective returns. As a result of this analysis at year end 2022, our weighted average pension EROA assumption for 2023 increased to 7.1%. Differences between actual asset returns in a given year and the EROA do not necessarily indicate a change in the assumption is required, as the EROA represents the expected average returns over a long-term horizon.

Net periodic benefit income is also sensitive to changes in the EROA. An increase or decrease of 25 basis points in the EROA would have increased or decreased our 2022 net periodic benefit income by approximately \$139 million.

Refer to “Note 11: Employee Benefit Plans” within Item 8 of this Form 10-K for discussion of current and prior year discount rate and EROA assumptions.

ACCOUNTING STANDARDS

For a discussion of recent accounting pronouncements, see the Accounting Pronouncements section in “Note 1: Basis of Presentation and Summary of Accounting Principles” within Item 8 of this Form 10-K.

COMMITMENTS AND CONTINGENCIES

Refer to “Note 18: Commitments and Contingencies” within Item 8 of this Form 10-K for discussion on contractual commitments and contingencies.

GOVERNMENT MATTERS

As described above in “Critical Accounting Estimates—Contingent Liabilities,” our contracts with the U.S. government are subject to audits. Such audits may recommend that certain contract prices should be reduced to comply with various government regulations, or that certain payments be delayed or withheld. We are also the subject of one or more investigations and legal proceedings initiated by the U.S. government with respect to government contract matters. See “Note 18: Commitments and Contingencies” within Item 8 of this Form 10-K for further discussion of these and other government matters.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary market exposures are to fluctuations in foreign currency exchange rates and interest rates as it relates to our market risk sensitive instruments, which are primarily cash, debt and derivative instruments. To quantify our market risk exposure, we perform a sensitivity analysis based on hypothetical changes in foreign currency exchange rates and interest rates. Refer to “Note 1: Basis of Presentation and Summary of Accounting Principles,” “Note 10: Borrowings and Lines of Credit” and “Note 14: Financial Instruments” within Item 8 of this Form 10-K for additional discussion of foreign currency exchange, interest rates and financial instruments.

Foreign Currency Exchange Rate Risk. We are subject to foreign currency exchange rate risk relating to receipts from customers and payments to suppliers in foreign currencies and to various internal or external financing arrangements. We use foreign currency forward contracts to hedge the price risk associated with firmly committed and forecasted foreign denominated payments and receipts related to our ongoing business and financing. We actively manage foreign currency exposures that are associated with committed foreign currency purchases and sales, and other assets and liabilities created in the normal course of business at the operating unit level. More than insignificant exposures that cannot be naturally offset within an operating unit are hedged with foreign currency derivatives. Foreign exchange exposures arising from intercompany loan and deposit transactions are also hedged regularly. The aggregate notional amount of our outstanding foreign currency hedges was \$11.2 billion and \$8.5 billion at December 31, 2022 and 2021, respectively. Foreign currency forward contracts are sensitive to changes in foreign currency exchange rates. A 10% unfavorable exchange rate movement in our portfolio of foreign currency contracts would have resulted in an increase in unrealized losses of \$0.9 billion and \$0.6 billion at December 31, 2022 and 2021, respectively. Such losses or gains would be offset by corresponding gains or losses in the remeasurement of the underlying transactions being hedged. We believe these foreign currency forward exchange contracts and the offsetting underlying commitments, when taken together, do not create material market risk.

Within our aerospace business, our sales are typically denominated in U.S. Dollars. However, for our non-U.S. based entities, such as Pratt & Whitney Canada (P&WC), a substantial portion of their costs are incurred in local currencies. Consequently, there is a foreign currency exchange impact and risk to operational results as U.S. Dollars must be converted to local currencies such as the Canadian Dollar in order to meet local currency cost obligations. Additionally, we transact business in various foreign currencies which exposes our cash flows and earnings to changes in foreign currency exchange rates. In order to minimize the exposure that exists from changes in the exchange rate of the U.S. Dollar against these other currencies, we hedge a certain portion of sales to secure the rates at which U.S. Dollars will be converted. The majority of this hedging activity occurs at P&WC and Collins, and hedging activity also occurs to a lesser extent at the remainder of Pratt & Whitney. At P&WC and Collins, firm and forecasted sales for both original equipment and spare parts are hedged at varying amounts for up to 49 months on the U.S. Dollar sales exposure as represented by the excess of U.S. Dollar sales over U.S. Dollar denominated purchases. Hedging gains and losses resulting from movements in foreign currency exchange rates are partially offset by the foreign currency translation impacts that are generated on the translation of local currency operating results into U.S. Dollars for reporting purposes. While the objective of the hedging program is to minimize the foreign currency exchange impact on operating results, there are typically variances between the hedging gains or losses and the translational impact due to the length of hedging contracts, changes in the sales profile, volatility in the exchange rates and other such operational considerations.

Interest Rate Risk. We have financial instruments that are subject to interest rate risk, principally fixed-rate debt obligations. A 100 basis points unfavorable interest rate movement would have had an approximate \$3 billion and \$4 billion impact on the fair value of our fixed-rate debt at December 31, 2022 and 2021. The investors in our fixed-rate debt obligations generally do not have the right to demand we pay off these obligations prior to maturity. Therefore, we believe our exposure to interest rate risk on our fixed-rate debt is not material. From time to time, we may hedge to floating rates using interest rate swaps. Currently, we do not hold any derivative contracts that hedge our interest exposures, but may consider such strategies in the future.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of RTC is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements.

Management has assessed the effectiveness of RTC's internal control over financial reporting as of December 31, 2022. In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its *Internal Control—Integrated Framework*, released in 2013. Management concluded that based on its assessment, RTC's internal control over financial reporting was effective as of December 31, 2022. The effectiveness of RTC's internal control over financial reporting, as of December 31, 2022, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

/s/ GREGORY J. HAYES

Gregory J. Hayes

President and Chief Executive Officer

/s/ NEIL G. MITCHILL, JR.

Neil G. Mitchill, Jr.

Executive Vice President and Chief Financial Officer

/s/ AMY L. JOHNSON

Amy L. Johnson

Corporate Vice President and Controller

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareowners and Board of Directors of Raytheon Technologies Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Raytheon Technologies Corporation and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income (loss), of changes in equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition - Contract Estimates at Completion

As described in Note 1 to the consolidated financial statements, a significant portion of the Company's revenues of \$67.1 billion for the year ended December 31, 2022 are from long-term contracts associated with the design, development, manufacture or modification of complex aerospace or defense equipment or related services. The timing of the satisfaction of performance obligations varies across the Company's businesses due to their diverse product and service mix, customer base, and contractual terms. Substantially all of the Company's revenues from the Raytheon Intelligence & Space and Raytheon Missiles & Defense segments are recognized over time because of the continuous transfer of control to the customer. The Company's revenues from certain long-term aftermarket contracts within its Pratt & Whitney segment are recognized over the contract period as a series of daily performance obligations to stand ready to provide spare parts, product maintenance and aftermarket services. For these performance obligations satisfied over time, revenue is recognized on a percentage of completion basis using costs incurred to date relative to total estimated costs at completion to measure progress. Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment by management on a contract by contract basis. Within the Raytheon Intelligence & Space and Raytheon Missiles & Defense segments, the variables and significant judgments relate to key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities for the contracts relate to management's ability and cost to achieve the schedule, consideration of customer-directed delays or reductions in scheduled deliveries, technical requirements, customer activity levels and related variable consideration. Management also makes judgments about variables related to estimates of labor productivity and availability, the complexity and scope of the work to be performed, the availability and cost of materials, including any impact from rising costs or inflation, the length of time to complete the performance obligation, execution by the Company's subcontractors, the availability and timing of funding from the customer, overhead cost rates, and the estimated cost of satisfying the Company's industrial cooperation agreements required under certain contracts. Within the Pratt & Whitney segment, the variables and significant judgments relate to current and past maintenance cost and frequency experience. Management reviews contract estimates at completion on a periodic basis and no less than annually or when a change in circumstances warrants a modification to a previous estimate.

The principal considerations for our determination that performing procedures relating to revenue recognition - contract estimates at completion is a critical audit matter are (i) the significant judgment by management in developing their estimates of total revenue and total costs at completion, including significant judgments and assumptions on a contract by contract basis, and (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence related to management's estimates of total revenue and total costs at completion for contracts.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, including controls over the estimates of total revenue and total costs at completion. These procedures also included, among others, testing management's process for developing the estimated total revenue and total costs at completion, including evaluating on a test basis the reasonableness of certain significant judgments and variables considered by management specific to each contract or performance obligation. Evaluating the significant judgments and assumptions related to the estimates of total revenue and total costs at completion involved evaluating whether the significant judgments and assumptions used were reasonable considering: (i) management's historical forecasting accuracy, (ii) evidence to support the relevant aforementioned variables, (iii) the consistent application of accounting policies, and (iv) the timely identification of circumstances which may warrant a modification to a previous estimate.

Goodwill and Indefinite-lived Intangible Assets Impairment Assessments

As described in Notes 1 and 2 to the consolidated financial statements, the Company's consolidated goodwill and indefinite-lived intangible assets balances were \$53.8 billion and \$8.6 billion, respectively, as of December 31, 2022. A portion of the total goodwill balance relates to certain reporting units of the Collins Aerospace segment. A portion of the total indefinite-lived intangible assets balance relates to the Collins Aerospace segment. Goodwill and indefinite-lived intangible assets are subject to impairment testing annually, or more frequently if events or changes in circumstances indicate the asset might be impaired. For the quantitative assessments that are performed, fair value is primarily based on market-based valuation methods, income-based methods using a discounted cash flow model, relief from royalty methods, or a combination of such. These assessments utilize significant assumptions related to sales growth rates, projected operating profit, terminal growth rates, discount rates, royalty rates, and comparable multiples from publicly traded companies in the aerospace and defense industry. The impairment testing compares carrying values to estimated fair values. If the carrying value exceeds the fair value, then the carrying value is reduced to fair value.

The principal considerations for our determination that performing procedures relating to the goodwill and indefinite-lived intangible assets impairment assessments is a critical audit matter are (i) the significant judgment by management when developing the fair value estimates of certain reporting units and indefinite-lived intangible assets of the Collins Aerospace segment, (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to sales growth rates, discount rates, and comparable multiples from publicly traded companies in the aerospace and defense industry, as applicable, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill and indefinite-lived intangible assets impairment assessments, including controls over the valuation of certain reporting units and indefinite-lived intangible assets of the Collins Aerospace segment. These procedures also included, among others (i) testing management's process for developing the fair value estimates, (ii) evaluating the appropriateness of the methodologies used to estimate fair value, (iii) testing the completeness and accuracy of underlying data used in developing the estimates, and (iv) evaluating the reasonableness of the significant assumptions used by management related to sales growth rates, discount rates, and comparable multiples from publicly traded companies in the aerospace and defense industry, as applicable. Evaluating management's assumptions related to sales growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the relevant businesses, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the Company's discounted cash flow, market-based valuation, and relief from royalty methods, and (ii) the reasonableness of the discount rates and comparable multiples from publicly traded companies in the aerospace and defense industry assumptions.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 6, 2023

We have served as the Company's auditor since 1947.

RAYTHEON TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENT OF OPERATIONS

<i>(dollars in millions, except per share amounts; shares in millions)</i>	2022	2021	2020
Net sales:			
Products sales	\$ 50,773	\$ 49,270	\$ 43,319
Services sales	16,301	15,118	13,268
Total net sales	67,074	64,388	56,587
Costs and expenses:			
Cost of sales - products	41,927	41,095	38,137
Cost of sales - services	11,479	10,802	9,919
Research and development	2,711	2,732	2,582
Selling, general and administrative	5,663	5,224	5,540
Total costs and expenses	61,780	59,853	56,178
Goodwill impairment	—	—	(3,183)
Other income, net	120	423	885
Operating profit (loss)	5,414	4,958	(1,889)
Non-operating expense (income), net:			
Non-service pension income	(1,889)	(1,944)	(902)
Debt extinguishment costs	—	649	—
Interest expense, net	1,276	1,322	1,366
Total non-operating expense (income), net	(613)	27	464
Income (loss) from continuing operations before income taxes	6,027	4,931	(2,353)
Income tax expense	700	786	575
Net income (loss) from continuing operations	5,327	4,145	(2,928)
Less: Noncontrolling interest in subsidiaries' earnings from continuing operations	111	248	181
Net income (loss) from continuing operations attributable to common shareowners	5,216	3,897	(3,109)
Discontinued operations (Note 3)			
Loss from discontinued operations	(30)	(10)	(216)
Income tax expense (benefit) from discontinued operations	(11)	23	151
Loss from discontinued operations	(19)	(33)	(367)
Less: Noncontrolling interest in subsidiaries' earnings from discontinued operations	—	—	43
Loss from discontinued operations attributable to common shareowners	(19)	(33)	(410)
Net income (loss) attributable to common shareowners	\$ 5,197	\$ 3,864	\$ (3,519)
Earnings (loss) per share attributable to common shareowners - basic			
Income (loss) from continuing operations attributable to common shareowners	\$ 3.54	\$ 2.60	\$ (2.29)
Loss from discontinued operations	(0.02)	(0.03)	(0.30)
Net income (loss) attributable to common shareowners	\$ 3.52	\$ 2.57	\$ (2.59)
Earnings (loss) per share attributable to common shareowners - diluted			
Income (loss) from continuing operations attributable to common shareowners	\$ 3.51	\$ 2.58	\$ (2.29)
Loss from discontinued operations	(0.01)	(0.02)	(0.30)
Net income (loss) attributable to common shareowners	\$ 3.50	\$ 2.56	\$ (2.59)
Weighted average number of shares outstanding:			
Basic shares	1,475.5	1,501.6	1,357.8
Diluted shares	1,485.9	1,508.5	1,357.8

See accompanying Notes to Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS)

<i>(dollars in millions)</i>	2022	2021	2020
Net income (loss) from continuing and discontinued operations	\$ 5,308	\$ 4,112	\$ (3,295)
Pension and postretirement benefit plans adjustments			
Net actuarial gain (loss) arising during period	1,291	3,246	(202)
Prior service credit (cost) arising during period	(131)	(59)	2,095
Amortization of actuarial loss and prior service cost	129	258	373
Other	65	23	(51)
Pension and postretirement benefit plans adjustments	1,354	3,468	2,215
Change in unrealized cash flow hedging	(143)	(254)	263
Foreign currency translation adjustments	(1,048)	(647)	609
Other comprehensive income, before tax	163	2,567	3,087
Income tax expense related to items of other comprehensive income	(266)	(748)	(547)
Other comprehensive income (loss), net of tax	(103)	1,819	2,540
Comprehensive income (loss)	5,205	5,931	(755)
Less: Comprehensive income attributable to noncontrolling interest	111	248	224
Comprehensive income (loss) attributable to common shareowners	\$ 5,094	\$ 5,683	\$ (979)

See accompanying Notes to Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
CONSOLIDATED BALANCE SHEET

<i>(dollars in millions; shares in thousands)</i>	2022	2021
Assets		
Current assets		
Cash and cash equivalents	\$ 6,220	\$ 7,832
Accounts receivable, net	9,108	9,661
Contract assets	11,534	11,361
Inventory, net	10,617	9,178
Other assets, current	4,964	4,018
Total current assets	42,443	42,050
Customer financing assets	2,603	2,848
Fixed assets, net	15,170	14,972
Operating lease right-of-use assets	1,829	1,958
Goodwill	53,840	54,436
Intangible assets, net	36,823	38,516
Other assets	6,156	6,624
Total assets	\$ 158,864	\$ 161,404
Liabilities, Redeemable Noncontrolling Interest and Equity		
Current liabilities		
Short-term borrowings	\$ 625	\$ 134
Accounts payable	9,896	8,751
Accrued employee compensation	2,401	2,658
Other accrued liabilities	10,999	10,162
Contract liabilities	14,598	13,720
Long-term debt currently due	595	24
Total current liabilities	39,114	35,449
Long-term debt	30,694	31,327
Operating lease liabilities, non-current	1,586	1,657
Future pension and postretirement benefit obligations	4,807	7,855
Other long-term liabilities	8,449	10,417
Total liabilities	84,650	86,705
Commitments and contingencies (Note 18)		
Redeemable noncontrolling interest	36	35
Shareowners' equity:		
Capital stock:		
Preferred stock, \$1 par value; 250,000 shares authorized; None issued or outstanding	—	—
Common stock, \$1 par value; 4,000,000 shares authorized; 1,710,960 and 1,708,065 shares issued	37,939	37,483
Treasury stock, 244,720 and 214,785 common shares at average cost	(15,530)	(12,727)
Retained earnings	52,269	50,265
Unearned ESOP shares	(28)	(38)
Accumulated other comprehensive loss	(2,018)	(1,915)
Total shareowners' equity	72,632	73,068
Noncontrolling interest	1,546	1,596
Total equity	74,178	74,664
Total liabilities, redeemable noncontrolling interest and equity	\$ 158,864	\$ 161,404

See accompanying Notes to Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENT OF CASH FLOWS

<i>(dollars in millions)</i>	2022	2021	2020
Operating Activities:			
Net income (loss) from continuing operations	\$ 5,327	\$ 4,145	\$ (2,928)
Adjustments to reconcile net income (loss) from continuing operations to net cash flows provided by operating activities:			
Depreciation and amortization	4,108	4,557	4,156
Deferred income tax benefit	(1,663)	(88)	(99)
Stock compensation cost	420	442	330
Net periodic pension and other postretirement income	(1,413)	(1,414)	(413)
Debt extinguishment costs	—	649	—
Goodwill impairment charge	—	—	3,183
Change in:			
Accounts receivable	437	(570)	1,318
Contract assets	(234)	(1,594)	63
Inventory	(1,575)	163	412
Other current assets	(1,027)	(566)	(445)
Accounts payable and accrued liabilities	2,075	917	(1,666)
Contract liabilities	846	1,372	1,129
Global pension contributions	(94)	(59)	(1,025)
Other operating activities, net	(39)	(812)	319
Net cash flows provided by operating activities from continuing operations	7,168	7,142	4,334
Investing Activities:			
Capital expenditures	(2,288)	(2,134)	(1,795)
Payments on customer financing assets	(150)	(231)	(280)
Receipts from customer financing assets	179	389	368
Investments in businesses (Note 2)	(66)	(1,088)	(419)
Cash acquired in Raytheon merger	—	—	3,208
Dispositions of businesses, net of cash transferred (Note 2)	94	1,879	2,556
Increase in other intangible assets	(487)	(308)	(312)
Payments from settlements of derivative contracts, net	(205)	(16)	(32)
Other investing activities, net	94	145	49
Net cash flows (used in) provided by investing activities from continuing operations	(2,829)	(1,364)	3,343
Financing Activities:			
Issuance of long-term debt	1	4,062	2,004
Distribution from discontinued operations	—	—	17,207
Repayment of long-term debt	(3)	(4,254)	(16,082)
Debt extinguishment costs	—	(649)	—
Change in commercial paper, net (Note 10)	518	(160)	160
Change in other short-term borrowings, net	(29)	47	(2,201)
Dividends paid on common stock	(3,128)	(2,957)	(2,732)
Repurchase of common stock	(2,803)	(2,327)	(47)
Net transfers to discontinued operations	—	(71)	(2,033)
Other financing activities, net	(415)	(447)	(136)
Net cash flows used in financing activities from continuing operations	(5,859)	(6,756)	(3,860)
Discontinued Operations:			
Net cash used in operating activities	—	(71)	(728)
Net cash used in investing activities	—	—	(241)
Net cash provided by (used in) financing activities	—	71	(1,414)
Net cash used in discontinued operations	—	—	(2,383)
Effect of foreign exchange rate changes on cash and cash equivalents from continuing operations	(42)	(1)	54
Effect of foreign exchange rate changes on cash and cash equivalents from discontinued operations	—	—	(76)
Net (decrease) increase in cash, cash equivalents and restricted cash	(1,562)	(979)	1,412
Cash, cash equivalents and restricted cash, beginning of year	7,853	8,832	4,961
Cash, cash equivalents and restricted cash within assets related to discontinued operations, beginning of year	—	—	2,459
Cash, cash equivalents and restricted cash, end of year	6,291	7,853	8,832
Less: Restricted cash, included in Other assets	71	21	30
Cash and cash equivalents, end of year	\$ 6,220	\$ 7,832	\$ 8,802
<i>Supplemental Disclosure of Cash Flow Information⁽¹⁾:</i>			
Interest paid, net of amounts capitalized	\$ 1,263	\$ 1,339	\$ 1,628
Income taxes paid, net of refunds	2,400	1,124	1,716

(1) Amounts are inclusive of continuing operations and discontinued operations payments.

See accompanying Notes to Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(dollars in millions, except per share amounts; shares in thousands)

	2022	2021	2020
Equity at January 1	\$ 74,664	\$ 73,852	\$ 44,231
Common Stock			
Balance at January 1	37,483	36,930	23,019
Common stock plans activity	485	553	417
Common stock issued for Raytheon Company outstanding common stock and equity awards	—	—	10,897
Adjustment to Common stock for the Otis Distribution	—	—	2,598
Purchase of subsidiary shares from noncontrolling interest, net	(29)	—	(1)
Balance at December 31	37,939	37,483	36,930
Treasury Stock			
Balance at January 1	(12,727)	(10,407)	(32,626)
Common stock plans activity	—	—	2
Common stock repurchased	(2,803)	(2,331)	(43)
Common stock issued for Raytheon Company outstanding common stock and equity awards	—	—	22,269
Other	—	11	(9)
Balance at December 31	(15,530)	(12,727)	(10,407)
Retained Earnings			
Balance at January 1	50,265	49,423	61,594
Net income (loss)	5,197	3,864	(3,519)
Adjustment to retained earnings for the Carrier Distribution	—	—	(5,805)
Dividends on common stock	(3,128)	(2,957)	(2,732)
Dividends on ESOP common stock	(54)	(50)	(50)
Other	(11)	(15)	(65)
Balance at December 31	52,269	50,265	49,423
Unearned ESOP Shares			
Balance at January 1	(38)	(49)	(64)
Common Stock plans activity	10	11	15
Balance at December 31	(28)	(38)	(49)
Accumulated Other Comprehensive Loss			
Balance at January 1	(1,915)	(3,734)	(10,149)
Other comprehensive income (loss), net of tax	(103)	1,819	2,540
Separation of Carrier and Otis	—	—	3,875
Balance at December 31	(2,018)	(1,915)	(3,734)
Noncontrolling Interest			
Balance at January 1	1,596	1,689	2,457
Net income	111	248	224
Less: Redeemable noncontrolling interest net income (loss)	(8)	(8)	(4)
Dividends attributable to noncontrolling interest	(132)	(332)	(159)
Sale (purchase) of subsidiary shares from noncontrolling interest, net	(19)	—	66
Acquisition (disposition) of noncontrolling interest, net	(13)	(1)	1
Separation of Carrier and Otis	—	—	(865)
Capital contributions (distributions)	11	—	(31)
Balance at December 31	1,546	1,596	1,689
Equity at December 31	\$ 74,178	\$ 74,664	\$ 73,852
Supplemental share information			
Shares of common stock issued under employee plans, net	2,894	1,893	2,689
Shares of common stock repurchased	29,935	28,052	330
Shares of common stock issued for Raytheon Company outstanding common stock and equity awards	—	—	652,638
Dividends declared per share of common stock	\$ 2.160	\$ 2.005	\$ 2.160

See accompanying Notes to Consolidated Financial Statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: BASIS OF PRESENTATION AND SUMMARY OF ACCOUNTING PRINCIPLES

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Actual results could differ from those estimates.

Separation Transactions, Distributions and Raytheon Merger. On April 3, 2020, United Technologies Corporation (UTC) (since renamed Raytheon Technologies Corporation) completed the separation of its business into three independent, publicly traded companies – UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) (the Separation Transactions). UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020 (the Distributions). Immediately following the Separation Transactions and the Distributions, on April 3, 2020, UTC and Raytheon Company completed their all-stock merger of equals transaction (the Raytheon merger), pursuant to which Raytheon Company became a wholly owned subsidiary of UTC, and UTC was renamed “Raytheon Technologies Corporation.” The historical results of Carrier and Otis are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Unless otherwise indicated, amounts and activity throughout these Consolidated Financial Statements are presented on a continuing operations basis. Refer to “Note 3: Discontinued Operations” below for further details.

Unless the context otherwise requires, the terms “we,” “our,” “us,” “the Company,” “Raytheon Technologies,” and “RTC” mean Raytheon Technologies Corporation and its subsidiaries. UTC was determined to be the accounting acquirer in the Raytheon merger and, as a result, the financial statements of Raytheon Technologies for the year ended December 31, 2020 include Raytheon Company’s financial position and results of operations for the period subsequent to the completion of the Raytheon merger on April 3, 2020.

Russia Sanctions. In response to the Russian military’s invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate, including certain members of the Company’s management team and Board of Directors. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected, and could continue to adversely affect, the Company and/or our supply chain, business partners or customers. As a result of these sanctions on Russia and export controls, in the first quarter of 2022, we recorded pretax charges of \$290 million, \$210 million net of tax and the impact of noncontrolling interest, within our Collins Aerospace (Collins) and Pratt & Whitney businesses primarily related to increased estimates for credit losses on both our accounts receivables and contract assets, inventory reserves and purchase order obligations, impairment of customer financing assets for products under lease, impairment of contract fulfillment costs that are no longer recoverable, and a loss on the exit of our investment in a Russia-based joint venture. Additionally, we reversed approximately \$1.3 billion of remaining performance obligations (RPO) in the quarter ended March 31, 2022 related to our sales contracts in Russia at Pratt & Whitney and Collins. We continue to monitor future developments, including additional sanctions and other measures, that could adversely affect the Company and/or our supply chain, business partners or customers.

Coronavirus Disease 2019 (COVID-19) Pandemic. The COVID-19 pandemic continues to negatively affect the global economy, our business and operations, the labor market, supply chains, inflation, and the industries in which we operate. As a result of COVID-19, commercial air travel demand experienced an unprecedented downturn as governments, businesses and individuals reacted to the pandemic in ways such as lockdowns, quarantines, border closings and other travel restrictions and requirements, the adoption of remote working and decreased leisure travel. The unprecedented decrease in air travel adversely affected our airline and airframer customers and their demand for our products and services of our Collins and Pratt & Whitney businesses. In addition, the border closings, lockdowns and labor shortages resulting from COVID-19 negatively impacted global supply and distribution capabilities. Decreases in the availability of supplies, increases in the cost of supplies and delivery issues have caused shortages and delays for the procurement of raw materials, components and other supplies required for our performance, although we continue to see signs of ongoing recovery in commercial air travel. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, uncertainty continues with respect to when commercial air traffic capacity will fully return to and/or exceed pre-COVID-19 levels. The pace of the commercial aerospace recovery is tied to general economic conditions and may be impacted by inflation, an economic downturn, or government budget deficits, among other factors, and may also be impacted by a resurgence of the pandemic and corresponding travel restrictions and protocols. Our expectations regarding the COVID-19 pandemic and

ongoing recovery and their potential financial impact are based on available information and assumptions that we believe are reasonable at this time; however, the actual financial impact is highly uncertain and subject to a wide range of factors and future developments.

In 2020, we recorded write-downs of assets and significant unfavorable Estimate at Completion (EAC) adjustments in our Collins and Pratt & Whitney businesses primarily related to:

- goodwill impairment charges of \$3.2 billion related to two of our Collins reporting units. Refer to “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” for additional information;
- increased estimated credit losses on both our receivables and contract assets of \$387 million;
- an unfavorable EAC adjustment on a Pratt & Whitney commercial engine aftermarket contract due to lower estimated revenues driven by a change in the estimated maintenance coverage period of \$334 million;
- contract asset and inventory impairments at Collins due to the impact of lower estimated future customer activity resulting from the expected acceleration of fleet retirements of a certain commercial aircraft type of \$146 million;
- an unfavorable EAC adjustment of \$129 million related to lower estimated revenues due to the restructuring of a customer contract at Pratt & Whitney;
- an \$89 million impairment of commercial aircraft program assets at Pratt & Whitney;
- the impairment of a Collins trade name of \$57 million;
- net unfavorable EAC adjustments on commercial aftermarket contracts at Pratt & Whitney based on a change in estimated future customer activity of \$75 million;
- an unfavorable EAC adjustment at Pratt & Whitney related to a shift in overhead costs to military contracts of \$44 million; and
- reserves related to a commercial financing arrangement at Pratt & Whitney of \$43 million.

Summary of Accounting Principles. The following represents the significant accounting principles of Raytheon Technologies Corporation.

Consolidation and Classification. The Consolidated Financial Statements include the accounts of Raytheon Technologies Corporation, and all wholly owned, majority-owned and otherwise controlled domestic and foreign subsidiaries. All intercompany transactions have been eliminated. For our consolidated non-wholly owned subsidiaries, a noncontrolling interest is recognized to reflect the portion of equity that is not attributable to us. For classification of certain current assets and liabilities, the duration of our contracts or programs is utilized to define our operating cycle, which is generally longer than one year. Included within our Current assets and liabilities are Contract assets and liabilities related to our aftermarket and development arrangements, which can generally span up to fifteen years.

We reclassified certain immaterial prior period amounts within the Consolidated Statement of Cash Flows to conform to our current period presentation.

Use of Estimates. Our Consolidated Financial Statements are based on the application of U.S. Generally Accepted Accounting Principles (GAAP), which require us to make estimates and assumptions about future events that affect the amounts reported in our Consolidated Financial Statements and the accompanying notes. Actual results could differ from those estimates, and any such differences may be material to our Consolidated Financial Statements. Estimates and assumptions are reviewed periodically and the effects of changes, if any, are reflected in our Consolidated Financial Statements in the period they are determined.

Cash and Cash Equivalents. Cash and cash equivalents includes cash on hand, demand deposits and short-term cash investments that are highly liquid in nature and have original maturities of three months or less. The estimated fair value of Cash and cash equivalents approximates the carrying value due to their short maturities.

Accounts Receivable. Accounts receivable are stated at the net amount expected to be collected. We are exposed to credit losses primarily on our accounts receivable and contract assets related to our sales of products and services to commercial customers. The allowance for expected credit losses is established to provide for the expected lifetime credit losses by evaluating factors such as customer creditworthiness, historical payment and loss experiences, current economic conditions, including geographic and political risk, and the age and status of outstanding receivables. In certain circumstances, we may be able to develop reasonable and supportable forecasts over the contractual term of the financial asset. For periods beyond which we are able to make or obtain reasonable and supportable forecasts, we revert to historical loss experience and information.

We determine credit ratings for each customer in our portfolio based upon public information and information obtained directly from our customers. We conduct a review of customer credit ratings, published historical credit default rates for different rating categories, and multiple third-party aircraft value publications as a basis to validate the reasonableness of the allowance for expected credit losses on a quarterly basis, or when events and circumstances warrant. A credit limit is established for each

customer based on the outcome of this review and consideration of the other factors discussed above. In certain cases, we may require collateral or prepayment to mitigate credit risk.

Expected credit losses are written off in the period in which the financial asset is no longer collectible.

Unbilled receivables represent revenues that are not currently billable to the customer under the terms of the contract and include unbilled amounts under commercial contracts where payment is solely subject to the passage of time. These items are expected to be billed and collected in the normal course of business. Accounts receivable as of December 31, 2022 and 2021 includes unbilled receivables of \$298 million and \$342 million, respectively, which primarily includes unbilled receivables with commercial aerospace customers. Other unbilled receivables where payment is subject to factors beyond just the passage of time are included in Contract assets in the Consolidated Balance Sheet.

Contract Assets and Liabilities. Contract assets and liabilities represent the difference in the timing of revenue recognition from receipt of cash from our customers. Contract assets reflect revenue recognized and performance obligations satisfied or partially satisfied in advance of customer billing.

Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. We receive payments from customers based on the terms established in our contracts.

Contract assets and Contract liabilities are generally classified as current as our operating cycle is generally longer than one year. See “Note 6: Contract Assets and Liabilities” for further discussion of Contract assets and liabilities.

As described in more detail above in “Accounts Receivable,” we are exposed to credit losses on our contract assets related to our sales of products and services to commercial customers and regularly assess our allowance for expected credit losses as it relates to our Contract assets.

Inventory. Inventory is stated at the lower of cost or estimated realizable value and is primarily based on first-in, first-out (FIFO) or average cost methods.

Valuation reserves for excess, obsolete, and slow-moving inventory are estimated by comparing the inventory levels of individual parts to both future sales forecasts or production requirements and historical usage rates in order to identify inventory where the resale value or replacement value is less than inventoriable cost. Other factors that management considers in determining the adequacy of these reserves include whether individual inventory parts meet current specifications and can be substituted for a part currently being sold or used as a service part, overall market conditions, and other inventory management initiatives. Manufacturing costs are allocated to current production contracts. In our commercial aerospace businesses, excess costs beyond standard manufacturing costs are expensed when they meet certain thresholds.

Equity Investments. Investments in entities we do not control are included in Other assets on the Consolidated Balance Sheet. For investments where we have significant influence, we apply the equity method of accounting, and as such, our share of the net earnings or losses of the investee is recorded. For investments where we do not have significant influence, we record them at cost under the measurement alternative and record adjustments for observable price changes. Equity investment income and losses are included in Other income, net on the Consolidated Statement of Operations since the activities of the investee are closely aligned with our operations. We evaluate our equity investments whenever events or changes in circumstance indicate that the carrying amounts of such investments may be impaired. If a decline in the value of an equity method investment is determined to be other than temporary, a loss is recorded in earnings in the current period. Our sales to and purchases from unconsolidated entities accounted for under the equity method, which are considered related parties, are not material.

Customer Financing Assets. Customer financing assets (CFA) relate to our commercial aerospace businesses in which we provide financing to airline customers. Our financing predominantly relates to products under lease, and to a lesser extent, notes and lease receivables. In certain limited circumstances, we pay deposits on behalf of our airline customers to secure production slots with the airframers, and such pre-delivery payments are included in Accounts receivable, net, if current, and Customer financing assets, if non-current, in our Consolidated Balance Sheet. Any unfunded pre-delivery payments are included within our commercial aerospace financing commitments as further discussed in “Note 18: Commitments and Contingencies.” Interest income from notes and financing leases and rental income from operating lease assets is generally included in Other income, net in the Consolidated Statement of Operations, while gains or losses on sales of operating lease assets are included in Products sales and Cost of sales. The current portion of these financing arrangements are aggregated in Accounts receivable, net and the non-current portion of these financing arrangements are aggregated in CFA in the Consolidated Balance Sheet. The increases and decreases in CFA from funding, receipts and certain other activity, are generally reflected as Investing Activities in the Consolidated Statement of Cash Flows. Leased assets are valued at cost and reviewed for impairment when circumstances indicate that the related carrying amounts may not be recoverable. Notes and lease receivables are valued at the net amount expected to be collected. For notes and lease receivables, we determine a specific reserve for exposure based on the difference between the carrying value of the receivable and the estimated fair value of the related collateral in connection with

the evaluation of credit risk and collectability. As of December 31, 2022 and 2021, the reserves related to CFA were not material. At December 31, 2022 and 2021, we did not have any significant balances that are considered to be delinquent, on non-accrual status, past due 90 days or more, or considered to be impaired.

Fixed Assets, Net. Fixed assets, net, are stated at cost less accumulated depreciation. Major improvements are capitalized while expenditures for maintenance, repairs and minor improvements are expensed. For asset sales or retirements, the assets and related accumulated depreciation and amortization are eliminated from the accounts. Gains and losses on sales of our Fixed assets, net, are generally recorded in operating income.

Business Combinations. Once a business is acquired, the fair value of the identifiable assets acquired and liabilities assumed is determined with the excess cost recorded to goodwill. As required, a preliminary fair value is determined once a business is acquired, with the final determination of the fair value being completed no later than one year from the date of acquisition.

In connection with the acquisitions of Rockwell Collins in 2018 and Goodrich in 2012, and to a lesser extent the acquisition of Raytheon Company in 2020, we recorded assumed liabilities related to customer contractual obligations on certain contracts with economic returns that were lower than what could be realized in market transactions as of the acquisition date. We measured these assumed liabilities based on the estimated cash flows of the programs plus a reasonable contracting profit margin required to transfer the contracts to market participants. These liabilities are being amortized in accordance with the underlying pattern of obligations, as reflected by the expenses incurred on the contracts. The balance of the contractual obligations was \$818 million and \$929 million at December 31, 2022 and 2021, respectively. Total consumption of the contractual obligations for the years ended December 31, 2022, 2021 and 2020 was \$111 million, \$314 million and \$295 million, respectively, with future consumption expected to be as follows: \$104 million in 2023, \$80 million in 2024, \$68 million in 2025, \$67 million in 2026, \$65 million in 2027 and \$434 million thereafter.

Goodwill and Intangible Assets. Goodwill represents costs in excess of fair values assigned to the underlying net assets of acquired businesses. Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are subject to impairment testing annually, or more frequently if events or changes in circumstances indicate the asset might be impaired. The goodwill impairment test compares carrying values of the reporting units to their estimated fair values. If the carrying value exceeds the fair value then the carrying value is reduced to fair value. In developing our estimates for the fair value of our reporting units and indefinite-lived intangible assets, significant judgment is required in the determination of the appropriateness of using a qualitative assessment or quantitative assessment. For the quantitative assessments that are performed, fair value is primarily based on market-based valuation methods, income-based methods using a discounted cash flow model, relief from royalty methods, or a combination of such. These assessments utilize significant assumptions including sales growth rates, projected operating profit, terminal growth rates, discount rates, royalty rates, and comparable multiples from publicly traded companies in our industry. Such assumptions are subject to variability from year to year and are directly impacted by, among other things, global market conditions. Finite-lived intangible assets are tested for impairment when events occur that indicate that the net book value will not be recovered over future cash flows.

Intangible assets consist of patents, trademarks/tradenames, customer relationships, exclusivity assets, developed technology and other intangible assets including collaboration assets. Acquired intangible assets are recognized at fair value in purchase accounting. Finite-lived intangible assets are amortized to Cost of sales and Selling, general and administrative expenses over the applicable useful lives. Exclusivity assets are commercial aerospace payments made to secure certain contractual rights to provide product on new aircraft platforms. We classify amortization of such payments as a reduction of sales. Such payments are capitalized when there are distinct rights obtained and there are sufficient incremental cash flows to support the recoverability of the assets established. Otherwise, the applicable portion of the payments are expensed. In addition, in connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in International Aero Engines AG (IAE), additional payments are due to Rolls-Royce contingent upon each hour flown through June 2027 by the V2500-powered aircraft in service as of the acquisition date. These flight hour payments are being capitalized as collaboration assets and amortized to cost of sales.

Useful lives of finite-lived intangible assets are estimated based upon the nature of the intangible asset and the industry in which the intangible asset is used. These intangible assets are amortized based on the pattern in which the economic benefits of the intangible assets are consumed, as represented by the underlying cash flows, which may result in an amortization method other than straight-line. For both our commercial aerospace collaboration assets and exclusivity arrangements, the pattern of economic benefit generally results in no amortization during the development period with amortization beginning as programs enter full rate production and aftermarket cycles. If a pattern of economic benefit cannot be reliably determined or if straight-

line amortization approximates the pattern of economic benefit, a straight-line amortization method may be used. The range of estimated useful lives is as follows:

	Years
Collaboration assets	30
Customer relationships and related programs	3 to 30
Developed technology	3 to 25
Patents and trademarks	5 to 30
Exclusivity assets	5 to 25

Leases. As a lessee, we record a right-of-use asset and a lease liability on the Consolidated Balance Sheet for leases with terms longer than 12 months. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statement of Operations.

We enter into lease agreements for the use of real estate space, vehicles, information technology equipment, and certain other equipment under both operating and finance leases. We determine if an arrangement contains a lease at inception. Operating leases are included in Operating lease right-of-use assets and Operating lease liabilities, non-current on our Consolidated Balance Sheet. The current portion of our operating lease liabilities is included in Accrued liabilities on our Consolidated Balance Sheet. Finance leases are not considered significant to our Consolidated Balance Sheet or Consolidated Statement of Operations.

Right-of-use assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Lease right-of-use assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments, and use the implicit rate when readily determinable. We determine our incremental borrowing rate through market sources including relevant industry rates. Our lease right-of-use assets also include any initial direct costs and lease prepayments made at or before the commencement date and are reduced for any lease incentives received at or before the commencement date. Certain of our leases include variable payments, which may vary based upon changes in facts or circumstances after the start of the lease. We exclude variable payments from lease right-of-use assets and lease liabilities, to the extent such payments are not considered fixed, and instead, expense variable payments as incurred. Variable lease expense and lease expense for short duration contracts are not a material component of lease expense. Some of our leases include the option to extend or terminate the lease. We include these options in the recognition of our right-of-use assets and lease liabilities when it is reasonably certain that we will exercise the option. Lease expense is generally recognized on a straight-line basis over the lease term.

In limited instances we act as a lessor, primarily for commercial aerospace engines, the majority of which are classified as operating leases. These leases are not significant to our Consolidated Balance Sheet or Consolidated Statement of Operations.

Other Long-Lived Assets. We evaluate the potential impairment of other long-lived assets whenever events or changes in circumstances indicate that the related carrying amounts may not be recoverable. If the carrying value of other long-lived assets held and used exceeds the sum of the undiscounted expected future cash flows, the carrying value is written down to fair value. In order for long-lived assets to be considered held for disposal, we must have committed to a plan to dispose of the assets. Once deemed held for disposal, the assets are stated at the lower of the carrying amount or fair value.

Income Taxes. Future income taxes represent the tax effects of transactions which are reported in different periods for tax and financial reporting purposes. These amounts consist of the tax effects of temporary differences between the tax and financial reporting balance sheets and tax carryforwards. Future income tax benefits and payables within the same tax paying component of a particular jurisdiction are offset for presentation in the Consolidated Balance Sheet. In the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. We assess our income tax positions and record tax benefits for all years subject to examination based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, we have recorded the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit has been recognized in the financial statements. Where applicable, associated interest expense has also been recognized. We recognize accrued interest related to unrecognized tax benefits in interest expense. Penalties, if incurred, would be recognized as a component of income tax expense. State income tax amounts are generally included in income tax expense; however state income tax payments related to our Raytheon Intelligence & Space (RIS) and Raytheon Missiles & Defense (RMD) segments are generally recoverable through the pricing of products and

services to the U.S. government, and, accordingly, we have recorded the future recovery of these costs from the U.S. government within Other assets, current in the Consolidated Balance Sheet. Accordingly, these state income taxes are generally allocated to contracts and then classified as Selling, general and administrative expenses when paid (recovered) or otherwise agreed as allocable with the U.S. government.

We have elected to account for tax on Global Intangible Low-Taxed Income (GILTI) as a period cost, as incurred.

Revenue Recognition. The vast majority of our revenues are from long-term contracts associated with the design, development, manufacture or modification of complex aerospace or defense equipment or related services. Collins and Pratt & Whitney primarily serve commercial and government customers in both the original equipment manufacturer (OEM) and aftermarket parts and services markets of the aerospace industry, while RIS and RMD primarily provide products and services to government customers in the defense industry.

We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. For certain contracts that meet the foregoing requirements, primarily contracts that are directly with a foreign government, we are required to obtain certain regulatory approvals. In these cases, we recognize revenue based on the likelihood of obtaining regulatory approvals based upon all known facts and circumstances. A performance obligation is a promise in a contract with a customer to transfer a distinct good or service to the customer. Some of our contracts with customers contain a single performance obligation, while others contain multiple performance obligations most commonly when a contract contains multiple distinct units (such as engines or certain aerospace components) or spans multiple phases of the product life-cycle such as production, maintenance and support. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as the performance obligation is satisfied. When there are multiple performance obligations within a contract, we allocate the transaction price to each performance obligation based on its standalone selling price when available. If standalone selling price is not available, we estimate the standalone selling price of each performance obligation, which is generally based on an expected cost plus a margin approach.

We consider the contractual consideration payable by the customer and assess variable consideration that may affect the total transaction price, including contractual discounts, contract incentive payments, estimates of award fees, flight hours, aircraft landings or other customer usage activities on long term maintenance contracts, and other sources of variable consideration, when determining the transaction price of each contract. When reasonably able to estimate, we include variable consideration in the transaction price at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. These estimates are based on historical experience, anticipated performance and our best judgment at the time. We also consider whether our contracts contain a significant financing component, which they generally do not.

Timing of the satisfaction of performance obligations varies across our businesses due to our diverse product and service mix, customer base, and contractual terms.

Performance obligations are satisfied as of a point in time for certain aerospace components, engines, and spare parts. Revenue is recognized when control of the product transfers to the customer, generally upon product shipment. Since billing also typically occurs upon product shipment, we generally do not have Contract assets or Contract liabilities balances related to point in time sales.

Performance obligations are satisfied over-time if the customer receives the benefits as we perform work, if the customer controls the asset as it is being produced (continuous transfer of control), or if the product being produced for the customer has no alternative use and we have a contractual right to payment for performance to date. We recognize revenue on an over-time basis for substantially all defense contracts and certain long-term aerospace OEM and aftermarket contracts.

Substantially all of our defense business revenue, which primarily relates to our RIS and RMD segments, and to a lesser extent Pratt & Whitney and Collins, is recognized over time because of the continuous transfer of control to our customers. For performance obligations satisfied over time, revenue is recognized on a percentage of completion basis generally using costs incurred to date relative to total estimated costs at completion to measure progress. Incurred costs represent work performed, which correspond with and best depict transfer of control to the customer. Contract costs can include labor, materials, subcontractors' costs, or other direct costs and indirect costs. Our contracts with the U.S. government are typically subject to the Federal Acquisition Regulation (FAR) and are priced based on estimated or actual costs of producing goods or providing services. The FAR provides guidance on the types of costs that are allowable in establishing prices for goods and services provided under U.S. government contracts. The pricing for non-U.S. government contracts is based on the specific negotiations with each customer. Under the typical payment terms of our U.S. government fixed-price contracts, the customer pays us either performance-based payments (PBPs) or progress payments. PBPs are interim payments equal to a negotiated percentage of the

contract price based on quantifiable measures of performance or on the achievement of specified events or milestones. Progress payments are interim payments up to 80-90% of costs incurred as the work progresses. Because the customer retains a portion of the contract price until completion of the contract, our U.S. government fixed-price contracts generally result in revenue recognized in excess of billings which we present as Contract assets on the Consolidated Balance Sheet. For our U.S. government cost-type contracts, the customer generally pays us for our costs incurred within a short period of time. For non-U.S. government contracts, we typically receive interim payments as work progresses, although for some contracts, we may be entitled to receive an advance payment. Such advances are not considered a significant financing component because they are used to meet working capital demands that can be higher in the early stages of a contract and to protect us from the other party failing to adequately complete some or all of its obligations under the contract. We recognize a liability for advance payments in excess of revenue recognized and present it as Contract liabilities on the Consolidated Balance Sheet.

For certain of our long-term aftermarket contracts, revenue is recognized over the contract period. We generally account for such contracts as a series of daily performance obligations to stand ready to provide spare parts, product maintenance and aftermarket services. These arrangements include the sale of spare parts with integral services to our customers, and are generally classified as Services sales, with the corresponding costs classified in Cost of sales - services, within the Consolidated Statement of Operations. Revenue is primarily recognized on a percentage of completion basis using costs incurred to date relative to total estimated costs at completion to measure progress, as sufficient historical evidence indicates that the cost of performing services under the contract is incurred on an other-than-straight-line basis. For some of our long-term aftermarket contracts, we receive payment prior to delivery of products and services, resulting in a contract liability balance, while for others, we deliver products or services in advance of payment, resulting in a contract asset balance.

Contracts are often modified to account for changes in contract specifications or requirements. We consider contract modifications to exist when the modification either creates new or changes existing enforceable rights and obligations. Contract modifications for goods or services that are not distinct are accounted for as part of the existing contract either on a cumulative catch-up basis or prospective basis depending on the nature of the modification.

Loss provisions on contracts are recognized to the extent that estimated contract costs exceed the estimated consideration from the products or services contemplated under the contractual arrangement. For new commitments, we generally record loss provisions at contract signing except for certain contracts under which losses are recorded upon receipt of the purchase order that obligates us to perform. For existing commitments, anticipated losses on contractual arrangements are recognized in the period in which losses become evident. In estimating losses, products contemplated under contractual arrangements include firm quantities of product sold under contract and, in the commercial engine and wheels and brakes businesses, future highly probable sales of replacement parts required by regulation that are expected to be sold subsequently for incorporation into the original equipment. In our commercial engine and wheels and brakes businesses, when the OEM product is sold for a loss, but the combined OEM and aftermarket arrangement for each individual sales campaign is profitable, we record OEM product losses at the time of product delivery.

We review our Estimates at Completion (EACs) at least annually or when a change in circumstances warrants a modification to a previous estimate. For significant contracts, we review our EACs more frequently. Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment by management on a contract by contract basis. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities relate to management's judgment about the ability and cost to achieve the schedule, consideration of customer-directed delays or reductions in scheduled deliveries, technical requirements, customer activity levels, such as flight hours or aircraft landings, and related variable consideration. Management must make assumptions and estimates regarding contract revenue and costs, including estimates of labor productivity and availability, the complexity and scope of the work to be performed, the availability and cost of materials, including any impact from rising costs or inflation, the length of time to complete the performance obligation, execution by our subcontractors, the availability and timing of funding from our customer, overhead cost rates, and current and past maintenance cost and frequency driven by estimated aircraft and engine utilization and estimated useful lives of components, among others. In particular, fixed-price development programs involve significant management judgment, as development contracts by nature have elements that have not been done before and thus, are highly subject to future unexpected cost changes. Cost estimates may also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements, required under certain contracts. These obligations may or may not be distinct depending on their nature. If cash is paid to a customer to satisfy our offset obligations it is recorded as a reduction in the transaction price.

Changes in estimates of net sales, cost of sales and the related impact to operating profit on contracts recognized over time are recognized on a cumulative catch-up basis, which recognizes the cumulative effect of the profit changes on current and prior periods based on a performance obligation's percentage of completion in the current period. A significant change in one or

more of these estimates could affect the profitability of one or more of our performance obligations. Our EAC adjustments also include the establishment of and changes to loss provisions for our contracts accounted for on a percentage of completion basis.

Net EAC adjustments had the following impact on our operating results:

<i>(dollars in millions, except per share amounts)</i>	2022	2021	2020
Total net sales	\$ 152	\$ 296	\$ (407)
Operating profit (loss)	(37)	110	(643)
Income (loss) from continuing operations attributable to common shareowners ⁽¹⁾	(29)	87	(508)
Diluted earnings (loss) per share from continuing operations attributable to common shareowners ⁽¹⁾	\$ (0.02)	\$ 0.06	\$ (0.37)

(1) Amounts reflect a U.S. statutory tax rate of 21%, which approximates our tax rate on our EAC adjustments.

For additional discussion on significant unfavorable EAC adjustments in 2020, see the COVID-19 Pandemic discussion above.

As a result of the Raytheon merger, Raytheon Company's contracts accounted for on a percentage of completion basis were reset to zero percent complete as of the merger date, because only the unperformed portion of the contract at the merger date represented the obligation of the Company. This had the impact of reducing EAC adjustments for these segments in the short term period following the merger, most notably in 2020. For additional information related to the Raytheon merger, see "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets."

In our Collins and Pratt & Whitney businesses, we may offer customers incentives to purchase our products, which may result in payments made to those customers, which are treated as a reduction in sales.

In our Collins and Pratt & Whitney businesses, we incur contract fulfillment costs for engineering and development of aerospace products directly related to existing or anticipated contracts with customers. Such costs generate or enhance our ability to satisfy our performance obligations under these contracts. We capitalize these costs as contract fulfillment costs to the extent the costs are recoverable from the associated contract margin and customer funding, and subsequently amortize the costs as the related performance obligations are satisfied. In instances where intellectual property does not transfer to the customer, we generally defer the customer funding of product engineering and development and recognize revenue when the related performance obligations are satisfied. Capitalized contract fulfillment costs were \$2.3 billion and \$2.0 billion as of December 31, 2022 and 2021, respectively, and are classified in Other assets, current in our Consolidated Balance Sheet and are included in Other current assets in our Consolidated Statement of Cash Flows. We regularly assess capitalized contract fulfillment costs for impairment and recognized \$111 million of impairment for contract fulfillment costs in 2020 in conjunction with the related impacts of the COVID-19 pandemic. Costs to obtain contracts are not material.

In view of the risks and costs associated with developing new engines and the large up-front investments required that often require returns generated over the full estimated life of the engine, Pratt & Whitney has entered into certain collaboration arrangements in which sales, costs and risks are shared. Sales generated from engine programs, spare parts sales, and aftermarket business under these collaboration arrangements are recorded consistent with our revenue recognition policies in our Consolidated Financial Statements. Amounts attributable to our collaborators for their share of sales are recorded as cost of sales in our Consolidated Financial Statements based upon the terms and nature of the arrangement. Costs associated with engine programs under collaborative arrangements are expensed as incurred. Under these arrangements, collaborators contribute their program share of engine parts, incur their own production costs and make certain payments for shared or joint program costs. The reimbursement from collaborators of their share of program costs is recorded as a reduction of the related expense item at that time. As of December 31, 2022, the collaborators' interests in all commercial engine programs ranged from 13% to 49%, inclusive of a portion of Pratt & Whitney's interests held by other participants. Pratt & Whitney is the principal participant in all existing collaborative arrangements, with the exception of the Engine Alliance (EA), a joint venture with GE Aviation, which provides aftermarket support, spare parts, and service for the GP7000 engine for the Airbus A380 aircraft. There are no individually significant collaborative arrangements, and none of the collaborators individually have more than a

25% share in an individual program. The following table illustrates the Consolidated Statement of Operations classification and amounts attributable to transactions arising from the collaborative arrangements between participants for each period presented.

<i>(dollars in millions)</i>	2022	2021	2020
Collaborator share of sales:			
Cost of sales - products	\$ 2,058	\$ 1,534	\$ 1,183
Cost of sales - services	1,808	1,428	1,374
Collaborator share of program costs (reimbursement of expenses incurred):			
Cost of sales - products	(154)	(160)	(147)
Research and development	(182)	(135)	(177)
Selling, general and administrative	(105)	(85)	(99)

Remaining Performance Obligations (RPO). RPO represents the aggregate amount of total contract transaction price that is unsatisfied or partially unsatisfied. Total RPO was \$175 billion as of December 31, 2022. In the quarter ended March 31, 2022, we reversed approximately \$1.3 billion of RPO related to our sales contracts in Russia due to global sanctions on and export controls with respect to Russia, as further discussed above. Of the total RPO as of December 31, 2022, we expect approximately 25% will be recognized as sales over the next 12 months. Approximately 45% of our RPO relates to long-term commercial aerospace maintenance contracts at Pratt & Whitney, which are generally expected to be realized over a span of up to 15 years.

Research and Development. Company-sponsored research and development costs, including those costs related to the Company's portion in connection with cost-sharing arrangements, are charged to expense as incurred and recovery on these cost-sharing arrangements is recorded as a reduction to research and development expense as earned. Customer-sponsored research and development projects performed under contracts with customers are accounted for as contract costs and reported as cost of sales on the related revenue generating contracts.

Foreign Exchange. We conduct business in many different currencies and, accordingly, are subject to the inherent risks associated with foreign exchange rate movements. The financial position and results of operations of many of our foreign subsidiaries are often measured using the local currency as the functional currency. Foreign currency denominated assets and liabilities are translated into U.S. Dollars at the exchange rates existing at the respective balance sheet dates, and income and expense items are translated at the average exchange rates during the respective periods. The aggregate effects of translating the balance sheets of these subsidiaries are deferred as a separate component of Accumulated other comprehensive loss (AOCL) in Shareowners' equity on our Consolidated Balance Sheet. Foreign exchange transaction gains and losses are recorded in Other income, net on our Consolidated Statement of Operations.

Derivatives and Hedging Activity. We use derivative instruments, including swaps, forward contracts and options, to help manage certain foreign currency, and from time to time to help manage interest rate and commodity price exposures. Derivative instruments are viewed as risk management tools by us and are not used for trading or speculative purposes. By their nature, all financial instruments involve market and credit risks. We enter into derivative and other financial instruments with major investment grade financial institutions and have policies to monitor the credit risk of those counterparties. We limit counterparty exposure and concentration of risk by diversifying counterparties. While there can be no assurance, we do not anticipate any material non-performance by any of these counterparties. We enter into transactions that are subject to enforceable master netting arrangements or similar agreements with various counterparties. However, we have not elected to offset multiple contracts with a single counterparty and, as a result, the fair value of the derivative instruments in a loss position is not offset against the fair value of derivative instruments in a gain position.

Derivatives used for hedging purposes may be designated and effective as a hedge of the identified risk exposure at the inception of the contract. All derivative instruments are recorded on the balance sheet at fair value. Derivatives used to hedge foreign currency denominated balance sheet items are reported directly in earnings along with offsetting transaction gains and losses on the items being hedged. Derivatives used to hedge forecasted cash flows associated with foreign currency commitments or forecasted commodity purchases may be accounted for as cash flow hedges, as deemed appropriate. Gains and losses on derivatives designated as cash flow hedges are recorded in other comprehensive income (loss) and reclassified to earnings as a component of products sales or expenses, as applicable, when the hedged transaction occurs. Cash payments or receipts on derivatives designated as cash flow hedges are recorded in Other operating activities, net within the Consolidated Statement of Cash Flows. To the extent that a previously designated hedging transaction is no longer an effective hedge, any ineffectiveness measured in the hedging relationship is recorded currently in earnings in the period it occurs.

To the extent the hedge accounting criteria are not met, the foreign currency forward contracts are utilized as economic hedges and changes in the fair value of these contracts are recorded currently in earnings in the period in which they occur. Cash

receipts or payments related to the settlement of derivatives not designated as hedging instruments are recorded as investing cash flows within the Consolidated Statement of Cash Flows. Additional information pertaining to foreign currency forward contracts and net investment hedging is included in “Note 14: Financial Instruments.”

Environmental. Environmental investigatory, remediation, operating and maintenance costs are accrued when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of currently available facts with respect to each individual site, including existing technology, current laws and regulations and prior remediation experience. Where no amount within a range of estimates is more likely, the minimum is accrued. For sites with multiple responsible parties, we consider our likely proportionate share of the anticipated remediation costs and the ability of the other parties to fulfill their obligations in establishing a provision for those costs. Liabilities with fixed or reliably determinable future cash payments are discounted. A portion of these costs is eligible for future recovery through the pricing of our products and services to the U.S. government. We regularly assess the probability of recovery of these costs, which requires us to make assumptions about the extent of cost recovery under our contracts and the amount of future contract activity with the U.S. government. We consider such recovery probable based on government contracting regulations and our history of receiving reimbursement for such costs, and accordingly have recorded the future recovery of these costs from the U.S. government within Other assets, current in the Consolidated Balance Sheet. Accrued environmental liabilities are not reduced by potential insurance reimbursements or potential recoveries from pursuing other parties. We also lease certain government-owned properties and generally are not liable for remediation of preexisting environmental contamination at these sites. As a result, we generally do not provide for these costs in our Consolidated Financial Statements. See “Note 18: Commitments and Contingencies” for additional details on the environmental remediation activities.

Pension and Postretirement Obligations. U.S. GAAP requires balance sheet recognition of the overfunded or underfunded status of pension and postretirement benefit (PRB) plans. Funded status is measured at least annually in the fourth quarter and represents the difference between the plans’ projected benefit obligation (PBO) and the fair market value of the plans’ assets.

Changes to our pension and PRB plans’ funded status can result from company actions, such as contributions or changes in plan provisions, or by gains and losses. Gains and losses are primarily a result of changes in assumptions and actual experience that differs from these assumptions. Major assumptions include the discount rate and expected return on plan assets (EROA). These gains or losses are recorded in other comprehensive income, net of tax effects, until they are amortized as a component of net periodic benefit (income) expense.

A calculated “market-related value” of our plan assets is used to develop the amount of deferred asset gains or losses to be amortized. The market-related value of assets is equal to the fair value of assets adjusted to reflect the recognition, and subsequent amortization, of the difference between actual and expected asset returns over a five-year period. The market-related value of assets is used to calculate the expected return on assets included in the net periodic benefit (income) expense.

The Company has elected to use the “corridor” approach in the amortization of gains and losses, which limits the expense recognition to the net outstanding gains and losses in excess of the greater of 10% of the PBO or 10% of the market-related value of assets. Gains and losses exceeding the corridor are amortized in net periodic benefit (income) expense over either the projected average remaining employee service period or the projected average remaining lifetime of inactive participants depending on the plan.

Net periodic benefit (income) expense is classified between operating and non-operating, whereby only the service cost component is included in operating profit and the remaining components are included in Non-service pension (income) expense.

Product Performance Obligations. We extend performance and operating cost guarantees beyond our normal service and warranty policies for extended periods on some of our products, particularly commercial aircraft engines. Liability under such guarantees is based upon future product performance and durability. We accrue for such costs that are probable and can be reasonably estimated. In addition, we incur discretionary costs to service our products in connection with product performance issues. The costs associated with these product performance and operating cost guarantees require estimates over the full terms of the agreements, and require management to consider factors such as the extent of future maintenance requirements, interval between flight and repair time and the future cost of material and labor to perform the services. These cost estimates are largely based upon historical experience. See “Note 17: Guarantees” for further discussion.

Government Grants. We may receive grants from various federal, state, local, and foreign governments in exchange for compliance with certain conditions relating to our activities in a specific jurisdiction. Grants are often structured to encourage investment, job creation, job retention, employee training, and other related activities. We recognize government grants when there is reasonable assurance that the Company will comply with the conditions of the grant and the grant is received or is probable of receipt and the amount is determinable. Government grants are recorded as a reduction to the related expense or

asset to which the grant relates or recorded in Other income, net in our Consolidated Statement of Operations. Government grant transactions are not material to our financial position, results of operations or liquidity.

Accounting Pronouncements. In September 2022, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-04, Liabilities – Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations, which requires that a buyer in a supplier finance program disclose the key terms of supplier finance programs, the amount of obligations outstanding at the end of the reporting period that the entity has confirmed as valid to the finance provider, where these obligations are recorded in the balance sheet, and a roll forward of the obligations. The new standard is effective for fiscal years beginning after December 15, 2022, on a retrospective basis, including interim periods within those fiscal years. We are currently evaluating the impact of adopting this new pronouncement.

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance, which requires business entities to make specific annual disclosures about transactions with a government. The new standard is effective for fiscal years beginning after December 15, 2021. The adoption of this standard did not have an impact on our disclosures.

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which requires an acquirer to apply the guidance in ASC 606, Revenue from Contracts with Customers, to recognize and measure contract assets and contract liabilities in a business combination, rather than using fair value. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022, with early adoption permitted. Effective January 1, 2022, we elected to early adopt the requirements of the new standard on a prospective basis. The adoption of the standard did not have an impact on our financial position, results of operations or liquidity.

Other new pronouncements issued but not effective until after December 31, 2022 are not expected to have a material impact on our results of operations, financial condition or liquidity.

NOTE 2: BUSINESS ACQUISITIONS, DISPOSITIONS, GOODWILL AND INTANGIBLE ASSETS

Business Acquisitions. Our investments in businesses, net of cash acquired, in 2022, 2021 and 2020 totaled \$66 million, \$1.1 billion and \$35.1 billion, respectively. Our investments in business in 2022 consisted of immaterial acquisitions. Our investments in business in 2021 and 2020 primarily consisted of the acquisitions discussed below.

In November 2021, we completed the acquisitions of FlightAware and SEAKR Engineering Inc., for a total of approximately \$1.1 billion, net of cash received. FlightAware is a leading digital aviation company providing global flight tracking solutions, predictive technology, analytics and decision-making tools, and is reported in the Collins segment. SEAKR Engineering Inc. is a leading supplier of advanced space electronics and is reported in the RIS segment. In connection with these acquisitions, we recorded \$0.8 billion of goodwill and \$0.3 billion of intangible assets.

In December 2020, we completed the acquisition of Blue Canyon Technologies, a leading provider of small satellites and spacecraft systems components for \$425 million, net of cash received. Blue Canyon Technologies is reported in the RIS segment. In connection with this acquisition, we recorded \$281 million of goodwill and \$149 million of intangible assets.

Pro forma financial information and revenue from the date of acquisition have not been provided for these acquisitions as they are not material either individually or in the aggregate.

Raytheon Merger. As discussed in “Note 1: Basis of Presentation and Summary of Accounting Principles”, on April 3, 2020, UTC and Raytheon Company completed an all-stock merger of equals, following the completion by UTC of the Separation Transactions and Distributions. Raytheon Company (previously New York Stock Exchange (NYSE): RTN) shares ceased trading prior to the market open on April 3, 2020, and each share of Raytheon common stock was converted in the merger into the right to receive 2.3348 shares of UTC common stock, previously traded on the NYSE under the ticker symbol “UTX.” Upon closing of the Raytheon merger, UTC’s name was changed to “Raytheon Technologies Corporation,” and its shares of common stock began trading as of April 3, 2020 on the NYSE under the ticker symbol “RTX.”

Total consideration is calculated as follows:

<i>(dollars in millions)</i>	Amount
Fair value of RTC common stock issued for Raytheon Company outstanding common stock and vested equity awards	\$ 33,067
Fair value attributable to pre-merger service for replacement equity awards	99
Total merger consideration	\$ 33,166

The fair value of RTC common stock issued for Raytheon Company outstanding common stock and vested equity awards is calculated as follows:

<i>(dollars and shares in millions, except per share amounts and exchange ratio)</i>	Amount
Number of Raytheon Company common shares outstanding as of April 3, 2020	277.3
Number of Raytheon Company stock awards vested as a result of the Raytheon merger ⁽¹⁾	0.4
Total outstanding shares of Raytheon Company common stock and equity awards entitled to merger consideration	277.7
Exchange ratio ⁽²⁾	2.3348
Shares of RTC common stock issued for Raytheon Company outstanding common stock and vested equity awards	648.4
Price per share of RTC common stock ⁽³⁾	\$ 51.00
Fair value of RTC common stock issued for Raytheon Company outstanding common stock and vested equity awards	\$ 33,067

- (1) Represents Raytheon Company stock awards that vested as a result of the Raytheon merger, which is considered a “change in control” for purposes of the Raytheon 2010 Stock Plan. Certain Raytheon Company restricted stock awards and Raytheon Company restricted stock unit (RSU) awards, issued under the Raytheon 2010 Stock Plan vested on an accelerated basis as a result of the Raytheon merger. Such vested awards were converted into the right to receive RTC common stock determined as the product of (1) the number of vested awards, and (2) the exchange ratio.
- (2) The exchange ratio is equal to 2.3348 shares of UTC common stock for each share of Raytheon Company common stock in accordance with the Raytheon merger agreement.
- (3) The price per share of RTC common stock is based on the RTC opening stock price as of April 3, 2020.

Allocation of Consideration Transferred to Net Assets Acquired. We accounted for the Raytheon merger under the acquisition method and are required to measure identifiable assets acquired and liabilities assumed of the acquiree (Raytheon Company) at the fair values on the closing date. During the first quarter of 2021, based on the finalization of our valuation and internal reviews, we completed the purchase price allocation which resulted in a net increase to goodwill of \$61 million.

The final purchase price allocation, net of cash acquired, for the acquisition was as follows:

<i>(dollars in millions)</i>	
Cash and cash equivalents	\$ 3,208
Accounts receivable	1,997
Contract assets	6,023
Inventory	705
Other assets, current	940
Fixed assets	4,745
Operating lease right-of-use assets	950
Intangible assets	19,130
Other assets	1,218
Total identifiable assets acquired	38,916
Accounts payable	1,477
Accrued employee compensation	1,492
Other accrued liabilities	1,921
Contract liabilities	3,002
Long-term debt, including current portion	4,700
Operating lease liabilities, non-current	738
Future pension and postretirement benefit obligations	11,607
Other long-term liabilities	2,368
Total liabilities acquired	27,305
Total identifiable net assets	11,611
Goodwill	21,589
Redeemable noncontrolling interest	(34)
Total consideration transferred	\$ 33,166

Fair value adjustments to Raytheon Company’s identified assets and liabilities included an increase in fixed assets of

\$1.1 billion and an increase to future pension and postretirement benefit obligations of \$3.6 billion, primarily related to remeasurement of the liability based on market conditions on the Raytheon merger closing date. In determining the fair value of identifiable assets acquired and liabilities assumed, a review was conducted for any significant contingent assets or liabilities existing as of the closing date. The assessment did not note any material contingencies related to existing legal or government action.

The Separation Transactions included the transfer of certain defined benefit plans from UTC to Carrier and Otis. The plans transferred were primarily international plans with the majority of the UTC defined benefit liability remaining with Raytheon Technologies. Upon separation, the pension participants within Carrier and Otis were effectively terminated from Raytheon Technologies. The terminations triggered a mid-year remeasurement of the UTC domestic plans. The remeasurement, which was calculated using discount rates and asset values as of April 3, 2020 (using March 31, 2020 as a practical expedient), resulted in a \$2.4 billion increase to our pension liability, primarily due to a decrease in the fair market value of the plans' assets since December 31, 2019. All service cost previously associated with Carrier and Otis was reclassified to discontinued operations. For non-service pension (income) expense and pension liabilities, generally only the portions related to the defined benefit plans transferred to Carrier and Otis as part of the Separation Transactions were reclassified to discontinued operations.

The fair values of the customer relationship intangible assets were determined by using a discounted cash flow valuation method, which is a form of the income approach. Under this approach, the estimated future cash flows attributable to the asset are adjusted to exclude the future cash flows that can be attributed to supporting assets, such as tradenames or fixed assets. Both the amount and the duration of the cash flows are considered from a market participant perspective. Our estimates of market participant future cash flows, which required significant management judgment, included forecasted revenue growth rates, remaining developmental effort, operational performance including company specific synergies, program life cycles, material and labor pricing, and other relevant customer, contractual and market factors. Where appropriate, the net cash flows were probability-adjusted to reflect the uncertainties associated with the underlying assumptions, including cancellation rates related to backlog, government demand for sole-source and re-compete contracts and win rates for re-compete contracts, as well as the risk profile of the net cash flows utilized in the valuation. The probability-adjusted future cash flows were then discounted to present value, using an appropriate discount rate that required significant judgment by management. The customer relationship intangible assets are being amortized based on the pattern of economic benefits we expect to realize over the estimated economic life of the underlying programs. The fair value of the tradename intangible assets were determined utilizing the relief from royalty method, which is a form of the income approach. Under this method, a royalty rate based on observed market royalties is applied to projected revenue supporting the tradename and discounted to present value, using forecasted revenue growth rate projections and a discount rate, respectively, that required significant judgment by management. The tradename intangible assets were determined to have an indefinite life. The developed technology intangible assets are being amortized based on the pattern of economic benefits.

The intangible assets included above consist of the following:

<i>(dollars in millions)</i>	Fair Value	Useful Life
Acquired customer relationships	\$ 12,900	25 years
Acquired tradenames	5,430	Indefinite
Acquired developed technology	800	5 to 7 years
Total identifiable intangible assets	\$ 19,130	

We also identified customer contractual obligations on loss making programs and recorded liabilities of \$222 million related to these programs based on the difference between the actual expected operating loss and a normalized operating profit. These liabilities are being liquidated based on the expected pattern of expenses incurred on these contracts.

We recorded \$21.6 billion of goodwill as a result of the Raytheon merger which primarily relates to expected synergies from combining operations and the value of the existing workforce. The goodwill generated as a result of the Raytheon merger is nondeductible for tax purposes.

Merger-Related Costs. Merger-related costs have been expensed as incurred. In 2021 and 2020, we recorded \$17 million and \$142 million, respectively, of Raytheon merger transaction and integration costs. These costs were recorded in Selling, general and administrative expenses within the Consolidated Statement of Operations.

Supplemental Pro-Forma Data. Raytheon Company's results of operations have been included in RTC's financial statements for the period subsequent to the completion of the Raytheon merger on April 3, 2020. The following unaudited supplemental pro-forma data presents consolidated information as if the Raytheon merger had been completed on January 1, 2019. The pro-forma results were calculated by combining the results of Raytheon Technologies with the stand-alone results of Raytheon Company for the pre-acquisition periods, which were adjusted to account for certain costs that would have been incurred during

this pre-acquisition period. The results below reflect Raytheon Technologies on a continuing operations basis, in order to more accurately represent the structure of Raytheon Technologies after completion of the Separation Transactions, the Distributions and the Raytheon merger.

<i>(dollars in millions, except per share amounts)</i>	2020
Net sales	\$ 64,087
Loss from continuing operations attributable to common shareowners	(2,167)
Basic loss per share of common stock from continuing operations	\$ (1.43)
Diluted loss per share of common stock from continuing operations	(1.43)

The unaudited supplemental pro-forma data above includes the following significant adjustments made to account for certain costs which would have been incurred if the acquisition had been completed on January 1, 2019, as adjusted for the applicable tax impact. As the merger was completed on April 3, 2020, the pro-forma adjustments in the table below only include the required adjustments through April 3, 2020.

<i>(dollars in millions)</i>	2020
Amortization of acquired Raytheon Company intangible assets, net ⁽¹⁾	\$ (270)
Amortization of fixed asset fair value adjustment ⁽²⁾	(9)
Utilization of contractual customer obligation ⁽³⁾	8
Deferred revenue fair value adjustment ⁽⁴⁾	(4)
Adjustment to non-service pension (income) expense ⁽⁵⁾	239
RTC/Raytheon fees for advisory, legal, accounting services ⁽⁶⁾	134
Adjustment to interest expense related to the Raytheon merger, net ⁽⁷⁾	9
Elimination of deferred commission amortization ⁽⁸⁾	5
	\$ 112

- (1) Reflects the additional amortization of the acquired Raytheon Company's intangible assets recognized at fair value in purchase accounting and eliminates the historical Raytheon Company intangible asset amortization expense.
- (2) Reflects the amortization of the fixed asset fair value adjustment as of the acquisition date.
- (3) Reflects the additional amortization of liabilities recognized for certain acquired loss making contracts as of the acquisition date.
- (4) Reflects the difference between prepayments related to extended arrangements and the fair value of the assumed performance obligations as they are satisfied.
- (5) Represents the elimination of unamortized prior service costs and actuarial losses, as a result of fair value purchase accounting.
- (6) Reflects the elimination of transaction-related fees incurred by RTC and Raytheon Company in connection with the Raytheon merger and assumes all of the fees were incurred during the first quarter of 2019.
- (7) Reflects the amortization of the fair market value adjustment related to Raytheon Company.
- (8) Reflects the elimination of amortization recognized on deferred commissions that are eliminated in purchase accounting.

The unaudited supplemental pro-forma financial information does not reflect the potential realization of cost savings related to the integration of the two companies. Further, the pro-forma data should not be considered indicative of the results that would have occurred if the acquisition had been consummated on January 1, 2019, nor are they indicative of future results.

Dispositions. In 2022, 2021 and 2020 cash inflows related to dispositions were \$94 million, \$1.9 billion and \$2.6 billion, respectively. Our dispositions of businesses in 2022 were immaterial. Our dispositions of businesses in 2021 and 2020 consisted of the dispositions discussed below and other immaterial dispositions.

In December 2021, we divested our global training and services business within our RIS segment for approximately \$0.9 billion in cash and other consideration, resulting in an aggregate pre-tax gain, net of transaction costs, of \$251 million (\$135 million after tax), which includes a \$12 million pre-tax gain recognized in Non-service pension income within the Consolidated Statement of Operations.

In January 2021, we sold our Forcepoint business for proceeds of \$1.1 billion, net of cash transferred. We did not recognize a pre-tax gain or loss within the Consolidated Statement of Operations related to the sale of Forcepoint. The results of Forcepoint were included in Eliminations and other in our segment results.

In the third quarter of 2020, in accordance with conditions imposed for regulatory approval of the Raytheon merger, we completed the sale of our Collins military Global Positioning System (GPS) and space-based precision optics businesses for \$2.3 billion in cash, resulting in an aggregate pre-tax gain, net of transaction costs, of \$580 million (\$253 million after tax), of which \$608 million was included in Other income, net partially offset by \$20 million of aggregate transaction costs included in

Selling, general and administrative costs and an \$8 million expense included in Non-service pension income within our Consolidated Statement of Operations.

In May 2020, in order to meet the requirements for regulatory approval of the Raytheon merger, we completed the sale of our airborne tactical radios business within our RIS segment for \$231 million in cash, net of transaction-related costs. As the transaction occurred subsequent to the Raytheon merger, the gain of \$199 million was not recorded in the Consolidated Statement of Operations, but rather was recorded as an adjustment to the fair value of net assets acquired in the allocation of consideration transferred to net assets acquired in the Raytheon merger.

Goodwill. Changes in our goodwill balances for the year ended in 2022 were as follows:

<i>(dollars in millions)</i>	Balance as of January 1, 2022	Acquisitions and Divestitures	Foreign currency translation and other	Balance as of December 31, 2022
Collins Aerospace	\$ 31,384	\$ (36)	\$ (629)	\$ 30,719
Pratt & Whitney	1,563	—	—	1,563
Raytheon Intelligence & Space	9,813	26	2	9,841
Raytheon Missiles & Defense	11,659	41	—	11,700
Total Segment	54,419	31	(627)	53,823
Eliminations and other	17	—	—	17
Total	\$ 54,436	\$ 31	\$ (627)	\$ 53,840

The Company reviews goodwill for impairment annually or more frequently if events or changes in circumstances indicate the asset might be impaired.

We completed our annual goodwill impairment testing as of October 1, 2022 and determined that no adjustments to the carrying value of goodwill were necessary. For those reporting units where we performed a quantitative test, we estimated the fair value of our reporting units using a combination of discounted cash flows and market-based valuation methodologies. As noted above, these methodologies involve significant assumptions that are subject to variability. The key assumptions used in our quantitative analysis include our business projections, including revenue growth rates and operating profit margins, the long-term growth rate used to calculate the terminal value of the reporting unit, the discount rate, and comparable multiples from publicly traded companies in our industry. We consider both internal and external factors and refresh key assumptions annually or as considered necessary. Material changes in these estimates could occur and result in impairments in future periods.

Based on our annual impairment analysis as of October 1, 2022, the reporting units that were closest to impairment were two previously combined Collins reporting units with fair values in excess of book values, including goodwill, of 15% and 17%. The combined value of goodwill allocated to these two reporting units is approximately \$9.5 billion as of the date testing was performed. All other reporting units had a fair value substantially in excess of book value.

We considered the deterioration in general economic and market conditions primarily due to the COVID-19 pandemic to be a triggering event in the first and second quarters of 2020, requiring an impairment evaluation of goodwill, intangible assets, net and other assets in our commercial aerospace businesses, Collins and Pratt & Whitney. Beginning in the second quarter of 2020, we observed several airline customer bankruptcies, delays and cancellations of aircraft purchases by airlines, fleet retirements and repositioning of OEM production schedules and we experienced significant unfavorable EAC adjustments at our Collins and Pratt & Whitney businesses due to a decline in flight hours, aircraft fleet utilization, shop visits and commercial OEM deliveries. These factors contributed to a deterioration of our expectations regarding the timing of a return to pre-COVID-19 commercial flight activity, which further reduced our future sales and cash flows expectations. In the second quarter of 2020, we evaluated the Collins and Pratt & Whitney reporting units for goodwill impairment and determined that the carrying values of two of the six Collins reporting units exceeded the sum of discounted future cash flows, resulting in goodwill impairments of \$3.2 billion. Goodwill impairment was not indicated for any of the other reporting units evaluated for impairment in any of these scenarios.

The Company continuously monitors and evaluates relevant events and circumstances that could unfavorably impact the significant assumptions noted above, including changes to U.S. treasury rates and equity risk premiums, tax rates, recent market valuations from transactions by comparable companies, volatility in the Company's market capitalization, and general industry, market and macro-economic conditions. It is possible that future changes in such circumstances or in the inputs and assumptions used in estimating the fair value of our reporting units, could require the Company to record a non-cash impairment charge.

Intangible Assets. Identifiable intangible assets are comprised of the following:

<i>(dollars in millions)</i>	2022		2021	
	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Amortized:				
Collaboration assets	\$ 5,536	\$ (1,408)	\$ 5,319	\$ (1,173)
Exclusivity assets	2,911	(323)	2,673	(318)
Developed technology and other	1,202	(544)	1,214	(466)
Customer relationships	29,775	(8,967)	29,982	(7,411)
	39,424	(11,242)	39,188	(9,368)
Indefinite-lived:				
Trademarks and other	8,641	—	8,696	—
Total	\$ 48,065	\$ (11,242)	\$ 47,884	\$ (9,368)

We also completed our annual indefinite-lived intangible assets impairment testing as of October 1, 2022 and determined that no adjustments to the carrying value of these assets were necessary. In 2020, given the deterioration in general economic and market conditions primarily due to the COVID-19 pandemic, we performed an assessment of our indefinite-lived intangible assets and recorded charges of \$57 million related to the impairment of an indefinite-lived tradename intangible assets at Collins.

Amortization of intangible assets was \$1,957 million, \$2,439 million and \$2,125 million in 2022, 2021 and 2020, respectively. The following is the expected amortization of total intangible assets for 2023 through 2027:

<i>(dollars in millions)</i>	2023	2024	2025	2026	2027
Amortization expense	\$2,082	\$2,203	\$2,086	\$2,002	\$1,882

NOTE 3: DISCONTINUED OPERATIONS

As discussed above, on April 3, 2020, UTC separated into three independent, publicly traded companies – UTC, Carrier and Otis and distributed all of the outstanding common stock of Carrier and Otis to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020.

Carrier and Otis are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Loss from discontinued operations is as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Otis	\$ —	\$ —	\$ 187
Carrier	—	—	196
Separation related and other discontinued operations transactions	(19)	(33)	(793)
Loss from discontinued operations attributable to common shareowners	\$ (19)	\$ (33)	\$ (410)

The following summarized financial information related to discontinued operations has been reclassified from Income from continuing operations and included in Income (loss) from discontinued operations:

<i>(dollars in millions)</i>	2022	2021	2020
Otis			
Products sales	\$ —	\$ —	\$ 1,123
Services sales	—	—	1,843
Cost of sales - products	—	—	913
Cost of sales - services	—	—	1,157
Research and development	—	—	38
Selling, general and administrative expense	—	—	450
Other income (expense), net	—	—	(65)

Non-operating expense (income), net	—	—	3
Income from discontinued operations, before income taxes	—	—	340
Income tax expense	—	—	116
Income from discontinued operations	—	—	224
Less: Noncontrolling interest in subsidiaries earnings from discontinued operations	—	—	37
Income from discontinued operations attributable to common shareowners	\$ —	\$ —	\$ 187
Carrier			
Products sales	\$ —	\$ —	\$ 3,143
Services sales	—	—	741
Cost of sales - products	—	—	2,239
Cost of sales - services	—	—	527
Research and development	—	—	98
Selling, general and administrative expense	—	—	669
Other income (expense), net	—	—	(30)
Non-operating expense (income), net	—	—	17
Income from discontinued operations, before income taxes	—	—	304
Income tax expense	—	—	102
Income from discontinued operations	—	—	202
Less: Noncontrolling interest in subsidiaries earnings from discontinued operations	—	—	6
Income from discontinued operations attributable to common shareowners	\$ —	\$ —	\$ 196
Separation related and other discontinued operations transactions⁽¹⁾			
Selling, general and administrative expense	\$ —	\$ 10	\$ 151
Other income (expense), net	(30)	—	(709)
Loss from discontinued operations, before income taxes	(30)	(10)	(860)
Income tax (benefit) expense	(11)	23	(67)
Loss from discontinued operations, net of tax	(19)	(33)	(793)
Total loss from discontinued operations attributable to common shareowners	\$ (19)	\$ (33)	\$ (410)

(1) Primarily reflects unallocable transaction costs incurred by the Company primarily related to professional services costs pertaining to the Separation Transactions and the establishment of Carrier and Otis as stand-alone public companies, facility relocation costs, costs to separate information systems, costs of retention bonuses and tax charges and benefits related to separation activities. In addition, 2020 includes debt extinguishment costs related to the Company's paydown of debt to not exceed the maximum applicable net indebtedness under the Raytheon merger agreement.

Selected financial information related to cash flows from discontinued operations is as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Net cash flows used in operating activities from discontinued operations	\$ —	\$ (71)	\$ (728)
Net cash flows used in investing activities from discontinued operations	—	—	(241)
Net cash flows provided by (used in) financing activities from discontinued operations	—	71	(1,414)

Net cash flows used in operating activities from discontinued operations includes the net operating cash flows of Carrier and Otis prior to the Separation Transactions, as well as costs incurred by the Company primarily related to professional services pertaining to the Separation Transactions and the establishment of Carrier and Otis as stand-alone public companies, facility relocation costs, costs to separate information systems, costs of retention bonuses and tax charges related to separation activities. Net cash flows provided by (used in) financing activities from discontinued operations primarily consists of net cash transfers from Carrier and Otis to the Company, as well as debt extinguishment costs related to the early repayment of debt in 2020.

The Separation of Carrier was treated as a return on capital and recorded as a reduction to retained earnings, as it was in a net asset position, while the Separation of Otis was treated as a return of capital and recorded as an adjustment to Common stock, as it was in a net liability position.

NOTE 4: EARNINGS PER SHARE

<i>(dollars in millions, except per share amounts; shares in millions)</i>	2022	2021	2020
Net income (loss) attributable to common shareowners:			
Income (loss) from continuing operations	\$ 5,216	\$ 3,897	\$ (3,109)
Loss from discontinued operations	(19)	(33)	(410)
Net income (loss) attributable to common shareowners	\$ 5,197	\$ 3,864	\$ (3,519)
Basic weighted average number of shares outstanding	1,475.5	1,501.6	1,357.8
Stock awards and equity units (share equivalent)	10.4	6.9	—
Diluted weighted average number of shares outstanding	1,485.9	1,508.5	1,357.8
Earnings (Loss) per share attributable to common shareowners - basic			
Income (loss) from continuing operations	\$ 3.54	\$ 2.60	\$ (2.29)
Loss from discontinued operations	(0.02)	(0.03)	(0.30)
Net income (loss) attributable to common shareowners	\$ 3.52	\$ 2.57	\$ (2.59)
Earnings (Loss) per share attributable to common shareowners - diluted			
Income (loss) from continuing operations	\$ 3.51	\$ 2.58	\$ (2.29)
Loss from discontinued operations	(0.01)	(0.02)	(0.30)
Net income (loss) attributable to common shareowners	\$ 3.50	\$ 2.56	\$ (2.59)

The computation of diluted EPS excludes the effect of the potential exercise of stock awards, including stock appreciation rights and stock options, when the average market price of the common stock is lower than the exercise price of the related stock awards during the period because the effect would be anti-dilutive. In addition, the computation of diluted EPS excludes the effect of the potential exercise of stock awards when the awards' assumed proceeds exceed the average market price of the common shares during the period. For 2022 and 2021, there were 6.2 million and 13.4 million stock awards excluded from the computation, respectively. For 2020, all stock awards were excluded from the computation of diluted EPS because their effect was antidilutive due to the loss from continuing operations, and amounted to 32.5 million stock awards.

NOTE 5: ACCOUNTS RECEIVABLE, NET

Accounts receivable, net consisted of the following:

<i>(dollars in millions)</i>	2022	2021
U.S. government contracts (including foreign military sales)	\$ 1,371	\$ 1,204
Other customers	8,189	8,932
Allowance for expected credit losses	(452)	(475)
Total accounts receivable, net	\$ 9,108	\$ 9,661

The changes in the allowance for expected credit losses related to Accounts receivable were as follows:

<i>(dollars in millions)</i>	2022	2021
Balance as of January 1	\$ 475	\$ 546
Current period provision for expected credit losses, net of recoveries	26	(47)
Write-offs charged against the allowance for expected credit losses	(42)	(18)
Other, net	(7)	(6)
Balance as of December 31	\$ 452	\$ 475

NOTE 6: CONTRACT ASSETS AND LIABILITIES

Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. We receive payments

from customers based on the terms established in our contracts. Total contract assets and contract liabilities as of December 31, 2022 and 2021 are as follows:

<i>(dollars in millions)</i>	2022	2021
Contract assets	\$ 11,534	\$ 11,361
Contract liabilities	(14,598)	(13,720)
Net contract liabilities	\$ (3,064)	\$ (2,359)

Contract assets increased \$173 million during 2022 primarily due to sales in excess of billings at Pratt & Whitney, partially offset by contractual billing terms on U.S. government and foreign military sales contracts at RMD. Contract liabilities increased \$878 million during 2022 primarily due to billings in excess of sales at Pratt & Whitney and RMD.

In 2022, 2021 and 2020, we recognized revenue of \$4.8 billion, \$4.3 billion and \$2.8 billion related to our Contract liabilities at January 1, 2022, January 1, 2021 and January 1, 2020, respectively.

As of December 31, 2022, our Contract liabilities include approximately \$385 million of advance payments received from a Middle East customer on contracts for which we no longer believe we will be able to execute on or obtain required regulatory approvals. These advance payments may become refundable to the customer if the contracts are ultimately terminated. In addition, as of December 31, 2022, our Contract liabilities include advance payments, in immaterial amounts, received from Russian customers on contracts we are currently unable to perform on due to global sanctions on Russia and export controls. Depending on the contractual terms and as allowed by sanctions, certain of these advance payments may become refundable.

Contract assets consisted of the following at December 31:

<i>(dollars in millions)</i>	2022	2021
Unbilled	\$ 23,909	\$ 23,652
Progress payments	(12,375)	(12,291)
Total contract assets	\$ 11,534	\$ 11,361

The U.S. government has title to the assets related to unbilled amounts on U.S. government contracts that provide progress payments.

Contract assets are net of an allowance for expected credit losses of \$318 million and \$251 million as of December 31, 2022 and 2021, respectively. The allowance for expected credit losses activity was not material in 2022 or 2021.

NOTE 7: INVENTORY, NET

<i>(dollars in millions)</i>	2022	2021
Raw materials	\$ 3,477	\$ 3,024
Work-in-process	3,839	3,085
Finished goods	3,301	3,069
Total inventory, net	\$ 10,617	\$ 9,178

Raw materials, work-in-process and finished goods are net of total valuation reserves of \$2.2 billion and \$2.0 billion as of December 31, 2022 and 2021, respectively.

NOTE 8: COMMERCIAL AEROSPACE INDUSTRY ASSETS AND COMMITMENTS

The COVID-19 pandemic continues to negatively affect the global economy, our business and operations, and the industries in which we operate. The pandemic and government, business and individual actions in response, including lockdowns, quarantines, border closings and other travel restrictions and requirements, remote working, facilities closures and reduced business and leisure travel, led to significant declines in demand for commercial air travel. The decrease in commercial air travel decreased demand for our commercial aerospace products and services of our Collins and Pratt & Whitney businesses. Refer to “Note 1: Basis of Presentation and Summary of Accounting Principles” for further details. While we have seen indications that commercial air travel is recovering, we continue to closely monitor our commercial aerospace assets for

recoverability and our off-balance sheet exposures. The following summarizes certain significant assets and off-balance sheet exposures specifically related to our commercial aerospace customers as of December 31:

<i>(dollars in millions)</i>	2022	2021
Assets related to commercial aerospace industry customers:		
Accounts receivable, net (Note 5)	\$ 6,653	\$ 7,235
Contract assets (Note 6)	4,274	3,264
Customer financing assets ⁽¹⁾ (Note 1)	2,700	2,945
Contract fulfillment costs (Note 1)	1,962	1,711
Guarantees and commitments related to commercial aerospace industry customers:		
Commercial aerospace guarantees (net of reserves and collaboration partners' share) (Note 17)	164	165
Commercial aerospace commitments (net of collaboration partners' share) (Note 18)	9,364	9,659

(1) Customer financing assets is inclusive of both the current and long term balances.

We also have goodwill and intangible assets, including exclusivity assets and collaboration assets, associated with our commercial aerospace business. Refer to "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" for further discussion.

NOTE 9: FIXED ASSETS, NET

Fixed assets, net, consisted of the following:

<i>(dollars in millions)</i>	Estimated Useful Lives	2022	2021
Land		\$ 744	\$ 765
Buildings and improvements	10-45 years	7,519	7,271
Machinery, tools and equipment	3-20 years	17,479	16,729
Other, including assets under construction		3,374	2,872
Fixed assets, gross		29,116	27,637
Accumulated depreciation		(13,946)	(12,665)
Fixed assets, net		\$ 15,170	\$ 14,972

Leasehold improvements are amortized over the lesser of the remaining lease term or the estimated useful life of the improvement.

Depreciation expense related to Fixed assets, net is recorded predominantly utilizing the straight-line method and was \$1,843 million in 2022, \$1,828 million in 2021 and \$1,767 million in 2020.

NOTE 10: BORROWINGS AND LINES OF CREDIT

As of December 31, 2022, we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$7.0 billion, consisting of a \$5.0 billion revolving credit agreement, which expires in April 2025, and a \$2.0 billion revolving credit agreement, which was renewed in September 2022 and expires in September 2023. As of December 31, 2022, there were no borrowings outstanding under these agreements. In addition, at December 31, 2022, approximately \$0.8 billion was available under short-term lines of credit with local banks at our various domestic and international subsidiaries.

From time to time, we use commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, pension contributions, debt refinancing, dividend payments and repurchases of our common stock. The commercial paper notes have original maturities of not more than 364 days from the date of issuance. As of December 31, 2022, our maximum commercial paper borrowing limit was \$5.0 billion as the commercial paper is backed by our \$5.0 billion revolving credit agreement. We had \$524 million of commercial paper outstanding at December 31, 2022, which is reflected in Short-term borrowings in our Consolidated Balance Sheet. At December 31, 2022, short-term commercial paper borrowings outstanding had a weighted-average interest rate of 4.4%. There was no commercial paper outstanding at December 31, 2021.

Proceeds from issuance of commercial paper with maturities greater than 90 days were \$1.4 billion during 2022. There were \$1.2 billion repayments of commercial paper with maturities greater than 90 days during 2022. During 2021, we had no commercial paper borrowings with original maturities more than 90 days from the date of issuance.

On November 17, 2021, we completed a cash tender offer for the notes included in the repayments table below (the Tender Offer Notes), resulting in a partial repayment of approximately \$1.5 billion of aggregate principal on these notes. In connection with this transaction, we recorded debt extinguishment costs of \$617 million, primarily related to premiums.

We had de minimis issuances and repayments of long-term debt during 2022. We had the following issuances of long-term debt during 2021:

Issuance Date	Description of Notes	Aggregate Principal Balance (in millions)
November 16, 2021	2.375% notes due 2032 ⁽¹⁾	\$ 1,000
	3.030% notes due 2052 ⁽¹⁾	1,100
August 10, 2021	1.900% notes due 2031 ⁽²⁾	1,000
	2.820% notes due 2051 ⁽²⁾	1,000

(1) The net proceeds received from these debt issuances were used to fund the purchase of the Tender Offer Notes.

(2) The net proceeds received from these debt issuances, along with cash on hand, were used to fund the repayment of our 2.800% and 2.500% notes due in 2022.

We made the following repayments of long-term debt during 2021:

Repayment Date	Description of Notes	Aggregate Principal Balance (in millions)
November 17, 2021	5.700% notes due 2040 ⁽¹⁾	\$ 447
	6.125% notes due 2038 ⁽¹⁾	425
	6.050% notes due 2036 ⁽¹⁾	190
	5.400% notes due 2035 ⁽¹⁾	154
	7.500% notes due 2029 ⁽¹⁾	136
	6.700% notes due 2028 ⁽¹⁾	115
	6.800% notes due 2036 ⁽¹⁾	17
	7.000% notes due 2038 ⁽¹⁾	11
	7.100% notes due 2027 ⁽¹⁾	6
November 15, 2021	3.100% notes due 2021	250
August 26, 2021	2.800% notes due 2022 ⁽¹⁾	1,100
	2.500% notes due 2022 ⁽¹⁾	1,100
March 1, 2021	8.750% notes due 2021	250

(1) In connection with the early repayment of outstanding principal, we recorded debt extinguishment costs of \$649 million in 2021.

Long-term debt consisted of the following as of December 31:

<i>(dollars in millions)</i>	2022	2021
3.650% notes due 2023 ⁽¹⁾	\$ 171	\$ 171
3.700% notes due 2023 ⁽¹⁾	400	400
3.200% notes due 2024 ⁽¹⁾	950	950
3.150% notes due 2024 ⁽¹⁾	300	300
3.950% notes due 2025 ⁽¹⁾	1,500	1,500
2.650% notes due 2026 ⁽¹⁾	719	719
3.125% notes due 2027 ⁽¹⁾	1,100	1,100
3.500% notes due 2027 ⁽¹⁾	1,300	1,300
7.200% notes due 2027 ⁽¹⁾	382	382
7.100% notes due 2027	135	135
6.700% notes due 2028	285	285
7.000% notes due 2028 ⁽¹⁾	185	185
4.125% notes due 2028 ⁽¹⁾	3,000	3,000
7.500% notes due 2029 ⁽¹⁾	414	414
2.150% notes due 2030 (€500 million principal value) ⁽¹⁾	531	565
2.250% notes due 2030 ⁽¹⁾	1,000	1,000
1.900% notes due 2031 ⁽¹⁾	1,000	1,000
2.375% notes due 2032 ⁽¹⁾	1,000	1,000
5.400% notes due 2035 ⁽¹⁾	446	446
6.050% notes due 2036 ⁽¹⁾	410	410
6.800% notes due 2036 ⁽¹⁾	117	117
7.000% notes due 2038	148	148
6.125% notes due 2038 ⁽¹⁾	575	575
4.450% notes due 2038 ⁽¹⁾	750	750
5.700% notes due 2040 ⁽¹⁾	553	553
4.875% notes due 2040 ⁽¹⁾	600	600
4.700% notes due 2041 ⁽¹⁾	425	425
4.500% notes due 2042 ⁽¹⁾	3,500	3,500
4.800% notes due 2043 ⁽¹⁾	400	400
4.200% notes due 2044 ⁽¹⁾	300	300
4.150% notes due 2045 ⁽¹⁾	850	850
3.750% notes due 2046 ⁽¹⁾	1,100	1,100
4.050% notes due 2047 ⁽¹⁾	600	600
4.350% notes due 2047 ⁽¹⁾	1,000	1,000
4.625% notes due 2048 ⁽¹⁾	1,750	1,750
3.125% notes due 2050 ⁽¹⁾	1,000	1,000
2.820% notes due 2051 ⁽¹⁾	1,000	1,000
3.030% notes due 2052 ⁽¹⁾	1,100	1,100
Other (including finance leases)	253	270
Total principal long-term debt	31,249	31,300
Other (fair market value adjustments, (discounts)/premiums and debt issuance costs)	40	51
Total long-term debt	31,289	31,351
Less: current portion	595	24
Long-term debt, net of current portion	\$ 30,694	\$ 31,327

(1) We may redeem these notes, in whole or in part, at our option pursuant to their terms prior to the applicable maturity date.

The weighted-average interest rate related to total debt was 4.0% at both December 31, 2022 and 2021.

The average maturity of our long-term debt at December 31, 2022 is approximately 14 years. The schedule of principal payments required on long-term debt for the next five years and thereafter is:

<i>(in millions)</i>	
2023	\$ 588
2024	1,270
2025	1,590
2026	751
2027	2,935
Thereafter	24,115
Total	\$ 31,249

NOTE 11: EMPLOYEE BENEFIT PLANS

We sponsor various domestic and foreign employee benefit plans, which are discussed below.

Employee Savings Plans. We sponsor various employee savings plans. Our contributions to employer sponsored defined contribution plans were \$1,037 million, \$962 million and \$875 million for 2022, 2021 and 2020, respectively.

Our non-union domestic employee savings plan for legacy UTC employees uses an Employee Stock Ownership Plan (ESOP) for employer matching contributions. External borrowings were used by the ESOP to fund a portion of its purchase of ESOP stock from us. The external borrowings have been extinguished and only re-amortized loans remain between RTC and the ESOP Trust. As ESOP debt service payments are made, common stock is released from an unreleased shares account. ESOP debt may be prepaid or re-amortized to either increase or decrease the number of shares released so that the value of released shares equals the value of plan benefit. We may also, at our option, contribute additional common stock or cash to the ESOP.

Shares of common stock are allocated to employees' ESOP accounts at fair value on the date earned. Cash dividends on common stock held by the ESOP are used for debt service payments. Participants may choose to have their ESOP dividends reinvested or distributed in cash. Common stock allocated to ESOP participants is included in the average number of common shares outstanding for both basic and diluted EPS. At December 31, 2022, 24.7 million common shares had been allocated to employees, leaving 5.1 million unallocated common shares in the ESOP Trust, with a fair value of \$512 million.

Pension and Postretirement Plans. We sponsor both funded and unfunded domestic and foreign defined benefit pension plans that cover a large number of our employees. Our largest plans are generally closed to new participants. We also sponsor both funded and unfunded PRB plans that provide health care and life insurance benefits to eligible retirees. Our plans use a December 31 measurement date consistent with our fiscal year.

Raytheon Company has both funded and unfunded domestic and foreign defined benefit pension and PRB plans. As of the merger date, the Raytheon Company plans were remeasured at fair value using accounting policies consistent with the UTC plans. Refer to "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" for additional information. The deferred pension and PRB plan losses included in Raytheon Company's accumulated other comprehensive income (loss) as of the merger date were eliminated and are no longer subject to amortization in net periodic benefit (income) expense. Amounts prior to the merger date of April 3, 2020 do not include the Raytheon Company pension plan results.

In December 2020, we approved a change to the Raytheon Company domestic benefit pension plans for non-union participants to cease future benefit accruals based on an employee's years of service and compensation under the historical formula effective December 31, 2022. The plan change does not impact participants' historical benefit accruals. Benefits for service after December 31, 2022 will be based on a cash balance formula. We utilized a practical expedient and measured the plan assets and pension benefit obligations for the effected pension plans as of the nearest month end, December 31, 2020, resulting in a prior service credit of \$2.1 billion.

For non-union employees in the UTC domestic pension plans, benefits for service up to December 31, 2014 are generally based on the employee's years of service and compensation. Benefits for service after December 31, 2014 and through December 31, 2019 are based on the existing cash balance formula that was adopted in 2003 for newly hired non-union employees and for non-union employees who made a one-time voluntary election to have future benefit accruals determined under this formula. In September 2019, we amended the UTC domestic defined benefit pension plans to cease accrual of additional benefits for future service and compensation for non-union participants effective December 31, 2019. Beginning January 1, 2020, these participants began receiving additional contributions under the UTC domestic defined contribution

plan. Benefits for union employees in the UTC domestic pension plans are generally based on a stated amount for each year of service.

We made the following contributions to our pension and PRB plans' trusts during the years ended December 31:

<i>(dollars in millions)</i>	2022	2021	2020
U.S. qualified defined benefit plans	\$ —	\$ —	\$ 885
International defined benefit plans	69	42	125
PRB plans	25	17	15

The contributions to our U.S. qualified defined benefit plans in 2020 include a \$750 million discretionary contribution to the Raytheon Company U.S. qualified pension plans' trust. The contributions to our International defined benefit plans in 2020 include discretionary contributions of \$51 million.

<i>(dollars in millions)</i>	Pension		PRB	
	2022	2021	2022	2021
Change in Benefit Obligation:				
Beginning balance	\$ 67,214	\$ 71,257	\$ 1,370	\$ 1,535
Service cost attributable to continuing operations	470	523	6	7
Interest cost	1,520	1,249	29	24
Actuarial gain	(15,466)	(1,643)	(294)	(73)
Total benefits paid ⁽¹⁾	(4,328)	(4,098)	(166)	(165)
Net settlement, curtailment and special termination benefits	3	(89)	(8)	(11)
Plan amendments	131	59	—	—
Business combinations and divestitures	—	48	—	—
Other ⁽²⁾	(516)	(92)	47	53
Ending balance	\$ 49,028	\$ 67,214	\$ 984	\$ 1,370
Change in Plan Assets:				
Beginning balance	\$ 63,323	\$ 62,318	\$ 389	\$ 381
Actual return on plan assets	(10,841)	4,983	(63)	36
Employer contributions ⁽¹⁾	306	289	98	95
Total benefits paid ⁽¹⁾	(4,328)	(4,098)	(166)	(165)
Settlements	(4)	(85)	(8)	(11)
Other ⁽²⁾	(496)	(84)	52	53
Ending balance	\$ 47,960	\$ 63,323	\$ 302	\$ 389
Funded Status:				
Fair value of plan assets	\$ 47,960	\$ 63,323	\$ 302	\$ 389
Benefit obligations	(49,028)	(67,214)	(984)	(1,370)
Funded status of plan	\$ (1,068)	\$ (3,891)	\$ (682)	\$ (981)
Amounts Recognized in the Consolidated Balance Sheet Consist of:				
Noncurrent assets	\$ 3,301	\$ 3,214	\$ —	\$ —
Current liability	(236)	(232)	(71)	(78)
Noncurrent liability	(4,133)	(6,873)	(611)	(903)
Net amount recognized	\$ (1,068)	\$ (3,891)	\$ (682)	\$ (981)
Amounts Recognized in Accumulated Other Comprehensive Loss Consist of:				
Net actuarial (gain) loss	\$ 2,950	\$ 4,402	\$ (394)	\$ (199)
Prior service credit	(1,424)	(1,715)	(4)	(6)
Net amount recognized	\$ 1,526	\$ 2,687	\$ (398)	\$ (205)

(1) Includes benefit payments paid directly by the company.

(2) The amount included in Other primarily reflects the impact of foreign exchange translation, primarily for plans in the United Kingdom (U.K.) and Canada, and participant contributions.

The majority of our pension obligations relate to our U.S. Internal Revenue Service (IRS) qualified pension plans, which comprise 87% and 86% of our pension PBO as of December 31, 2022 and 2021, respectively. 3% of our pension PBO as of both December 31, 2022 and 2021 is attributable to our nonqualified domestic pension plans, which provide supplementary retirement benefits to certain employees in excess of the IRS qualified plan limits. International plans comprise 10% and 11% of the pension PBO as of December 31, 2022 and 2021, respectively, and are considered defined benefit pension plans for accounting purposes.

In addition to the pension and PRB noncurrent liabilities shown above, Future pension and postretirement benefit obligations on the Consolidated Balance Sheet includes other immaterial pension and PRB-related liabilities.

Information for pension plans with accumulated benefit obligations in excess of plan assets:

<i>(dollars in millions)</i>	2022	2021
Projected benefit obligation	\$ 22,116	\$ 28,960
Accumulated benefit obligation	22,080	28,494
Fair value of plan assets	17,747	22,002

The accumulated benefit obligation for all defined benefit pension plans was \$48.8 billion and \$66.5 billion at December 31, 2022 and 2021, respectively.

Information for pension plans with projected benefit obligations in excess of plan assets:

<i>(dollars in millions)</i>	2022	2021
Projected benefit obligation	\$ 22,116	\$ 31,471
Accumulated benefit obligation	22,080	30,745
Fair value of plan assets	17,747	24,366

The components of the net periodic pension (income) expense are as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Operating expense			
Service cost	\$ 470	\$ 523	\$ 483
Non-operating expense			
Interest cost	1,520	1,249	1,650
Expected return on plan assets	(3,544)	(3,476)	(2,995)
Amortization of prior service cost (credit)	(163)	(168)	51
Recognized actuarial net loss	305	435	337
Net settlement, curtailment and special termination benefits loss	2	22	45
Non-service pension income	(1,880)	(1,938)	(912)
Total net periodic pension benefit (income) expense	\$ (1,410)	\$ (1,415)	\$ (429)

The components of the net periodic PRB (income) expense are as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Operating expense			
Service cost	\$ 6	\$ 7	\$ 6
Non-operating expense			
Interest cost	29	24	37
Expected return on plan assets	(22)	(21)	(13)
Amortization of prior service credit	(2)	(3)	(3)
Recognized actuarial net gain	(11)	(6)	(12)
Net settlement, curtailment and special termination benefits (gain) loss	(3)	—	1
Non-service pension (income) expense	(9)	(6)	10
Total net periodic PRB benefit (income) expense	\$ (3)	\$ 1	\$ 16

Other changes in pension plan assets and benefit obligations recognized in other comprehensive loss in 2022 and 2021 are as follows:

<i>(dollars in millions)</i>	2022	2021
Net actuarial gain arising during the period	\$ (1,082)	\$ (3,158)
Amortization of actuarial loss	(305)	(435)
Current year prior service cost	131	59
Amortization of prior service credit	163	168
Net settlement and curtailment	1	(17)
Other ⁽¹⁾	(69)	(6)
Total recognized in other comprehensive (income) loss	(1,161)	(3,389)
Net recognized in net periodic benefit (income) cost and other comprehensive (income) loss	\$ (2,571)	\$ (4,804)

(1) The amount included in Other primarily reflects the impact of foreign exchange translation, primarily for plans in the U.K. and Canada.

The Actuarial gain arising in 2022 was primarily due to an increase in discount rates during 2022, partially offset by actual asset returns less than our expected return on assets.

The Actuarial gain arising in 2021 was primarily due to an increase in discount rates during 2021 and asset returns exceeding our expected return on assets, partially offset by demographic losses.

Other changes in PRB assets and benefit obligations recognized in other comprehensive loss in 2022 and 2021 are as follows:

<i>(dollars in millions)</i>	2022	2021
Net actuarial gain arising during the period	\$ (209)	\$ (88)
Amortization of actuarial gain	11	6
Amortization of prior service credit	2	3
Net settlement and curtailment	3	—
Total recognized in other comprehensive (income) loss	(193)	(79)
Net recognized in net periodic benefit (income) cost and other comprehensive loss	\$ (196)	\$ (78)

The Actuarial gain arising in 2022 was primarily due to an increase in discount rates during 2022, partially offset by actual asset returns less than our expected return on assets on our funded plans.

The Actuarial gain arising in 2021 was primarily due to an increase in discount rates during 2021 and asset returns exceeding our expected return on assets on our funded plans.

The table below reflects the total benefit payments expected to be paid from the plans or from corporate assets.

<i>(dollars in millions)</i>	Pension	PRB
2023	\$ 4,418	\$ 107
2024	3,796	100
2025	3,780	94
2026	3,734	89
2027	3,671	84
2028-2032	17,654	357

Major assumptions used in determining the pension benefit obligation and net periodic pension benefit (income) expense are presented in the following table as weighted-averages:

	Benefit Obligation		Net Periodic Benefit (Income) Expense		
	2022	2021	2022	2021	2020
Discount rate					
PBO	5.5 %	2.8 %	2.8 %	2.5 %	3.2 %
Interest cost ⁽¹⁾	N/A	N/A	2.3 %	1.8 %	2.8 %
Service cost ⁽¹⁾	N/A	N/A	3.1 %	2.8 %	3.5 %
Salary scale	4.4 %	4.4 %	4.4 %	4.4 %	4.3 %
Expected return on plan assets	N/A	N/A	6.5 %	6.5 %	6.5 %
Interest crediting rate	4.5 %	4.0 %	4.0 %	3.8 %	3.8 %

(1) The discount rates used to measure the service cost and interest cost applies to our significant plans. The PBO discount rate is used for the service cost and interest cost measurements for non-significant plans.

Major assumptions used in determining the PRB benefit obligation and net periodic PRB (income) expense are presented in the following table as weighted-averages:

	Benefit Obligation		Net Periodic Benefit (Income) Expense		
	2022	2021	2022	2021	2020
Discount rate	5.5 %	2.8 %	2.8 %	2.4 %	3.1 %
Expected return on assets	N/A	N/A	5.7 %	5.7 %	5.7 %

Assumed health care cost trend rates used in determining the PRB benefit obligation and net periodic PRB (income) expense are as follows:

	2022	2021
Health care cost trend rate assumed for next year	5.0 %	4.7 %
Ultimate health care cost trend rate	4.2 %	4.2 %
Year that the rate reaches the ultimate health care cost trend rate	2029	2026

The weighted-average discount rates used to measure pension and PRB liabilities are based on yield curves developed using high-quality corporate bonds as well as plan specific expected cash flows. For our significant plans, we utilize a full yield curve approach in the estimation of the service cost and interest cost components of net periodic benefit expense by applying the specific spot rates along the yield curve used in determination of the benefit obligation to the relevant discounted projected cash flows.

In determining the EROA assumption, we consider the target asset allocation of plan assets, as well as economic and other indicators of future performance. We consult with and consider the opinions of financial and other professionals in determining the appropriate capital market assumptions. Return projections are validated using a simulation model that incorporates yield curves, credit spreads and risk premiums to project long-term prospective returns. As a result of this analysis at year end 2022, our weighted average pension EROA assumption for 2023 increased to 7.1%.

Plan Assets. The plans' investment management objectives include providing the liquidity and asset levels needed to meet current and future benefit payments, while maintaining a prudent degree of portfolio diversification considering interest rate risk and market volatility. Globally, investment strategies generally target a mix of 40% to 45% of growth seeking assets and 55% to 60% of income generating and hedging assets using a wide set of diversified asset types, fund strategies and investment managers. The growth seeking allocation consists of global public equities in developed and emerging countries, private equity, real estate and multi-asset class strategies. Growth assets include an enhanced alpha strategy that invests in publicly traded equity and fixed income securities, derivatives and foreign currency. Investments in private equity are primarily via limited partnership interests in buy-out strategies with smaller allocations to distressed debt funds. The real estate strategy is principally concentrated in directly held U.S. core investments with some smaller investments in international, value-added and opportunistic strategies. Within the income generating assets, the fixed income portfolio consists of mainly government and broadly diversified high quality corporate bonds.

The plans have continued their pension risk management techniques designed to reduce their interest rate risk. Specifically, the plans have incorporated liability hedging programs that include the adoption of a risk reduction objective as part of the long-term investment strategy. Under this objective the interest rate hedge is intended to increase as funded status improves. The

hedging programs incorporate a range of assets and investment tools, each with varying interest rate sensitivities. The investment portfolios are currently hedging approximately 40% to 80% of the interest rate sensitivity of the pension plan liabilities, depending on the funded status of the plan.

The fair values of pension plan assets at December 31, 2022 and 2021 by asset category are as follows:

<i>(dollars in millions)</i>	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Not Subject to Leveling ⁽⁸⁾	Total
Asset Category:					
Public Equities					
Global Equities	\$ 6,194	\$ 5	\$ —	\$ —	\$ 6,199
Global Equity Commingled Funds ⁽¹⁾	20	568	—	—	588
Enhanced Global Equities ⁽²⁾	(53)	75	—	—	22
Other Public Equities	—	—	—	5,771	5,771
Private Equities ⁽³⁾	—	—	—	4,068	4,068
Fixed Income Securities					
Governments	2,526	1,426	—	—	3,952
Corporate Bonds	1	12,638	—	—	12,639
Structured Products	—	57	—	—	57
Other Fixed Income	—	—	—	6,975	6,975
Real Estate ⁽⁴⁾	—	—	1,650	1,761	3,411
Other ⁽⁵⁾	—	84	—	3,071	3,155
Cash & Cash Equivalents ⁽⁶⁾	—	150	—	164	314
Subtotal	\$ 8,688	\$ 15,003	\$ 1,650	\$ 21,810	\$ 47,151
Other Assets & Liabilities ⁽⁷⁾					809
Total at December 31, 2022					\$ 47,960
Public Equities					
Global Equities	\$ 9,411	\$ 6	\$ —	\$ —	\$ 9,417
Global Equity Commingled Funds ⁽¹⁾	3	929	—	—	932
Enhanced Global Equities ⁽²⁾	46	163	—	—	209
Other Public Equities	—	—	—	8,495	8,495
Private Equities ⁽³⁾	—	—	—	4,490	4,490
Fixed Income Securities					
Governments	1,933	1,172	—	—	3,105
Corporate Bonds	1	18,681	—	—	18,682
Structured Products	—	25	—	—	25
Other Fixed Income	—	—	—	7,367	7,367
Real Estate ⁽⁴⁾	—	—	1,885	1,743	3,628
Other ⁽⁵⁾	—	91	—	5,351	5,442
Cash & Cash Equivalents ⁽⁶⁾	—	111	—	220	331
Subtotal	\$ 11,394	\$ 21,178	\$ 1,885	\$ 27,666	\$ 62,123
Other Assets & Liabilities ⁽⁷⁾					1,200
Total at December 31, 2021					\$ 63,323

(1) Represents commingled funds that invest primarily in common stocks.

(2) Represents enhanced equity separate account and commingled fund portfolios. A portion of the portfolio may include long-short market neutral and relative value strategies that invest in publicly traded, equity and fixed income securities, as well as derivatives of equity and fixed income securities and foreign currency.

- (3) Represents limited partnership investments with general partners that primarily invest in equity and debt.
- (4) Represents investments in real estate including commingled funds and directly held properties.
- (5) Represents global balanced risk commingled funds that invest in multiple asset classes including equity, fixed income and some commodities. "Other" also includes insurance contracts.
- (6) Represents short-term commercial paper, bonds and other cash or cash-like instruments.
- (7) Represents receivables, payables and certain individually immaterial international plan assets that are not leveled.
- (8) In accordance with ASU 2015-07, *Fair Value Measurement (Topic 820)*, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented for the total pension benefits plan assets.

Derivatives in the plan are primarily used to manage risk and gain asset class exposure while still maintaining liquidity. Derivative instruments mainly consist of equity futures, interest rate futures, interest rate swaps and currency forward contracts. The fair market value of the plans' derivatives through direct or separate account investments was approximately \$(79) million and \$98 million as of December 31, 2022 and 2021, respectively.

We review our assets at least quarterly to ensure we are within the targeted asset allocation ranges and, if necessary, asset balances are adjusted back within target allocations. We employ a broadly diversified investment manager structure that includes diversification by active and passive management, style, capitalization, country, sector, industry and number of investment managers. No individual investment represented more than 5% of the plan assets as of December 31, 2022.

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed due to the following:

<i>(dollars in millions)</i>	Corporate Bonds		Real Estate		Total
Balance, December 31, 2020	\$	2	\$	1,647	\$ 1,649
Realized gains		—		212	212
Unrealized gains relating to instruments still held in the reporting period		—		50	50
Purchases, sales, and settlements, net		—		(24)	(24)
Transfers in/out, net		(2)		—	(2)
Balance, December 31, 2021		—		1,885	1,885
Realized gains		—		76	76
Unrealized gains relating to instruments still held in the reporting period		—		64	64
Purchases, sales, and settlements, net		—		(211)	(211)
Transfers in/out, net		—		(164)	(164)
Balance, December 31, 2022	\$	—	\$	1,650	\$ 1,650

Quoted market prices are used to value investments when available. Investments in securities traded on exchanges, including listed futures and options, are valued at the last reported sale prices on the last business day of the year or, if not available, the last reported bid prices. Fixed income securities are primarily measured using a market approach pricing methodology, where observable prices are obtained by market transactions involving identical or comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar investments. Investment contracts are valued at fair value by discounting the related cash flows based on current yields of similar instruments with comparable durations. Real estate investments are valued on a quarterly basis using discounted cash flow models which consider long-term lease estimates, future rental receipts and estimated residual values. Valuation estimates are supplemented by third-party appraisals on an annual basis.

The fair market value of assets related to our PRB benefits was \$302 million and \$389 million as of December 31, 2022 and 2021, respectively. These assets include \$105 million and \$147 million of which are invested in our domestic qualified pension plan trust at December 31, 2022 and 2021, respectively. The remaining PRB investments are held within Voluntary Employees' Beneficiary Association (VEBA) trusts. The VEBA assets are generally invested in mutual funds and are valued primarily using quoted prices in active markets (Level 1). There were no Level 3 investments in the VEBA trusts as of December 31, 2022 or 2021.

We have set aside assets in separate trusts, which we expect to be used to pay for certain nonqualified defined benefit and defined contribution plan obligations in excess of qualified plan limits. These assets are included in Other assets in our Consolidated Balance Sheet. The fair value of marketable securities held in trusts as of December 31 was as follows:

<i>(dollars in millions)</i>	2022		2021	
Marketable securities held in trusts	\$	774	\$	965

NOTE 12: LEASES

Operating lease expense was \$475 million, \$525 million, and \$497 million for 2022, 2021, and 2020, respectively. Finance leases and leases where we are the lessor are not considered significant to our Consolidated Balance Sheet, Consolidated Statement of Operations or Consolidated Statement of Cash Flows.

In 2021 and 2020, we entered into sale and leaseback transactions for the sale of equipment and related maintenance. We subsequently leased back the equipment sold for a limited timeframe, which is accounted for as an operating lease. The proceeds received as a result of the equipment sales are classified in Receipts from customer financing assets within the Investing Activities in our Consolidated Statement of Cash Flows, and the portion related to future maintenance services are classified within Operating Activities. The net gains as a result of these transactions were not material.

Supplemental cash flow information related to operating leases were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Operating cash flows used in the measurement of operating lease liabilities	\$ 399	\$ 490	\$ 420
Operating lease right-of-use assets obtained in exchange for operating lease obligations	359	535	299

Future lease payments related to our operating lease liabilities as of December 31, 2022 are as follows:

<i>(dollars in millions)</i>	
2023	\$ 340
2024	301
2025	265
2026	236
2027	195
Thereafter	735
Total undiscounted lease payments	2,072
Less imputed interest	(130)
Total discounted lease payments	\$ 1,942

Our lease liabilities recognized in our Consolidated Balance Sheet were as follows as of December 31:

<i>(dollars in millions)</i>	2022	2021
Operating lease liabilities, current (included in Other accrued liabilities)	\$ 356	\$ 411
Operating lease liabilities, noncurrent	1,586	1,657
Total operating lease liabilities	\$ 1,942	\$ 2,068

The weighted-average remaining lease term related to our operating leases was 9 years as of December 31, 2022 and 2021. The weighted-average discount rate related to our operating leases was 3.3% and 2.8% as of December 31, 2022 and 2021, respectively.

NOTE 13: INCOME TAXES

Income Before Income Taxes. The sources of income (loss) from continuing operations before income taxes are:

<i>(dollars in millions)</i>	2022	2021	2020
United States	\$ 4,061	\$ 3,498	\$ (2,762)
Foreign	1,966	1,433	409
Income (loss) from continuing operations before income taxes	\$ 6,027	\$ 4,931	\$ (2,353)

The Company no longer intends to reinvest certain undistributed earnings of its international subsidiaries that have been previously taxed in the U.S. As such, we recorded the taxes associated with the future remittance of these earnings. For the remainder of the Company's undistributed international earnings, unless tax effective to repatriate, the Company will continue to permanently reinvest these earnings. As of December 31, 2022, such undistributed earnings were approximately \$18 billion, excluding other comprehensive income amounts. It is not practicable to estimate the amount of tax that might be payable on the remaining amounts.

Provision for Income Taxes. The income tax expense (benefit) for the years ended December 31 are as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Current:			
United States:			
Federal	\$ 1,724	\$ 387	\$ 324
State	126	60	45
Foreign	513	427	305
	2,363	874	674
Future:			
United States:			
Federal	(1,399)	(26)	(264)
State	(166)	41	258
Foreign	(98)	(103)	(93)
	(1,663)	(88)	(99)
Income tax expense	\$ 700	\$ 786	\$ 575

Reconciliation of Effective Income Tax Rate. Differences between effective income tax rates and the statutory U.S. federal income tax rate are as follows:

<i>(dollars in millions)</i>	2022		2021		2020	
	Amount	Rate	Amount	Rate	Amount	Rate
Statutory U.S. federal income tax rate	\$ 1,266	21.0 %	\$ 1,036	21.0 %	\$ (494)	21.0 %
Tax on international activities	(186)	(3.1)	(204)	(4.1)	27	(1.1)
Tax charges related to Separation Transactions and Raytheon merger	—	—	(39)	(0.8)	416	(17.7)
Disposals of businesses	—	—	108	2.2	177	(7.5)
U.S. research and development credit	(164)	(2.7)	(172)	(3.5)	(142)	6.1
Goodwill impairment	—	—	—	—	668	(28.4)
State income tax, net	(12)	(0.2)	33	0.7	(56)	2.4
Foreign Derived Intangible Income	(214)	(3.5)	(121)	(2.5)	(83)	3.5
U.K. corporate tax rate enactment	—	—	73	1.5	8	(0.4)
Other	10	0.1	72	1.4	54	(2.3)
Effective income tax rate	\$ 700	11.6 %	\$ 786	15.9 %	\$ 575	(24.4)%

The 2022 effective tax rate includes a benefit of \$214 million related to the Foreign Derived Intangible Income (FDII) benefit, \$207 million associated with legal entity and operational reorganizations implemented in 2022, and \$164 million associated with U.S. research and development credits. The increase in the FDII benefit from 2021 is primarily attributable to the capitalization of research or experimental expenditures for tax-purposes, enacted as part of the Tax Cuts and Jobs Act of 2017 effective beginning January 1, 2022.

The 2021 effective tax rate includes tax benefits of \$244 million included in international activities associated with legal entity and operational reorganizations implemented in 2021, \$172 million associated with U.S. research and development credits and \$121 million associated with FDII, and tax charges of \$73 million associated with the revaluation of deferred taxes resulting from the increase in the U.K. corporate tax rate to 25% enacted in 2021. In the first quarter of 2021, we recorded \$148 million of tax charges associated with the sale of the Forcepoint business, and subsequently recognized a \$104 million tax benefit due to the revaluation of that tax benefit as a result of completing the divestiture of RIS's global training and services business for a gain in the fourth quarter of 2021.

The 2020 negative effective tax rate is a result of having tax expense of \$575 million on a loss from continuing operations before income taxes of \$2.4 billion. The loss from continuing operations before income taxes in 2020 includes the \$3.2 billion goodwill impairment as described in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets,” most of which was non-deductible for tax purposes. Tax expense includes net deferred tax charges of \$416 million resulting from the Separation Transactions and the Raytheon merger primarily related to the impairment of deferred tax assets and the revaluation of certain international tax incentives, and incremental tax expense of \$177 million related to the disposal of businesses, including the sales of businesses at Collins, the airborne tactical radios business at RIS and the entry into a definitive agreement to sell Forcepoint, as described in “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets.” Also included in the 2020 effective tax rate are tax benefits of \$142 million associated with U.S. research and development credits and \$83 million associated with FDII.

Deferred Tax Assets and Liabilities. The tax effects of temporary differences and tax carryforwards which gave rise to future income tax benefits and payables at December 31, 2022 and 2021 are as follows:

<i>(dollars in millions)</i>	2022	2021
Future income tax benefits:		
Insurance and employee benefits	\$ 1,126	\$ 1,831
Inventory and contract balances	639	756
Warranty provisions	242	248
Capitalization of research and experimental expenditures	1,712	—
Other basis differences	828	878
Tax loss carryforwards	305	251
Tax credit carryforwards	970	1,088
Valuation allowances	(842)	(825)
Total future income tax benefits	\$ 4,980	\$ 4,227
Future income taxes payable:		
Goodwill and intangible assets	\$ 6,588	\$ 7,168
Fixed assets	1,751	1,746
Other basis differences	220	323
Total future income tax payable	\$ 8,559	\$ 9,237

Valuation allowances have been established primarily for tax credit carryforwards, tax loss carryforwards, and certain temporary differences to reduce the future income tax benefits to expected realizable amounts.

Tax Credit and Loss Carryforwards. At December 31, 2022, tax credit carryforwards, principally state and foreign, and tax loss carryforwards, principally state and foreign, were as follows:

<i>(dollars in millions)</i>	Tax Credit Carryforwards	Tax Loss Carryforwards
Expiration period:		
2023-2027	\$ 54	\$ 292
2028-2032	73	174
2033-2042	337	318
Indefinite	506	1,357
Total	\$ 970	\$ 2,141

Unrecognized Tax Benefits. At December 31, 2022, we had gross tax-effected unrecognized tax benefits of \$1,515 million, of which \$1,378 million, if recognized, would impact the effective tax rate. A reconciliation of the beginning and ending amounts of unrecognized tax benefits and interest expense related to unrecognized tax benefits for the years ended December 31, 2022, 2021 and 2020 is as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Balance at January 1	\$ 1,458	\$ 1,225	\$ 1,347
Additions for tax positions related to the current year	106	110	125
Additions for tax positions of prior years	23	282	323
Reductions for tax positions of prior years	(56)	(49)	(83)
Settlements	(16)	(110)	(48)
Separation of Carrier and Otis	—	—	(439)
Balance at December 31	\$ 1,515	\$ 1,458	\$ 1,225
Gross interest expense related to unrecognized tax benefits	\$ 34	\$ 39	\$ 50
Total accrued interest balance at December 31	190	165	141

The unrecognized tax benefit table includes discontinued operations activity in 2020.

As a result of the Separation Transactions and the Distributions in April 2020, we transferred unrecognized tax benefits to Carrier and Otis of \$439 million and associated interest of approximately \$165 million. Pursuant to the terms of the separation agreements, certain other unrecognized tax benefits retained by the Company are subject to indemnification.

The 2020 additions for tax positions of prior years in the table above include amounts related to the Raytheon merger.

We conduct business globally and, as a result, Raytheon Technologies or one or more of our subsidiaries files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business we are subject to examination by taxing authorities throughout the world, including such major jurisdictions as Canada, China, France, Germany, India, Poland, Saudi Arabia, Singapore, Switzerland, the United Kingdom and the United States. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations for years before 2012.

The Examination Division of the IRS is currently auditing Raytheon Technologies tax years 2017 and 2018 and pre-merger Raytheon Company tax years 2017, 2018 and 2019 as well as certain refund claims of Raytheon Company for tax years 2014, 2015 and 2016 filed prior to the Raytheon merger. The examination phase of the audits for each of these tax years is expected to close in 2023.

The Examination Division of the IRS is also auditing pre-acquisition Rockwell Collins fiscal tax years 2016, 2017 and 2018. The examination phase of the audit for each of these tax years is expected to close during 2023.

It is reasonably possible that a net reduction within the range of \$25 million to \$375 million of unrecognized tax benefits may occur over the next 12 months as a result of the revaluation of uncertain tax positions arising from developments in examinations, in appeals, or in the courts, or the closure of tax statutes.

NOTE 14: FINANCIAL INSTRUMENTS

We enter into derivative instruments primarily for risk management purposes, including derivatives designated as hedging instruments and those utilized as economic hedges. We operate internationally and in the normal course of business, are exposed to fluctuations in interest rates, foreign exchange rates and commodity prices. These fluctuations can increase the costs of financing, investing and operating the business. We have used derivative instruments, including swaps, forward contracts and options, to manage certain foreign currency, interest rate and commodity price exposures.

The present value of aggregate notional principal of our outstanding foreign currency hedges was \$11.2 billion and \$8.5 billion at December 31, 2022 and 2021, respectively. At December 31, 2022, all derivative contracts accounted for as cash flow hedges will mature by February 2030. Additional information pertaining to foreign exchange and hedging activities is included in “Note 1: Basis of Presentation and Summary of Accounting Principles.”

The following table summarizes the fair value and presentation in the Consolidated Balance Sheet for derivative instruments as of December 31:

<i>(dollars in millions)</i>	Balance Sheet Location	2022		2021	
Derivatives designated as hedging instruments:					
Foreign exchange contracts	Other assets, current	\$	67	\$	59
	Other accrued liabilities		347		202
Derivatives not designated as hedging instruments:					
Foreign exchange contracts	Other assets, current	\$	17	\$	11
	Other accrued liabilities		39		11

The effect of cash flow hedging relationships on Accumulated other comprehensive income (loss) and on the Consolidated Statement of Operations in 2022 and 2021 are presented in “Note 19: Accumulated Other Comprehensive Loss”. The amounts of gain or (loss) are attributable to foreign exchange contract activity and are primarily recorded as a component of Products sales when reclassified from Accumulated other comprehensive loss.

The Company utilizes the critical terms match method in assessing derivatives for hedge effectiveness. Accordingly, the hedged items and derivatives designated as hedging instruments are highly effective.

As of December 31, 2022, we have €500 million of euro-denominated long-term debt outstanding, which qualifies as a net investment hedge against our investments in European businesses, which is deemed to be effective.

The effect of derivatives not designated as hedging instruments is included within Other income, net, on the Consolidated Statement of Operations and is not material.

NOTE 15: FAIR VALUE MEASUREMENTS

The following tables provide the valuation hierarchy classification of assets and liabilities that are carried at fair value and measured on a recurring basis in our Consolidated Balance Sheet:

<i>(dollars in millions)</i>	December 31, 2022			
	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Marketable securities held in trusts	\$ 774	\$ 713	\$ 61	\$ —
Derivative assets	84	—	84	—
Derivative liabilities	386	—	386	—

<i>(dollars in millions)</i>	December 31, 2021			
	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Marketable securities held in trusts	\$ 965	\$ 890	\$ 75	\$ —
Derivative assets	70	—	70	—
Derivative liabilities	213	—	213	—

Valuation Techniques. Our derivative assets and liabilities include foreign exchange contracts that are measured at fair value using internal models based on observable market inputs such as forward rates, interest rates, our own credit risk and our counterparties’ credit risks.

As of December 31, 2022, there has not been any significant impact to the fair value of our derivative liabilities due to our own credit risk. Similarly, there has not been any significant adverse impact to our derivative assets based on our evaluation of our counterparties’ credit risks.

The following table provides carrying amounts and fair values of financial instruments that are not carried at fair value in our Consolidated Balance Sheet at December 31:

<i>(dollars in millions)</i>	2022		2021	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Customer financing notes receivables	\$ 169	\$ 161	\$ 195	\$ 192
Long-term debt (excluding finance leases)	31,201	28,049	31,250	35,828

The following table provides the valuation hierarchy classification of assets and liabilities that are not carried at fair value in our Consolidated Balance Sheet at December 31:

<i>(dollars in millions)</i>	December 31, 2022			
	Total	Level 1	Level 2	Level 3
Customer financing notes receivables	\$ 161	\$ —	\$ 161	\$ —
Long-term debt (excluding finance leases)	28,049	—	28,003	46

<i>(dollars in millions)</i>	December 31, 2021			
	Total	Level 1	Level 2	Level 3
Customer financing notes receivables	\$ 192	\$ —	\$ 192	\$ —
Long-term debt (excluding finance leases)	35,828	—	35,778	50

The fair value of our Short-term borrowings approximates the carrying value due to their short-term nature, with commercial paper classified as level 2 and other short-term borrowings classified as level 3 within the fair value hierarchy.

NOTE 16: VARIABLE INTEREST ENTITIES

Pratt & Whitney holds a 61% program share interest in the International Aero Engines AG (IAE) collaboration with MTU Aero Engines AG (MTU) and Japanese Aero Engines Corporation (JAEC) and a 49.5% ownership interest in IAE. IAE's business purpose is to coordinate the design, development, manufacturing and product support of the V2500 engine program through involvement with the collaborators. Additionally, Pratt & Whitney, JAEC and MTU are participants in the International Aero Engines, LLC (IAE LLC) collaboration, whose business purpose is to coordinate the design, development, manufacturing and product support for the PW1100G-JM engine for the Airbus A320neo family of aircraft. Pratt & Whitney holds a 59% program share interest and a 59% ownership interest in IAE LLC. IAE and IAE LLC retain limited equity with the primary economics of the programs passed to the participants. As such, we have determined that IAE and IAE LLC are variable interest entities with Pratt & Whitney as the primary beneficiary. IAE and IAE LLC have, therefore, been consolidated. The carrying amounts and classification of assets and liabilities for variable interest entities in our Consolidated Balance Sheet as of December 31, 2022 and 2021 are as follows:

<i>(dollars in millions)</i>	2022	2021
Current assets	\$ 7,609	\$ 7,081
Noncurrent assets	779	825
Total assets	\$ 8,388	\$ 7,906
Current liabilities	\$ 9,154	\$ 7,965
Noncurrent liabilities	19	54
Total liabilities	\$ 9,173	\$ 8,019

NOTE 17: GUARANTEES

We extend a variety of financial, market value and product performance guarantees to third parties. These instruments expire on various dates through 2028. Additional guarantees of project performance for which there is no stated value also remain

outstanding. A portion of our third party guarantees are subject to indemnification for our benefit for any liabilities that could arise. As of December 31, 2022 and 2021, the following financial guarantees were outstanding:

<i>(dollars in millions)</i>	December 31, 2022		December 31, 2021	
	Maximum Potential Payment	Carrying Amount of Liability	Maximum Potential Payment	Carrying Amount of Liability
Commercial aerospace financing arrangements	\$ 304	\$ —	\$ 309	\$ 3
Third party guarantees	335	1	511	5

We have made residual value and other guarantees related to various commercial aerospace customer financing arrangements. The estimated fair market values of the guaranteed assets equal or exceed the value of the related guarantees, net of existing reserves. Collaboration partners' share of these financing guarantees is \$140 million and \$141 million at December 31, 2022 and 2021, respectively.

We also have obligations arising from sales of certain businesses and assets, including those from representations and warranties and related indemnities for environmental, health and safety, tax and employment matters. The maximum potential payment related to these obligations is not a specified amount as a number of the obligations do not contain financial caps. The carrying amount of liabilities related to these obligations was \$97 million and \$120 million at December 31, 2022 and 2021, respectively. These primarily relate to environmental liabilities, which are included in our total environmental liabilities as further discussed in "Note 18: Commitments and Contingencies."

We accrue for costs associated with guarantees when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of currently available facts, and where no amount within a range of estimates is more likely, the minimum is accrued.

We also provide service and warranty policies on our products and extend performance and operating cost guarantees beyond our normal service and warranty policies on some of our products, particularly commercial aircraft engines. In addition, we incur discretionary costs to service our products in connection with specific product performance issues. Liabilities for performance and operating cost guarantees are based upon future product performance and durability, and are largely estimated based upon historical experience. Adjustments are made to accruals as claims data and historical experience warrant. The changes in the carrying amount of service and product warranties and product performance guarantees for the years ended December 31 were as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Balance as of January 1	\$ 1,157	\$ 1,057	\$ 1,033
Warranties and performance guarantees issued	264	380	311
Settlements	(284)	(272)	(292)
Other	(28)	(8)	5
Balance as of December 31	\$ 1,109	\$ 1,157	\$ 1,057

NOTE 18: COMMITMENTS AND CONTINGENCIES

Except as otherwise noted, while we are unable to predict the final outcome, based on information currently available, we do not believe that resolution of any of the following matters will have a material adverse effect upon our competitive position, results of operations, financial condition or liquidity.

Environmental. Our operations are subject to environmental regulation by federal, state and local authorities in the United States and regulatory authorities with jurisdiction over our foreign operations. We have accrued for the costs of environmental remediation activities, including but not limited to investigatory, remediation, operating and maintenance costs and performance guarantees, and periodically reassess these amounts. We do not expect any additional liability to have a material adverse effect on our results of operations, financial condition or liquidity. As of December 31, 2022 and 2021, we had \$798 million and \$834 million, respectively, reserved for environmental remediation. Additional information pertaining to environmental matters is included in "Note 1: Basis of Presentation and Summary of Accounting Principles."

Commercial Aerospace Financing and Other Commitments. We had commercial aerospace financing commitments and other contractual commitments of approximately \$15.3 billion and \$15.6 billion as of December 31, 2022 and 2021, respectively, on a gross basis before reduction for our collaboration partners' share. Aircraft financing commitments, in the form of debt or lease financing, are provided to certain commercial aerospace customers. The extent to which the financing commitments will be utilized is not currently known, since customers may be able to obtain more favorable terms from other

financing sources. We may also arrange for third-party investors to assume a portion of these commitments. The majority of financing commitments are collateralized arrangements. We may also lease aircraft and subsequently sublease the aircraft to customers under long-term non-cancelable operating leases, or pay deposits on behalf of our customers to secure production slots with the airframers (pre-delivery payments). Our financing commitments with customers are contingent upon maintenance of certain levels of financial condition by the customers. Associated risks on these commitments are mitigated due to the fact that interest rates are variable during the commitment term and are set at the date of funding based on current market conditions, the fair value of the underlying collateral and the credit worthiness of the customers. As a result, the fair value of these financing commitments is expected to equal the amounts funded.

We also have other contractual commitments to make payments to secure certain contractual rights to provide product on new aircraft platforms. The estimated amount and timing of these payments, which are generally based on future sales or engine flight hours, are reflected in “Other commercial aerospace commitments” in the table below. Payments made on these contractual commitments are included within intangible assets as exclusivity assets and are amortized over the term of underlying economic benefit. We have entered into certain collaboration arrangements, which may include participation by our collaboration partners in these commitments. In addition, in connection with our 2012 agreement to acquire Rolls-Royce’s ownership and collaboration interests in IAE, additional payments are due to Rolls-Royce contingent upon each hour flown through June 2027 by the V2500-powered aircraft in service as of the acquisition date. These flight hour payments, which are considered in “Other commercial aerospace commitments” below, will be capitalized as collaboration intangible assets as payments are made.

The following is the expected maturity of our commercial aerospace industry commitments as of December 31, 2022:

<i>(dollars in millions)</i>	Committed	2023	2024	2025	2026	2027	Thereafter
Commercial aerospace financing commitments	\$ 4,559	\$ 1,559	\$ 1,405	\$ 980	\$ 556	\$ 59	\$ —
Other commercial aerospace commitments	10,710	1,147	883	794	695	717	6,474
Collaboration partners’ share	(5,905)	(915)	(863)	(714)	(535)	(331)	(2,547)
Total commercial aerospace commitments	\$ 9,364	\$ 1,791	\$ 1,425	\$ 1,060	\$ 716	\$ 445	\$ 3,927

Other Financing Arrangements. We have entered into standby letters of credit and surety bonds with financial institutions to meet various bid, performance, warranty, retention and advance payment obligations for us or our affiliates. We enter into these agreements to assist certain affiliates in obtaining financing on more favorable terms, making bids on contracts and performing their contractual obligations. The stated values of these letters of credit agreements and surety bonds totaled \$3.3 billion as of December 31, 2022.

Offset Obligations. We have entered into industrial cooperation agreements, sometimes in the form of either offset agreements or ICIP agreements, as a condition to obtaining orders for our products and services from certain customers in foreign countries. At December 31, 2022, the aggregate amount of our offset agreements, both agreed to and anticipated to be agreed to, had an outstanding notional value of approximately \$11.3 billion. These agreements are designed to return economic value to the foreign country by requiring us to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. Offset agreements may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects, and the purchase by third parties (e.g., our vendors) of supplies from in-country vendors. These agreements may also be satisfied through our use of cash for activities such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. Such activities may also vary by country depending upon requirements as dictated by their governments. We typically do not commit to offset agreements until orders for our products or services are definitive. The amounts ultimately applied against our offset agreements are based on negotiations with the customers and typically require cash outlays that represent only a fraction of the notional value in the offset agreements. Offset programs usually extend over several or more years and may provide for penalties in the event we fail to perform in accordance with offset requirements. Historically, we have not been required to pay any penalties of significance.

Government Oversight. In the ordinary course of business, the Company and its subsidiaries and our properties are subject to regulatory and governmental examinations, information gathering requests, inquiries, investigations and threatened legal actions and proceedings. For example, we are now, and believe that, in light of the current U.S. government contracting environment, we will continue to be the subject of one or more U.S. government investigations. Our contracts with the U.S. government are also subject to audits. Agencies that oversee contract performance include: the Defense Contract Audit Agency (DCAA), the Defense Contract Management Agency (DCMA), the Inspectors General of the U.S. Department of Defense (DoD) and other

departments and agencies, the Government Accountability Office (GAO), the Department of Justice (DOJ), and Congressional Committees. Other areas of our business operations may also be subject to audit and investigation by these and other agencies. From time to time, agencies investigate or conduct audits to determine whether our operations are being conducted in accordance with applicable requirements. Such investigations and audits may be initiated due to a number of reasons, including as a result of a whistleblower complaint. Such investigations and audits could result in administrative, civil or criminal liabilities, including repayments, fines, treble or other damages, forfeitures, restitution, or penalties being imposed upon us, the suspension of government export licenses or the suspension or debarment from future U.S. government contracting. U.S. government investigations often take years to complete. The U.S. government also reserves the right to debar a contractor from receiving new government contracts for fraudulent, criminal or other seriously improper conduct. The U.S. government could void any contracts found to be tainted by fraud. Like many defense contractors, we have received audit reports recommending the reduction of certain contract prices because, for example, cost or pricing data or cost accounting practices used to price and negotiate those contracts may not have conformed to government regulations. Some of these audit reports recommend that certain payments be repaid, delayed, or withheld, and may involve substantial amounts. We have made voluntary refunds in those cases we believe appropriate, have settled some allegations and, in some cases, continue to negotiate and/or litigate. The Company may be, and in some cases has been, required to make payments into escrow of disputed liabilities while the related litigation is pending. If the litigation is resolved in the Company's favor, any such payments will be returned to the Company with interest. Our final allowable incurred costs for each year are also subject to audit and have, from time to time, resulted in disputes between us and the U.S. government, with litigation resulting at the Court of Federal Claims (COFC) or the Armed Services Board of Contract Appeals (ASBCA) or their related courts of appeals. In addition, the DOJ has, from time to time, convened grand juries to investigate possible irregularities by us. We also provide products and services to customers outside of the U.S., and those sales are subject to local government laws, regulations and procurement policies and practices. Our compliance with such local government regulations or any applicable U.S. government regulations (e.g., the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR)) may also be investigated or audited. In addition, we accrue for liabilities associated with those matters that are probable and can be reasonably estimated. The most likely liability amount to be incurred is accrued based upon a range of estimates. Where no amount within a range of estimates is more likely, then we accrue the minimum amount. Other than as specifically disclosed in this Form 10-K, we do not expect these audits, investigations or disputes to have a material effect on our results of operations, financial condition or liquidity, either individually or in the aggregate.

Tax Treatment of Carrier and Otis Dispositions. Management has determined that the distributions of Carrier and Otis on April 3, 2020, and certain related internal business separation transactions, qualified as tax-free under applicable law. In making these determinations, we applied the tax law in the relevant jurisdictions to our facts and circumstances and obtained tax rulings from the relevant taxing authorities, tax opinions, and/or other external tax advice related to the concluded tax treatment. If the completed distributions of Carrier or Otis or certain internal business separation transactions, were to fail to qualify for tax-free treatment, the Company could be subject to significant liabilities, and there could be material adverse impacts on the Company's business, results of operations, financial condition or liquidity in future reporting periods.

Legal Proceedings. The Company and its subsidiaries are subject to various contract pricing disputes, government investigations and litigation matters across jurisdictions, updates to certain of which are set forth below.

Cost Accounting Standards Claims

As previously disclosed, in April 2019, a Divisional Administrative Contracting Officer (DACO) of the United States DCMA asserted a claim against Pratt & Whitney to recover alleged overpayments of approximately \$1.73 billion plus interest (\$843 million at December 31, 2022). The claim is based on Pratt & Whitney's alleged noncompliance with Cost Accounting Standards (CAS) from January 1, 2007 to March 31, 2019, due to its method of allocating independent research and development costs to government contracts. Pratt & Whitney believes that the claim is without merit and filed an appeal to the ASBCA on June 7, 2019.

As previously disclosed, in December 2013, a DCMA DACO asserted a claim against Pratt & Whitney to recover alleged overpayments of approximately \$177 million plus interest (\$132 million at December 31, 2022). The claim is based on Pratt & Whitney's alleged noncompliance with CAS from January 1, 2005 to December 31, 2012, due to its method of determining the cost of collaborator parts used in the calculation of material overhead costs for government contracts. In 2014, Pratt & Whitney filed an appeal to the ASBCA. An evidentiary hearing was held and completed in June 2019. On November 22, 2021, the ASBCA issued its written decision sustaining in part and denying in part Pratt & Whitney's appeal. The ASBCA rejected the DCMA's asserted measure of the cost of collaborator parts, and ruled substantially in Pratt & Whitney's favor on other liability issues. The ASBCA remanded the appeal to the parties for resolution of damages issues, which could require further proceedings at the ASBCA. On December 23, 2021, the DCMA filed a motion with the ASBCA seeking partial reconsideration of the November 22, 2021 decision. The motion for reconsideration was denied on August 29, 2022. On December 23, 2022, the DCMA filed an appeal to the United States Court of Appeals for the Federal Circuit. We continue to believe that the

ASBCA's rejection of the DCMA's asserted measure of the cost of collaborator parts is well supported in fact and law and likely will be sustained. In December 2018, a DCMA DACO issued a second claim against Pratt & Whitney that similarly alleges that its method of determining the cost of collaborator parts does not comply with the CAS for calendar years 2013 through 2017. This second claim, which asserts the same measure of the cost of collaborator parts rejected by the ASBCA's recent decision, demands payment of \$269 million plus interest (\$96 million at December 31, 2022). Pratt & Whitney appealed this second claim to the ASBCA in January 2019. Although subject to further litigation at the ASBCA and potentially further litigation at the ASBCA and potentially further appellate proceedings, we continue to believe that the November 22, 2021 decision in the first claim will apply with equal legal effect to the second claim. Accordingly, we believe that the amounts demanded by the DCMA as set forth in the two claims are without legal basis and that any damages owed to the U.S. government for the two claims will not have a material adverse effect on our results of operations, financial condition or liquidity.

Thales-Raytheon Systems and Related Matters

As previously disclosed, in 2019, Raytheon Company received a subpoena from the Securities and Exchange Commission (SEC) seeking information in connection with an investigation into whether there were improper payments made by Raytheon Company, our joint venture known as Thales-Raytheon Systems (TRS) or anyone acting on their behalf in connection with TRS or Raytheon Company contracts in certain Middle East countries since 2014. In the first quarter of 2020, the DOJ advised Raytheon Company it had opened a parallel criminal investigation. In the third quarter of 2020, Raytheon Company received an additional subpoena from the SEC, seeking information and documents as part of its ongoing investigation. The Company maintains a rigorous anti-corruption compliance program, and continues to cooperate fully with the SEC's and DOJ's inquiries and to examine through our own investigation whether there were any improper payments or any such conduct that was in violation of Raytheon Company policy. At this time, the Company is unable to predict the outcome of the SEC's or DOJ's inquiries. Based on the information available to date, however, we cannot reasonably estimate the range of any potential loss or impact to the business that may result, but do not believe that the results of these inquiries will have a material adverse effect on our results of operations, financial condition or liquidity.

DOJ Investigation, Contract Pricing Disputes and Related Civil Litigation

As previously disclosed, on October 8, 2020, the Company received a criminal subpoena from the DOJ seeking information and documents in connection with an investigation relating to financial accounting, internal controls over financial reporting, and cost reporting regarding Raytheon Company's Missiles & Defense (RMD) business since 2009. The investigation involves multi-year contracts subject to governmental regulation, including potential civil defective pricing claims for three RMD contracts entered into between 2011 and 2013. As part of the same investigation, on March 24, 2021, the Company received a second criminal subpoena from the DOJ seeking documents relating to a different RMD contract entered into in 2017. We are cooperating fully with, and will continue to review the issues raised by the DOJ's ongoing investigation. We continue to make substantial progress in our internal review of the issues raised by the DOJ investigation. Although we believe we have defenses to the potential claims, the Company has determined that there is a probable risk of liability for damages, interest and potential penalties and has accrued approximately \$290 million for this matter. We are currently unable to estimate an incremental loss, if any, which may result when the DOJ investigation is complete. Based on the information available to date, we do not believe the results of the DOJ investigation or of any pending or potential civil litigation will have a material adverse effect on our results of operations, financial condition or liquidity.

Four shareholder lawsuits were filed against the Company after the DOJ investigation was first disclosed. A putative securities class action lawsuit was filed in the United States District Court for the District of Arizona against the Company and certain of its executives alleging that the defendants violated federal securities laws by making material misstatements in regulatory filings regarding internal controls over financial reporting in RMD. Three shareholder derivative lawsuits were also filed in the United States District Court for the District of Delaware against the former Raytheon Company Board of Directors, the Company and certain of its executives, each alleging that defendants violated federal securities laws and breached their fiduciary duties by engaging in improper accounting practices, failing to implement sufficient internal financial and compliance controls, and making a series of false and misleading statements in regulatory filings. We believe that each of these lawsuits lacks merit.

Darnis, et al. and Related Matter

As previously disclosed, on August 12, 2020, several former employees of UTC or its subsidiaries filed a putative class action complaint in the United States District Court for the District of Connecticut against the Company, Otis, Carrier, the former members of the UTC Board of Directors, and the members of the Carrier and Otis Boards of Directors (Geraud Darnis, et al. v. Raytheon Technologies Corporation, et al.). The complaint challenged the method by which UTC equity awards were converted to Company, Otis, and Carrier equity awards following the separation of UTC into three independent, publicly-traded companies on April 3, 2020. The complaint also claimed that the defendants are liable for breach of certain equity

compensation plans and also asserted claims under certain provisions of the Employee Retirement Income Security Act of 1974 (ERISA). On September 13, 2021, Plaintiffs filed an amended complaint which supersedes the initial complaint and continues to assert claims for breach of the equity compensation plans against the Company, Otis and Carrier, but no longer asserts ERISA claims. Further, no claim is made in the amended complaint against any current or former director of any of the three companies. Plaintiffs seek money damages, attorneys' fees and other relief. On September 30, 2022, in response to motions to dismiss filed by the Company, Otis and Carrier, the Court dismissed the class action in its entirety with prejudice. On October 26, 2022, Plaintiffs filed an appeal to the United States Court of Appeals for the Second Circuit. We continue to believe that this matter will not have a material adverse effect on our results of operations, financial condition or liquidity. On December 6, 2022, a shareholder derivative lawsuit was filed in the Delaware Court of Chancery against the Company and certain current and former members of its Board of Directors, alleging that defendants breached their fiduciary duties in May 2020 by amending the method by which UTC equity awards were converted to certain Company equity awards following the separation of UTC into three independent, publicly-traded companies. We believe that the lawsuit lacks merit.

DOJ Grand Jury Investigation and Related Civil Litigation

The Company received a grand jury subpoena in late 2019, as part of a DOJ criminal investigation into purported agreements not to solicit or hire employees in violation of the federal antitrust laws. While the investigation has focused on alleged hiring restrictions between and among Pratt & Whitney and certain of its suppliers of outsourced engineering services, the subpoena also included requests regarding Collins. Since receipt of the subpoena, the Company has been cooperating with the DOJ investigation. On December 15, 2021, a criminal indictment was filed in the United States District Court for the District of Connecticut, against a former Pratt & Whitney employee and other employees of certain outsourced engineering suppliers charging each of them with one count of violating the federal antitrust laws. No current or former Collins employees were named in the indictment. We have been advised that the Company is a target of the DOJ investigation, and we continue to cooperate with the investigation. No criminal charge has been filed against the Company or its affiliates.

After the criminal charges against the individuals were filed, numerous civil class action antitrust lawsuits have been filed against Pratt & Whitney and other corporate and individual defendants in the United States District Court for the District of Connecticut. The allegations in each of the civil lawsuits track the factual assertions in the criminal indictment and generally allege that Pratt & Whitney and the other defendants agreed to restrict the hiring and recruiting of certain engineers and skilled laborers in a manner that violated federal antitrust laws. Plaintiffs in each of the civil lawsuits seek to represent different purported classes of engineers and skilled laborers employed by Pratt & Whitney and other supplier-defendants since 2011. Plaintiffs in each of the lawsuits seek treble damages in an undetermined amount, plus attorneys' fees and costs of suit. All of the lawsuits have been consolidated and a single amended class action complaint was filed. We believe that the claims asserted lack merit. Based on the information available to date, we do not believe that this matter will have a material adverse effect on our results of operations, financial condition or liquidity.

Where appropriate, we have recorded loss contingency accruals for the above-referenced matters, and the amounts individually, or in the aggregate, are not material.

Other. As described in "Note 17: Guarantees," we extend performance and operating cost guarantees beyond our normal warranty and service policies for extended periods on some of our products. We have accrued our estimate of the liability that may result under these guarantees and for service costs that are probable and can be reasonably estimated.

We also have other commitments and contingent liabilities related to legal proceedings, self-insurance programs and matters arising out of the normal course of business. We accrue contingencies based upon a range of possible outcomes. If no amount within this range is a better estimate than any other, then we accrue the minimum amount.

In the ordinary course of business, the Company and its subsidiaries are also routinely defendants in, parties to or otherwise subject to many pending and threatened legal actions, claims, disputes and proceedings. These matters are often based on alleged violations of contract, product liability, warranty, regulatory, environmental, health and safety, employment, intellectual property, tax and other laws. In some instances, claims for substantial monetary damages are asserted against the Company and its subsidiaries and could result in fines, penalties, compensatory or treble damages or non-monetary relief. We do not believe that these matters will have a material adverse effect upon our results of operations, financial condition or liquidity.

NOTE 19: ACCUMULATED OTHER COMPREHENSIVE LOSS

A summary of the changes in each component of Accumulated other comprehensive (loss) income, net of tax is provided below:

<i>(dollars in millions)</i>	Foreign Currency Translation	Defined Benefit Pension and Postretirement Plans	Unrealized Hedging (Losses) Gains	Accumulated Other Comprehensive (Loss) Income
Balance at December 31, 2019	\$ (3,211)	\$ (6,772)	\$ (166)	\$ (10,149)
Other comprehensive income (loss) before reclassifications, net	609	1,842	181	2,632
Amounts reclassified, pre-tax	—	373	82	455
Tax benefit (expense)	25	(510)	(62)	(547)
Separation of Carrier and Otis, net of tax	3,287	584	4	3,875
Balance at December 31, 2020	\$ 710	\$ (4,483)	\$ 39	\$ (3,734)
Other comprehensive income before reclassifications, net	(647)	3,210	(226)	2,337
Amounts reclassified, pre-tax	—	258	(28)	230
Tax benefit (expense)	(14)	(813)	79	(748)
Balance at December 31, 2021	\$ 49	\$ (1,828)	\$ (136)	\$ (1,915)
Other comprehensive income (loss) before reclassifications, net	(1,050)	1,225	(246)	(71)
Amounts reclassified, pre-tax	2	129	103	234
Tax benefit (expense)	(6)	(308)	48	(266)
Balance at December 31, 2022	\$ (1,005)	\$ (782)	\$ (231)	\$ (2,018)

Amounts reclassified that relate to our defined benefit pension and postretirement plans include the amortization of prior service costs and actuarial net gains or losses recognized during each period presented. These costs are recorded as components of net periodic pension income for each period presented. See “Note 11: Employee Benefit Plans” for additional details.

All noncontrolling interests with redemption features, such as put options, that are not solely within our control (redeemable noncontrolling interests) are reported in the mezzanine section of the Consolidated Balance Sheet, between liabilities and equity, at the greater of redemption value or initial carrying value.

NOTE 20: STOCK-BASED COMPENSATION

RTC’s long-term incentive plans authorize various types of market and performance based incentive awards that may be granted to officers and key employees. Certain historic awards remain outstanding under predecessor plans. The Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated (2018 LTIP) was approved by shareowners on April 26, 2021. A total of 134.8 million shares have been authorized for issuance pursuant to awards under the 2018 LTIP including shares assumed from predecessor plans. There is also an additional 21.5 million shares for future issuance due to adjustments related to the Separation Transactions. As of December 31, 2022, approximately 81.2 million shares remain available for awards under the 2018 LTIP. The 2018 LTIP does not contain aggregate annual award limits, however, it sets an annual award limit per participant. The 2018 LTIP will expire after all authorized shares have been awarded or April 26, 2031, whichever is sooner.

Under the 2018 LTIP, the exercise price of awards is set on the grant date and may not be less than the fair market value per share on that date. Generally, stock appreciation rights and stock options have a term of ten years and a three-year vesting period, subject to limited exceptions. In the event of retirement, annual stock appreciation rights, stock options, and RSUs held for more than one year may become vested and exercisable, subject to certain terms and conditions. LTIP awards with performance-based vesting generally have a minimum three-year vesting period and vest based on actual performance against pre-established metrics. In the event of retirement, performance-based awards held for more than one year, remain eligible to vest based on actual performance relative to performance goals. We have historically repurchased shares of our common stock in an amount at least equal to the number of shares issued under our equity compensation arrangements and will continue to evaluate this policy in conjunction with our overall share repurchase program.

We measure the cost of all share-based payments, including stock options and stock appreciation rights, at fair value on the grant date and recognize this cost in the Consolidated Statement of Operations, net of expected forfeitures, as follows:

<i>(dollars in millions)</i>	2022	2021	2020
Total compensation cost recognized	\$ 420	\$ 442	\$ 330

The associated future income tax benefit recognized was \$91 million, \$83 million and \$63 million for the years ended December 31, 2022, 2021 and 2020, respectively.

For the years ended December 31, 2022, 2021 and 2020, the amount of cash received from the exercise of stock options was \$20 million, \$7 million and \$15 million, respectively, with an associated tax benefit realized of \$32 million, \$42 million and \$48 million, respectively. In addition, for the years ended December 31, 2022, 2021 and 2020, the associated tax benefit realized from the vesting of performance share units (PSUs), restricted stock awards and RSUs was \$80 million, \$44 million and \$58 million, respectively.

At December 31, 2022, there was \$329 million of total unrecognized compensation cost related to non-vested equity awards granted under long-term incentive plans. This cost is expected to be recognized ratably over a weighted-average period of 2.1 years.

A summary of the transactions under our long-term incentive plans for the year ended December 31, 2022 follows.

<i>(shares and units in thousands)</i>	Stock Options		Stock Appreciation Rights		Performance Share Units		Restricted Stock and RSUs	
	Shares	Average Price ⁽¹⁾	Shares	Average Price ⁽¹⁾	Units	Average Price ⁽²⁾	Units	Average Price ⁽¹⁾
Outstanding at:								
December 31, 2021	1,849	\$ 78.36	33,061	\$ 78.62	1,265	\$ 73.75	11,443	\$ 66.18
Granted	102	94.04	3,225	94.06	990	96.15	3,441	97.76
Exercised / earned	(283)	70.20	(3,827)	70.53	(1)	80.53	(4,476)	62.03
Cancelled	(11)	94.04	(427)	86.34	(104)	85.06	(651)	78.38
December 31, 2022	1,657	\$ 80.67	32,032	\$ 81.04	2,150	\$ 83.52	9,757	\$ 78.40

(1) Weighted-average exercise price.

(2) Weighted-average grant date fair value.

The weighted-average grant date fair value of stock options and stock appreciation rights granted during 2022, 2021 and 2020 was \$21.80, \$15.60 and \$23.37, respectively. The weighted-average grant date fair value of performance share units, which vest upon achieving certain performance metrics, granted during 2022 and 2021 was \$96.15 and \$73.75, respectively. There were no performance share units granted in 2020. The total fair value of awards vested during the years ended December 31, 2022, 2021 and 2020 was \$346 million, \$287 million and \$284 million, respectively. The total intrinsic value (which is the amount by which the stock price exceeded the exercise price on the date of exercise) of stock options and stock appreciation rights exercised during the years ended December 31, 2022, 2021 and 2020 was \$110 million, \$54 million and \$206 million, respectively. The total intrinsic value (which is the stock price at vesting multiplied by the number of underlying shares) of performance share units and other restricted awards vested was \$427 million, \$256 million and \$295 million during the years ended December 31, 2022, 2021 and 2020, respectively.

The following table summarizes information about equity awards outstanding that are vested and expected to vest as well as equity awards outstanding that are exercisable at December 31, 2022:

<i>(shares in thousands; aggregate intrinsic value in millions)</i>	Equity Awards Vested and Expected to Vest				Equity Awards That Are Exercisable			
	Awards	Average Price ⁽¹⁾	Aggregate Intrinsic Value	Remaining Term ⁽²⁾	Awards	Average Price ⁽¹⁾	Aggregate Intrinsic Value	Remaining Term ⁽²⁾
Stock Options	1,654	\$ 80.61	\$ 34	5.36	1,182	\$ 77.13	\$ 28	4.47
Stock Appreciation Rights	31,896	81.01	635	5.56	22,118	77.68	514	4.52
Performance Share Units	2,105	83.41	212	1.48				
Restricted Stock and RSUs	9,417	78.02	950	1.54				

(1) Weighted-average exercise price per share.

(2) Weighted-average contractual remaining term in years.

The fair value of each option award is estimated on the date of grant using a binomial lattice model. The following table indicates the assumptions used in estimating fair value for awards granted during 2022, 2021 and 2020. Lattice-based option models incorporate ranges of assumptions for inputs; those ranges are as follows:

	2022	2021	2020
Expected volatility	27.9%	29.9%	18.8%
Weighted-average volatility	28 %	30 %	19 %
Expected term (in years)	6.5	6.5	6.5
Expected dividend yield	2.2 %	2.6 %	1.9 %
Risk-free rate	0.02% - 2.1%	0.04% - 1.2%	1.4% - 1.6%

Expected volatilities are based on the returns of our stock, including implied volatilities from traded options on our stock for the binomial lattice model. We use historical data to estimate equity award exercise and employee termination behavior within the valuation model. The expected term represents an estimate of the period of time equity awards are expected to remain outstanding. The risk-free rate is based on the term structure of interest rates at the time of equity award grant.

NOTE 21: SEGMENT FINANCIAL DATA

Our operations, for the periods presented herein, are classified into four principal segments: Collins, Pratt & Whitney, RIS and RMD. The segments are generally based on the management structure of the businesses and the grouping of similar operating companies, where each management organization has general operating autonomy over diversified products and services. The results of RIS and RMD reflect the period subsequent to the completion of the Raytheon merger on April 3, 2020. The Company recently announced its intention to streamline the structure of its core businesses into three principal business segments: Collins Aerospace, Pratt & Whitney and Raytheon. The Company plans to determine the exact composition of each segment and implement the reorganization in the second half of 2023, at which time management will begin to manage its operations under its new segment structure. The changes will require the Company to revise its segment reporting. All segment information included in this Form 10-K is reflective of the existing four segments of Collins, Pratt & Whitney, RIS and RMD in accordance with the management structure in place as of December 31, 2022.

Collins Aerospace is a leading global provider of technologically advanced aerospace and defense products and aftermarket service solutions for aircraft manufacturers, airlines, and regional, business and general aviation, as well as for defense and commercial space operations. Collins' product lines include integrated avionics systems, aviation systems, communications systems, navigation systems, electric power generation, management and distribution systems, environmental control systems, flight control systems, air data and aircraft sensing systems, engine control systems, engine components, engine nacelle systems, including thrust reversers and mounting pylons, interior and exterior aircraft lighting, aircraft seating and cargo systems, evacuation systems, landing systems, including landing gear, wheels and braking systems, hoists and winches, fire and ice detection and protection systems, actuation systems, and propeller systems. Collins also designs, manufactures, and supports cabin interior, oxygen systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management systems. Collins' solutions support human space exploration with environmental control and power systems and extravehicular activity suits and support government and defense customer missions by providing airborne intelligence, surveillance and reconnaissance systems, test and training range systems, crew escape systems, and simulation and training solutions. Collins also provides connected aviation solutions and services through worldwide voice and data communication networks and solutions. Aftermarket services include spare parts, overhaul and repair, engineering and technical support, training and fleet management solutions, asset management services and information management services.

Pratt & Whitney is among the world's leading suppliers of aircraft engines for commercial, military, business jet and general aviation customers. Pratt & Whitney's Commercial Engines and Military Engines businesses design, develop, produce and maintain families of large engines for wide- and narrow-body and large regional aircraft for commercial customers and for fighter, bomber, tanker and transport aircraft for military customers. Pratt & Whitney's small engine business, Pratt & Whitney Canada (P&WC), is among the world's leading suppliers of engines powering regional airlines, general and business aviation, as well as helicopters. Pratt & Whitney also produces, sells and services military and commercial auxiliary power units. Pratt & Whitney provides fleet management services and aftermarket maintenance, repair and overhaul services in all of these segments.

Raytheon Intelligence & Space is a leading provider of integrated space, communication and sensor systems, and cyber and software solutions to intelligence, defense, federal and commercial customers. RIS's Sensing and Effects business provides intelligence, surveillance and reconnaissance, precision targeting radars, and electronic warfare solutions across all domains, as well as end-to-end space solutions, including missile warning and intelligence, weather, and navigation. RIS Sensing and Effects products include the Multi-Spectral Targeting System (MTS) product family of sensors, Electro Optical Distributed

Aperture System (EODAS), AN/APG-79 AESA Radar, AN/APG-82(V)1 AESA Radar, Next Generation Jammer Mid-Band (NGJ-MB), Global Positioning System (GPS) Next-Generation Operational Control System (GPS-OCX), Next Generation Overhead Persistent Infrared (OPIR), and Future Operationally Resilient Ground Evolution (FORGE). RIS's Command, Control and Communications business provides automated battle management and secure, resilient communications systems, including terminals providing satellite communications connecting submarines, ships, aircraft and ground stations for the U.S. Department of Defense (DoD), identification friend or foe interrogators and transponders, and automation, surveillance, navigation, and landing solutions including the Joint Precision Approach Landing System (JPALS). RIS's Cyber, Training and Services provides full-spectrum cyber and service solutions in every domain, including offensive and defensive cyber services for certain classified and department of defense customers, cyber protection solutions which secure and monitor information technology (IT) systems and networks across the federal and commercial domains, and high consequence missions which provide classified special mission support and IT intelligence services to certain classified customers.

Raytheon Missiles & Defense is a leading provider of end-to-end solutions for U.S. and foreign government customers designed to detect, track and engage threats. RMD's systems span air, land, sea and space, and are designed to defend against the most sophisticated threats. RMD's Air Power business provides air-to-air and air-to-ground weapons that deliver power and precision to fourth- and fifth-generation fighters including the Advanced Medium Range Air-to-Air Missile (AMRAAM) and StormBreaker smart weapon, and ground-based sensors for persistent wide-area defense and space surveillance including Early Warning Radar. RMD's Land Warfare and Air Defense business provides capabilities ranging from precision weapons including Excalibur, Javelin, Stinger and TOW to integrated air and missile defense, including the proven Patriot air and missile defense system, the Guidance Enhanced Missile (GEM-T), the National Advanced Surface-to-Air Missile System (NASAMS) and the GhostEye family of radars, including the Lower Tier Air and Missile Defense Sensor (LTAMDS). RMD's Naval Power business provides advanced sensors, command and control and weapons to protect ships and sailors around the world, including AIM-9X Sidewinder, Tomahawk, Standard Missile 2 (SM-2) and Standard Missile 6 (SM-6) missiles, and the SPY-6 family of radars. RMD's Strategic Missile Defense business provides technologically advanced sensors, satellites and interceptors including the AN/TPY-2 radar, Standard Missile 3 (SM-3) Block IA/IB/IIA missiles and development of future integrated missile defense solutions. RMD's Advanced Technology business focuses on the development and early introduction of next-generation technologies and systems, including hypersonics, counter-hypersonics, directed energy, advanced weapons and next-generation radars.

Segment Information. Total sales and operating profit by segment include inter-segment sales which are generally recorded at cost-plus a specified fee or at a negotiated fixed price. These pricing arrangements may result in margins different than what the purchasing segment realizes on the ultimate third-party sales.

We present a FAS/CAS operating adjustment outside of segment results, which represents the difference between the service cost component of our pension and PRB expense under the Financial Accounting Standards (FAS) requirements of U.S. GAAP and our pension and PRB expense under U.S. government Cost Accounting Standards (CAS) primarily related to our RIS and RMD segments. While the ultimate liability for pension and PRB costs under FAS and CAS is similar, the pattern of cost recognition is different. Over time, we generally expect to recover the related RIS and RMD pension and PRB liabilities through the pricing of our products and services to the U.S. government. Collins and Pratt & Whitney generally record pension and PRB expense on a FAS basis.

Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions, the amortization of customer contractual obligations related to loss making or below market contracts acquired, and goodwill impairment. These adjustments are not considered part of management's evaluation of segment results.

Segment information for the years ended December 31 are as follows:

<i>(dollars in millions)</i>	Net Sales			Operating Profit (Loss)			Operating Profit (Loss) Margins		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Collins Aerospace	\$ 20,597	\$ 18,449	\$ 19,288	\$ 2,343	\$ 1,759	\$ 1,466	11.4 %	9.5 %	7.6 %
Pratt & Whitney	20,530	18,150	16,799	1,075	454	(564)	5.2 %	2.5 %	(3.4)%
Raytheon Intelligence & Space	14,312	15,180	11,069	1,342	1,833	1,020	9.4 %	12.1 %	9.2 %
Raytheon Missiles & Defense	14,863	15,539	11,396	1,519	2,004	880	10.2 %	12.9 %	7.7 %
Total segment	70,302	67,318	58,552	6,279	6,050	2,802	8.9 %	9.0 %	4.8 %
Eliminations and other ⁽¹⁾	(3,228)	(2,930)	(1,965)	(174)	(133)	(107)			
Corporate expenses and other unallocated items ⁽²⁾	—	—	—	(318)	(552)	(590)			
FAS/CAS operating adjustment	—	—	—	1,520	1,796	1,106			
Acquisition accounting adjustments ⁽³⁾	—	—	—	(1,893)	(2,203)	(5,100)			
Consolidated	\$ 67,074	\$ 64,388	\$ 56,587	\$ 5,414	\$ 4,958	\$ (1,889)	8.1 %	7.7 %	(3.3)%

(1) Includes the operating results of certain smaller non-reportable business segments. 2020 amounts include Forcepoint, LLC, which was acquired as part of the Raytheon merger, and subsequently disposed of on January 8, 2021.

(2) Includes the net expenses related to the U.S. Army's LTAMDS project.

(3) Operating profit (loss) in 2020 includes the \$3.2 billion goodwill impairment charge in the second quarter of 2020 related to two Collins reporting units. Refer to "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" for additional information.

<i>(dollars in millions)</i>	Total Assets		Capital Expenditures			Depreciation & Amortization		
	2022	2021	2022	2021	2020	2022	2021	2020
Collins Aerospace ⁽¹⁾	\$ 67,030	\$ 67,564	\$ 655	\$ 665	\$ 638	\$ 742	\$ 728	\$ 736
Pratt & Whitney ⁽¹⁾	36,205	33,414	949	700	565	724	642	729
Raytheon Intelligence & Space ⁽¹⁾	21,174	21,545	320	305	218	209	187	154
Raytheon Missiles & Defense ⁽¹⁾	27,852	28,766	260	287	280	333	333	228
Total segment	152,261	151,289	2,184	1,957	1,701	2,008	1,890	1,847
Corporate, eliminations and other	6,603	10,115	104	177	94	99	152	155
Acquisition accounting adjustments						2,001	2,515	2,154
Consolidated	\$ 158,864	\$ 161,404	\$ 2,288	\$ 2,134	\$ 1,795	\$ 4,108	\$ 4,557	\$ 4,156

(1) Total assets include acquired intangible assets and the property, plant and equipment fair value adjustment. Related amortization expense is included in Acquisition accounting adjustments.

Geographic External Sales by Origin and Long-Lived Assets. Geographic external sales are attributed to the geographic regions based on their location of origin. U.S. external sales include export sales to commercial customers outside the U.S. and sales to the U.S. government, commercial and affiliated customers, which are known to be for resale to customers outside the U.S. Long-lived assets are Fixed assets, net attributed to the specific geographic regions.

<i>(dollars in millions)</i>	External Net Sales			Long-Lived Assets	
	2022	2021	2020	2022	2021
United States	\$ 57,869	\$ 55,837	\$ 48,560	\$ 12,162	\$ 11,731
International					
Europe	3,874	3,630	3,696	1,132	1,255
Asia Pacific	1,778	1,748	1,574	801	854
Middle East and North Africa	173	136	103	113	129
Other	3,380	3,037	2,654	962	1,003
Consolidated	\$ 67,074	\$ 64,388	\$ 56,587	\$ 15,170	\$ 14,972

Disaggregation of Revenue. We also disaggregate our contracts from customers by geographic region based on customer location, by customer and by sales type. Our geographic region based on customer location uses end user customer location where known or practical to determine, or in instances where the end user customer is not known or not practical to determine, we utilize "ship to" location as the customer location. In addition, for our RIS and RMD segments, we disaggregate our

contracts from customers by contract type. We believe these categories best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors.

Segment sales disaggregated by geographic region for the years ended December 31 are as follows:

2022						
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
United States	\$ 9,847	\$ 10,433	\$ 11,418	\$ 9,482	\$ 10	\$ 41,190
Europe	5,374	4,211	418	1,108	—	11,111
Asia Pacific	2,021	3,775	747	1,514	—	8,057
Middle East and North Africa	474	450	231	2,444	—	3,599
Other	1,240	1,658	141	78	—	3,117
Consolidated net sales	18,956	20,527	12,955	14,626	10	67,074
Inter-segment sales	1,641	3	1,357	237	(3,238)	—
Business segment sales	\$ 20,597	\$ 20,530	\$ 14,312	\$ 14,863	\$ (3,228)	\$ 67,074

2021						
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
United States	\$ 9,341	\$ 9,034	\$ 12,126	\$ 9,495	\$ 15	\$ 40,011
Europe	4,421	3,488	434	1,255	—	9,598
Asia Pacific	1,851	3,885	771	1,462	—	7,969
Middle East and North Africa	462	441	469	3,007	—	4,379
Other	915	1,302	144	70	—	2,431
Consolidated net sales	16,990	18,150	13,944	15,289	15	64,388
Inter-segment sales	1,459	—	1,236	250	(2,945)	—
Business segment sales	\$ 18,449	\$ 18,150	\$ 15,180	\$ 15,539	\$ (2,930)	\$ 64,388

2020						
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
United States	\$ 10,132	\$ 8,534	\$ 8,704	\$ 6,906	\$ 284	\$ 34,560
Europe	4,643	2,726	307	1,031	149	8,856
Asia Pacific	1,810	4,024	637	1,132	41	7,644
Middle East and North Africa	421	505	410	2,077	30	3,443
Other	904	1,001	83	73	23	2,084
Consolidated net sales	17,910	16,790	10,141	11,219	527	56,587
Inter-segment sales	1,378	9	928	177	(2,492)	—
Business segment sales	\$ 19,288	\$ 16,799	\$ 11,069	\$ 11,396	\$ (1,965)	\$ 56,587

Segment sales disaggregated by type of customer for the years ended December 31 are as follows:

<i>(dollars in millions)</i>	2022					
	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
U.S. government ⁽¹⁾	\$ 4,337	\$ 5,272	\$ 11,221	\$ 9,477	\$ 10	\$ 30,317
Foreign military sales through the U.S. government	238	1,115	604	3,085	—	5,042
Foreign government direct commercial sales	978	474	827	2,048	—	4,327
Commercial aerospace and other commercial	13,403	13,666	303	16	—	27,388
Consolidated net sales	18,956	20,527	12,955	14,626	10	67,074
Inter-segment sales	1,641	3	1,357	237	(3,238)	—
Business segment sales	\$ 20,597	\$ 20,530	\$ 14,312	\$ 14,863	\$ (3,228)	\$ 67,074

(1) Excludes foreign military sales through the U.S. government.

<i>(dollars in millions)</i>	2021					
	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
U.S. government ⁽¹⁾	\$ 4,685	\$ 5,140	\$ 11,844	\$ 9,493	\$ 15	\$ 31,177
Foreign military sales through the U.S. government	168	1,273	825	3,280	—	5,546
Foreign government direct commercial sales	1,095	541	844	2,513	—	4,993
Commercial aerospace and other commercial	11,042	11,196	431	3	—	22,672
Consolidated net sales	16,990	18,150	13,944	15,289	15	64,388
Inter-segment sales	1,459	—	1,236	250	(2,945)	—
Business segment sales	\$ 18,449	\$ 18,150	\$ 15,180	\$ 15,539	\$ (2,930)	\$ 64,388

(1) Excludes foreign military sales through the U.S. government.

<i>(dollars in millions)</i>	2020					
	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
U.S. government ⁽¹⁾	\$ 5,159	\$ 5,193	\$ 8,512	\$ 6,896	\$ 202	\$ 25,962
Foreign military sales through the U.S. government	218	1,229	640	2,498	—	4,585
Foreign government direct commercial sales	923	583	740	1,725	3	3,974
Commercial aerospace and other commercial	11,610	9,785	249	100	322	22,066
Consolidated net sales	17,910	16,790	10,141	11,219	527	56,587
Inter-segment sales	1,378	9	928	177	(2,492)	—
Business segment sales	\$ 19,288	\$ 16,799	\$ 11,069	\$ 11,396	\$ (1,965)	\$ 56,587

(1) Excludes foreign military sales through the U.S. government.

Sales to Airbus primarily relate to Pratt & Whitney and Collins products, and prior to discounts and incentives were approximately 14%, 12% and 13% of total net sales in 2022, 2021 and 2020, respectively.

Segment sales disaggregated by sales type for the years ended December 31 are as follows:

	2022					
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
Products	\$ 14,857	\$ 12,411	\$ 10,261	\$ 13,234	\$ 10	\$ 50,773
Services	4,099	8,116	2,694	1,392	—	16,301
Consolidated net sales	18,956	20,527	12,955	14,626	10	67,074
Inter-segment sales	1,641	3	1,357	237	(3,238)	—
Business segment sales	\$ 20,597	\$ 20,530	\$ 14,312	\$ 14,863	\$ (3,228)	\$ 67,074

	2021					
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
Products	\$ 13,404	\$ 11,189	\$ 10,735	\$ 13,927	\$ 15	\$ 49,270
Services	3,586	6,961	3,209	1,362	—	15,118
Consolidated net sales	16,990	18,150	13,944	15,289	15	64,388
Inter-segment sales	1,459	—	1,236	250	(2,945)	—
Business segment sales	\$ 18,449	\$ 18,150	\$ 15,180	\$ 15,539	\$ (2,930)	\$ 64,388

	2020					
<i>(dollars in millions)</i>	Collins Aerospace	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
Products	\$ 14,664	\$ 10,186	\$ 7,775	\$ 10,232	\$ 462	\$ 43,319
Services	3,246	6,604	2,366	987	65	13,268
Consolidated net sales	17,910	16,790	10,141	11,219	527	56,587
Inter-segment sales	1,378	9	928	177	(2,492)	—
Business segment sales	\$ 19,288	\$ 16,799	\$ 11,069	\$ 11,396	\$ (1,965)	\$ 56,587

RIS and RMD segment sales disaggregated by contract type for the years ended December 31 are as follows:

	2022		2021		2020	
<i>(dollars in millions)</i>	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Raytheon Intelligence & Space	Raytheon Missiles & Defense
Fixed-price	\$ 5,357	\$ 8,763	\$ 6,338	\$ 9,406	\$ 4,526	\$ 7,080
Cost-type	7,598	5,863	7,606	5,883	5,615	4,139
Consolidated net sales	12,955	14,626	13,944	15,289	10,141	11,219
Inter-segment sales	1,357	237	1,236	250	928	177
Business segment sales	\$ 14,312	\$ 14,863	\$ 15,180	\$ 15,539	\$ 11,069	\$ 11,396

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

As required by Rule 13a-15 under the Securities Exchange Act of 1934, as amended, we carried out an evaluation under the supervision and with the participation of our management, including the Chairman, President and Chief Executive Officer (CEO), the Executive Vice President and Chief Financial Officer (CFO) and the Corporate Vice President and Controller (Controller), of the effectiveness of the design and operation of our disclosure controls and procedures. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our CEO, CFO and Controller concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our CEO, CFO and Controller, as appropriate, to allow timely decisions regarding required disclosure.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with accounting principles generally accepted in the U.S. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its 2013 Internal Control – Integrated Framework. Our management has concluded that based on its assessment, our internal control over financial reporting was effective as of December 31, 2022. The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report which is set forth in Item 8 of this Annual Report on Form 10-K. There were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 with respect to directors, the Audit Committee of the Board of Directors, audit committee financial experts, and the procedures by which our shareowners may recommend nominees to our Board of Directors is incorporated herein by reference to the sections of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Election of Directors” (including under the subheadings “Nominees” and “How Candidates Are Identified”) and “Corporate Governance” (including under the subheading “Board Committees”).

Information about our Executive Officers

The following persons are executive officers of Raytheon Technologies Corporation:

Name	Title	Other Business Experience Since 1/1/2018	Age as of 2/6/2023
Christopher T. Calio	Chief Operating Officer, (since March 2022)	President, Pratt & Whitney; President, Commercial Engines, Pratt & Whitney; Executive Assistant to the Chairman & CEO, United Technologies Corporation	49
Kevin G. DaSilva	Corporate Vice President, Treasurer, Raytheon Technologies Corporation (since April 2020)	Vice President and Treasurer, Raytheon Company	59
Shane G. Eddy	President, Pratt & Whitney (since March 2022)	Chief Operations Officer, Pratt & Whitney; Senior Vice President, Operations, Pratt & Whitney	58
Gregory J. Hayes	Chairman (since June 2021) President and Chief Executive Officer, Raytheon Technologies Corporation (since November 2014)	President, Chief Executive Officer and Director, Raytheon Technologies Corporation; Chairman, President and Chief Executive Officer, United Technologies Corporation	62
Amy L. Johnson	Corporate Vice President, Controller, Raytheon Technologies Corporation (since September 2021)	Vice President, Finance, Pratt & Whitney Commercial Engines; Vice President and Controller, Pratt & Whitney	48
Wesley D. Kremer	President, Raytheon Missiles & Defense (since April 2020)	Vice President of Raytheon Company and President of its Missile Systems business unit; President, Integrated Defense Systems, Raytheon Company	58
Ramsaran Maharajh, Jr.	Executive Vice President and General Counsel, Raytheon Technologies Corporation (since December 2021)	Vice President, Legal, Raytheon Technologies Corporation; Chief of Staff, Office of the Chief Executive Officer, Raytheon Technologies Corporation; Executive Assistant to Chairman & CEO, United Technologies Corporation; Vice President & General Counsel, Pratt & Whitney	51
Neil G. Mitchill, Jr.	Executive Vice President and Chief Financial Officer, Raytheon Technologies Corporation (since April 2021)	Corporate Vice President, Financial Planning & Analysis & Investor Relations, Raytheon Technologies Corporation; Acting Senior Vice President & Chief Financial Officer, United Technologies Corporation; Corporate Vice President, FP&A and Investor Relations, United Technologies Corporation; Vice President & Chief Financial Officer, Pratt & Whitney	47
Stephen J. Timm	President, Collins Aerospace (since February 2020)	President, Avionics, Collins Aerospace; Vice President and General Manager, Avionics, Collins Aerospace; Vice President and General Manager, Avionics, Rockwell Collins, Inc.; Vice President & General Manager, Air Transport Systems, Rockwell Collins, Inc.	54

Name	Title	Other Business Experience Since 1/1/2018	Age as of 2/6/2023
Dantaya M. Williams	Executive Vice President & Chief Human Resources Officer, Raytheon Technologies Corporation (since June 2020)	Vice President, Human Resources, Pratt & Whitney Commercial Engines	48

All of the officers serve at the pleasure of the Board of Directors of Raytheon Technologies Corporation or the subsidiary designated.

Information concerning Section 16(a) compliance is incorporated herein by reference to the section of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Other Important Information” under the heading “Delinquent Section 16(a) Reports.” We have adopted a code of conduct that applies to all our directors, officers, employees and representatives. Information regarding our Code of Conduct is incorporated herein by reference to the section of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Other Important Information” under the heading “Corporate Governance Information, Code of Conduct and How to Contact the Board.” This code is publicly available on our website at <http://www.rtx.com/Our-Company/ethics-and-compliance>. Amendments to the code of conduct and any grant of a waiver from a provision of the code requiring disclosure under applicable Securities and Exchange Commission (SEC) rules will be disclosed on our website. Our Corporate Governance Guidelines and the charters of our Board of Directors’ Audit Committee, Finance Committee, Governance and Public Policy Committee, Human Capital and Compensation Committee and Special Activities Committee are available on our website at <https://www.rtx.com/Our-Company/corporate-governance>. These materials may also be requested in print free of charge by writing to our Investor Relations Department at Raytheon Technologies Corporation, 1000 Wilson Blvd., Arlington, VA 22209.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated herein by reference to the sections of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Executive Compensation,” “Compensation of Directors” and “Report of the Human Capital & Compensation Committee.”

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information relating to security ownership of certain beneficial owners and management is incorporated herein by reference to the sections of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Share Ownership.”

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information about our equity compensation plans that authorize the issuance of shares of our common stock as of December 31, 2022.

	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and right (\$/share) (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by shareowners	18,549,957 ⁽¹⁾	\$ 81.00	81,186,868 ⁽³⁾
Equity compensation plans not approved by shareowners	408,884 ⁽²⁾	—	—

- Consists of the following issuable shares of Common Stock under the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated, effective April 26, 2021 (2018 LTIP) authorized for issuance: (i) upon the exercise of outstanding non-qualified stock options; (ii) upon the exercise of outstanding stock appreciation rights (SARs); (iii) pursuant to outstanding restricted stock unit awards (RSUs) and performance share unit awards (PSUs), assuming performance at the target level (up to an additional 2,129,956 shares of Common Stock could be issued if performance goals are achieved above target); and (iv) upon the settlement of outstanding deferred stock units and RSUs awarded under the Raytheon Technologies Corporation Board of Directors Deferred Stock Unit Plan, as amended and restated effective January 1, 2020. Under the RTX LTIPs, each SAR referred to in clause (ii) is exercisable for a number of shares of Common Stock having a value equal to the difference between the market price of RTX on the exercise date and the exercise price. For purposes of determining the total number of shares to be issued in respect of outstanding SARs as reflected in column (a) above, we have used the NYSE closing price for a share of Common Stock on the last trading day of 2022 of \$100.92. The weighted-average exercise price of outstanding options, warrants and rights shown in column (b) takes into account only the shares identified in clauses (i) and (ii).
- Consists of shares of Common Stock issuable pursuant to outstanding RSUs awards granted under the Raytheon Company 2019 Stock Plan and the Raytheon Company 2010 Stock Plan, as amended (RTN Stock Plans), that were assumed upon the merger of UTC and RTN.
- Represents the maximum number of shares of Common Stock available to be awarded under the Plan as of December 31, 2022. RSUs and PSUs (full-value awards) will result in a reduction in the number of shares of Common Stock available for delivery under the 2018 LTIP in an amount equal to 4.03 times the number of shares subject to the awards. SARs and stock options are not full-value awards and will result in a reduction in the number of shares of Common Stock available for delivery under the Plan on a one-for-one basis.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated herein by reference to the sections of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Corporate Governance” (under the subheading “Director Independence”) and “Other Important Information” (under the subheading “Transactions with Related Persons”).

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by Item 14 is incorporated by reference to the section of our Proxy Statement for the 2023 Annual Meeting of Shareowners titled “Appoint PwC LLP to Serve as Independent Auditor for 2023,” including the information provided in that section with regard to “Audit Fees,” “Audit-Related Fees,” “Tax Fees” and “All Other Fees.”

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements and Schedules

- (1) The following financial statements of Raytheon Technologies Corporation, supplemental information and report of independent registered public accounting firm are included in this Form 10-K:

Report of Independent Registered Public Accounting Firm (PCAOB ID 238)

Consolidated Statement of Operations for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statement of Comprehensive Income (Loss) for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Balance Sheet at December 31, 2022 and 2021

Consolidated Statement of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statement of Changes in Equity for the Years Ended December 31, 2022, 2021 and 2020

Notes to Consolidated Financial Statements

- (2) List of financial statement schedules:

SCHEDULE II—Valuation and Qualifying Accounts for the three years ended December 31, 2022

**Page Number in
Form 10-K**

130

All schedules have been omitted because they are not required, not applicable or the information is otherwise included.

(b) Exhibits:

The following list of exhibits includes exhibits submitted with this Form 10-K as filed with the Securities and Exchange Commission (SEC) and those incorporated by reference to other filings.

- 2.1 Separation and Distribution Agreement, dated as of April 2, 2020, by and among United Technologies Corporation, Otis Worldwide Corporation and Carrier Global Corporation (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 8, 2020).
- 3(i) Restated Certificate of Incorporation, restated as of April 26, 2022, incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 26, 2022.
- 3(ii) Bylaws as amended and restated effective April 25, 2022, incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 26, 2022.
- 4.1 Amended and Restated Indenture, dated as of May 1, 2001, between UTC and The Bank of New York, as trustee, incorporated by reference to Exhibit 4(a) to the Company's Registration Statement on Form S-3 (Commission file number 333-60276) filed with the SEC on May 4, 2001. The Company hereby agrees to furnish to the Commission upon request a copy of each other instrument defining the rights of holders of long-term debt of the Company and its consolidated subsidiaries and any unconsolidated subsidiaries.
- 4.2 Description of Securities, incorporated by reference to Exhibit 4.2 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.1 United Technologies Corporation Annual Executive Incentive Compensation Plan, incorporated by reference to Exhibit A to the Company's Proxy Statement for the 1975 Annual Meeting of Shareowners, Amendment No. 1 thereto, effective January 1, 1995, incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1995, and Amendment No. 2 thereto, effective January 1, 2009, incorporated by reference to Exhibit 10.1 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.

- 10.2 United Technologies Corporation Pension Preservation Plan, as amended and restated, effective January 1, 2020, incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.3 United Technologies Corporation Senior Executive Severance Plan, incorporated by reference to Exhibit 10(vi) to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1992, as amended by Amendment thereto, effective December 10, 2003, incorporated by reference to Exhibit 10.4 of the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2003, and Amendment thereto, effective June 11, 2008, incorporated by reference to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended June 30, 2008, and Amendment thereto, effective February 10, 2011, incorporated by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2010.
- 10.4 United Technologies Corporation Deferred Compensation Plan, as amended and restated, effective January 1, 2011, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended June 30, 2018.
- 10.5 United Technologies Corporation Executive Leadership Group Program, as amended and restated, effective October 15, 2013, incorporated by reference to Exhibit 10.11 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013; United Technologies Executive Leadership Group Program, effective April 1, 2019; and Raytheon Technologies Corporation Executive Leadership Group Program, effective April 3, 2020, incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.6 Schedule of Terms for Restricted Share Unit Retention Awards relating to the United Technologies Corporation Executive Leadership Group Program (referred to above in Exhibit 10.6), incorporated by reference to Exhibit 10.12 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013; and Schedule of Terms of Restricted Share Unit Retention Awards relating to the United Technologies Leadership Group Program, effective April 1, 2019 (referred to above in Exhibit 10.5).
- 10.7 Form of Award Agreement for Restricted Share Unit Retention Awards relating to the United Technologies Corporation Executive Leadership Group Program (referred to above in Exhibit 10.6), incorporated by reference to Exhibit 10.13 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013; and Form of Award Agreement for Restricted Share Unit Retention Awards relating to the United Technologies Leadership Group Program, effective April 1, 2019 (referred to above in Exhibit 10.5).
- 10.8 United Technologies Corporation Board of Directors Deferred Stock Unit Plan, as Amended and Restated, effective as of April 29, 2019, incorporated by reference to Exhibit 10.8 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2018.
- 10.9 Retainer Payment Election Form for United Technologies Corporation Board of Directors Deferred Stock Unit Plan (referred to above in Exhibit 10.8), incorporated by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2018.
- 10.10 Form of Deferred Restricted Stock Unit Award relating to the United Technologies Corporation Board of Directors Deferred Stock Unit Plan (referred to above in Exhibit 10.8), incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2018.
- 10.11 United Technologies Corporation Long-Term Incentive Plan, as amended and restated effective April 28, 2014, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on May 2, 2014, as further amended by Amendment No. 1, effective as of February 5, 2016, incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
- 10.12 Schedule of Terms for restricted stock awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.11) (Rev. January 2016), incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.

- 10.13 Schedule of Terms for non-qualified stock option awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.11) (Rev. January 2016), incorporated by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
- 10.14 Form of Award Agreement for non-qualified stock option awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.11), incorporated by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2016.
- 10.15 Schedule of Terms for performance share unit awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.11) (Rev. January 2016), incorporated by reference to Exhibit 10.17 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
- 10.16 Schedule of Terms for stock appreciation rights awards relating to the United Technologies Corporation 2005 Long-Term Incentive Plan (referred to above in Exhibit 10.11) (Rev. January 2016), incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
- 10.17 Form of Award Agreement for restricted stock unit, performance share unit and stock appreciation rights awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.11), incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2016.
- 10.18 United Technologies Corporation LTIP Performance Share Unit Deferral Plan, relating to the Long-Term Incentive Plan (referred to above in Exhibit 10.11) as amended and restated, effective January 1, 2020, incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.19 United Technologies Corporation International Deferred Compensation Replacement Plan, effective January 1, 2005, incorporated by reference to Exhibit 10.35 of the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.
- 10.20 United Technologies Corporation Company Automatic Contribution Excess Plan, as amended and restated, effective January 1, 2020, incorporated by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.21 United Technologies Corporation Savings Restoration Plan executed July 16, 2018 (amended and restated as of January 1, 2011), incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended June 30, 2018.
- 10.22 Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on May 3, 2018, as amended by Amendment No. 1, effective as of December 6, 2020, incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2020.
- 10.23 Schedule of Terms for restricted stock unit awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended (referred to above in Exhibit 10.22), incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2021.
- 10.24 Schedule of Terms for stock appreciation right awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended (referred to above in Exhibit 10.22), incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2021.
- 10.25 Schedule of Terms for performance share unit awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended (referred to above in Exhibit 10.22), incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2021.

- 10.26 Schedule of Terms for stock option awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended (referred to above in Exhibit 10.22), incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2021.
- 10.27 Rockwell Collins' 2015 Long-Term Incentives Plan, incorporated by reference to Appendix B to Rockwell Collins' Notice and Proxy Statement (Commission file number 0001-16445) dated December 17, 2014.
- 10.28 Form of Performance Share Agreement under Rockwell Collins' 2015 Long-Term Incentives Plan (referred to above in Exhibit 10.27), incorporated by reference to Exhibit 10-a-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended December 31, 2017.
- 10.29 Form of Restricted Stock Unit Agreement under Rockwell Collins' 2015 Long-Term Incentives Plan (referred to above in Exhibit 10.27), incorporated by reference to Exhibit 10-a-2 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended December 31, 2017.
- 10.30 Compensation Recovery Policy acknowledgment and agreement, incorporated by reference to Exhibit 10-c-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended December 31, 2012.
- 10.31 Rockwell Collins' Deferred Compensation Plan, as amended, incorporated by reference to Exhibit 10-f-2 to Rockwell Collins' Annual Report on Form 10-K (Commission file number 0001-16445) for the fiscal year ended September 30, 2007; Amendment No. 1 to Rockwell Collins' Deferred Compensation Plan, as amended, incorporated by reference to Exhibit 10-f-2 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.32 Rockwell Collins' 2005 Deferred Compensation Plan, as amended and restated as of June 27, 2017, incorporated by reference to Exhibit 10-f-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended June 30, 2017; Amendment No. 1 to Rockwell Collins' 2005 Deferred Compensation Plan, incorporated by reference to Exhibit 10-f-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended December 31, 2017; Amendment No. 2 to Rockwell Collins' 2005 Deferred Compensation Plan, as amended, incorporated by reference to Exhibit 10-f-6 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.33 Rockwell Collins' Non-Qualified Savings Plan, as amended, incorporated by reference to Exhibit 10-g-2 to Rockwell Collins' Annual Report on Form 10-K (Commission file number 0001-16445) for the fiscal year ended September 30, 2007; Amendment No. 1 to Rockwell Collins' Non-Qualified Savings Plan, incorporated by reference to Exhibit 10-g-2 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.34 Rockwell Collins' 2005 Non-Qualified Retirement Savings Plan, as amended and restated as of July 17, 2018, incorporated by reference to Exhibit 10-g-6 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.35 Rockwell Collins' 2005 Non-Qualified Pension Plan, as amended, incorporated by reference to Exhibit 10-h-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended June 30, 2012; Amendment No. 1 to Rockwell Collins' Non-Qualified Pension Plan, as amended, incorporated by reference to Exhibit 10-h-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended December 31, 2015; Amendment No. 2 to Rockwell Collins' 2005 Non-Qualified Pension Plan, as amended, incorporated by reference to Exhibit 10-h-3 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.36 Rockwell Collins' Master Trust, as amended, incorporated by reference to Exhibit 10-i-2 to Rockwell Collins' Annual Report on Form 10-K (Commission file number 0001-16445) for the fiscal year ended September 30, 2007; Amendment No. 1 to Rockwell Collins' Master Trust, as amended, incorporated by reference to Exhibit 10-i-2 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018; Amendment No. 2 to Rockwell Collins' Master Trust, as amended; and Amendment No. 3 to Rockwell Collins' Master Trust, as amended, incorporated by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2018.

- 10.37 Rockwell Collins' Short-term Relocation Benefit to Rockwell Collins' CEO, CFO and two other executive officers, incorporated by reference to Exhibit 10-e-1 to Rockwell Collins' Quarterly Report on Form 10-Q (Commission file number 0001-16445) for the quarterly period ended March 31, 2018; Description of the Extension to the Short-Term Relocation Benefit for the Company's CEO, CFO and two other executive officers, incorporated by reference to Exhibit 10-j-2 to Rockwell Collins' Annual Report on Form 10-K/A (Commission file number 0001-16445) for the fiscal year ended September 30, 2018.
- 10.38 Compensation & Covenants Agreement between United Technologies Corporation and Robert K. Ortberg, effective as of November 26, 2018, incorporated by reference to Exhibit 10.37 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2018.
- 10.39 Employment Agreement, dated as of June 9, 2019, by and between United Technologies Corporation and Gregory J. Hayes, incorporated by reference to Exhibit 10.1 the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on June 10, 2019.
- 10.40 First Amendment, dated March 4, 2021, to Employment Agreement (referred to above in Exhibit 10.38) between Gregory J. Hayes and Raytheon Technologies Corporation, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on March 5, 2021.
- 10.41 United Technologies Corporation Merger Severance Plan for Corporate Office Executives and Other Key Employees, incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended June 30, 2019.
- 10.42 Amendment dated February 3, 2020, to the terms of certain awards granted under the Company's Long Term Incentive Plans (referred to above in Exhibits 10.11 and 10.22), by and between United Technologies Corporation and Judy Marks incorporated by reference to Exhibit 10.40 of the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2019.
- 10.43 Transition Services Agreement, dated as of April 2, 2020, by and among United Technologies Corporation, Otis Worldwide Corporation and Carrier Global Corporation (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 8, 2020).
- 10.44 Tax Matters Agreement, dated as of April 2, 2020, by and among United Technologies Corporation, Otis Worldwide Corporation and Carrier Global Corporation (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 8, 2020).
- 10.45 Employee Matters Agreement, dated as of April 2, 2020, by and among United Technologies Corporation, Otis Worldwide Corporation and Carrier Global Corporation (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 8, 2020).
- 10.46 First Amendment to Employee Matters Agreement (referred to above in Exhibit 10.45), dated as of May 22, 2020 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on May 29, 2020).
- 10.47 Intellectual Property Agreement, dated as of April 2, 2020, by and among United Technologies Corporation, Otis Worldwide Corporation and Carrier Global Corporation (incorporated by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 8, 2020).
- 10.48 Employment Agreement, dated as of June 9, 2019, between Thomas A. Kennedy and United Technologies Corporation, incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2021.
- 10.49 First Amendment, dated March 4, 2021, to Employment Agreement between Thomas A. Kennedy and Raytheon Technologies Corporation (referred to above in Exhibit 10.48), incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2021.
- 10.50 Separation Agreement, dated as of May 24, 2021, between Thomas A. Kennedy and Raytheon Technologies Corporation, incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2021.
- 10.51 Raytheon Company 2010 Stock Plan, as amended as of May 24, 2017, incorporated by reference to Exhibit 10.2 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017.

- 10.52 Raytheon Company Excess Savings Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2010 and November 1, 2013, incorporated by reference to Exhibit 10.9 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2013.
- 10.53 Raytheon Company Excess Pension Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2009, incorporated by reference to Exhibit 10.10 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2013.
- 10.54 Raytheon Company Supplemental Executive Retirement Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2011, incorporated by reference to Exhibit 10.11 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2013.
- 10.55 Raytheon Company Deferred Compensation Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2009, January 1, 2010, May 6, 2010 and November 1, 2013, incorporated by reference to Exhibit 10.12 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2013.
- 10.56 Raytheon 2019 Stock Plan, incorporated by reference to Appendix A to Raytheon Company's definitive proxy statement, filed on April 16, 2019.
- 10.57 Form of Change in Control Severance Agreement between Raytheon Company and certain executive officers (providing for benefits in the event of a qualified termination upon a change in control of two times base salary and bonus), incorporated by reference to Exhibit 10.22 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2009.
- 10.58 Form of Amendment to Change in Control Severance Agreement between Raytheon Company and its executive officers, incorporated by reference to Exhibit 10.60 to Raytheon Company's Annual Report on Form 10-K for the year ended December 31, 2009.
- 10.59 Form of Change in Control Severance Agreement between Raytheon Company and certain executive officers (providing for benefits in the event of a qualified termination upon a change in control of one times base salary and bonus), incorporated by reference to Exhibit 10.4 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016.
- 10.60 Letter Agreement dated January 21, 2015 by and between Raytheon Company and Anthony F. O'Brien, incorporated by reference to Exhibit 10.1 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016.
- 10.61 Letter Agreement dated December 16, 2014 by and between Raytheon Company and Frank R. Jimenez, incorporated by reference to Exhibit 10.2 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016.
- 10.62 Amendment to Letter Agreement dated January 23, 2015 by and between Raytheon Company and Frank R. Jimenez, incorporated by reference to Exhibit 10.3 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016.
- 10.63 Enhanced Severance Plan for Senior Leadership Team Members, incorporated by reference to Exhibit 10.1 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019.
- 10.64 Letter Agreement, dated July 23, 2015, by Raytheon Company and Wesley D. Kremer, incorporated by reference to Exhibit 10.1 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.
- 10.65 Amendment to Letter Agreement, dated March 21, 2019, by Raytheon Company and Wesley D. Kremer, incorporated by reference to Exhibit 10.2 to Raytheon Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019.
- 10.66 Schedule of Terms for restricted stock unit awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated (referred to in Exhibit 10.22 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2021), incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.

- 10.67 Schedule of Terms for performance share unit awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated (referred to in Exhibit 10.22 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2021), incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.
- 10.68 Schedule of Terms for stock appreciation right awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated (referred to in Exhibit 10.22 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2021), incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.
- 10.69 Schedule of Terms for stock option awards relating to the Raytheon Technologies Corporation 2018 Long-Term Incentive Plan, as amended and restated (referred to in Exhibit 10.22 to the Company's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2021), incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.
- 10.70 Raytheon Technologies Corporation Executive Severance Plan, effective April 4, 2022, incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.
- 10.71 Consulting Agreement, dated as of April 1, 2022, by and between Raytheon Technologies Corporation and Michael R. Dumais, incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended March 31, 2022.
- 10.72 Raytheon Technologies Corporation Compensation Deferral Plan, effective as of January 1, 2023.*
- 14 Code of Conduct. The RTC Code of Conduct may be accessed via RTC's website at <https://www.rtx.com/our-company/ethics-and-compliance>.
- 21 Subsidiaries of Raytheon Technologies Corporation.*
- 23 Consent of PricewaterhouseCoopers LLP.*
- 24 Powers of Attorney of Tracy A. Atkinson, Leanne G. Caret, Bernard A. Harris, Jr., George R. Oliver, Robert K. Ortberg, Margaret L. O'Sullivan, Dinesh C. Paliwal, Ellen M. Pawlikowski, Denise L. Ramos, Fredric G. Reynolds, Brian C. Rogers, James A. Winnefeld, Jr. and Robert O. Work.*
- 31.1 Rule 13a-14(a)/15d-14(a) Certification.*
- 31.2 Rule 13a-14(a)/15d-14(a) Certification.*
- 31.3 Rule 13a-14(a)/15d-14(a) Certification.*
- 32 Section 1350 Certifications.*
- 101.INS eXtensible Business Reporting Language (XBRL) Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
- 101.SCH Inline XBRL Taxonomy Extension Schema Document.*
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document.*
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document.*
- 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document.*
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document.*

104 The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2022, formatted in Inline XBRL and contained in Exhibit 101.

(Exhibits marked with an asterisk (*) are filed electronically herewith.)

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ GREGORY J. HAYES</u> (Gregory J. Hayes)	Chairman, President and Chief Executive Officer (Principal Executive Officer)	February 6, 2023
<u>/s/ NEIL G. MITCHILL, JR.</u> (Neil G. Mitchill, Jr.)	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 6, 2023
<u>/s/ AMY L. JOHNSON</u> (Amy L. Johnson)	Corporate Vice President and Controller (Principal Accounting Officer)	February 6, 2023
<u>/s/ TRACY A. ATKINSON *</u> (Tracy A. Atkinson)	Director	February 6, 2023
<u>/s/ LEANNE G. CARET *</u> (Leanne G. Caret)	Director	February 6, 2023
<u>/s/ BERNARD A. HARRIS, JR. *</u> (Bernard A. Harris, Jr.)	Director	February 6, 2023
<u>/s/ GEORGE R. OLIVER *</u> (George R. Oliver)	Director	February 6, 2023
<u>/s/ ROBERT K. ORTBERG *</u> (Robert K. Ortberg)	Director	February 6, 2023
<u>/s/ MARGARET L. O'SULLIVAN *</u> (Margaret L. O'Sullivan)	Director	February 6, 2023
<u>/s/ DINESH C. PALIWAL *</u> (Dinesh C. Paliwal)	Director	February 6, 2023
<u>/s/ ELLEN M. PAWLIKOWSKI *</u> (Ellen M. Pawlikowski)	Director	February 6, 2023
<u>/s/ DENISE L. RAMOS *</u> (Denise L. Ramos)	Director	February 6, 2023
<u>/s/ FREDRIC G. REYNOLDS *</u> (Fredric G. Reynolds)	Director	February 6, 2023
<u>/s/ BRIAN C. ROGERS *</u> (Brian C. Rogers)	Director	February 6, 2023
<u>/s/ JAMES A. WINNEFELD, JR. *</u> (James A. Winnefeld, Jr.)	Director	February 6, 2023
<u>/s/ ROBERT O. WORK *</u> (Robert O. Work)	Director	February 6, 2023

*By: /s/ RAMSARAN MAHARAJH, JR.
Ramsaran Maharajh, Jr.
Executive Vice President and General Counsel

Date: February 6, 2023

RAYTHEON TECHNOLOGIES CORPORATION AND SUBSIDIARIES
SCHEDULE II - Valuation and Qualifying Accounts
Three years ended December 31, 2022

(dollars in millions)

Future Income Tax Benefits—Valuation allowance:	
Balance, December 31, 2019 ⁽¹⁾	\$ 616
Additions charged to income tax expense	581
Additions charged to goodwill, due to acquisitions	29
Reductions credited to income tax expense	(36)
Other adjustments, including the Separation of Carrier and Otis	(433)
Balance, December 31, 2020	757
Additions charged to income tax expense	136
Reductions credited to goodwill, due to acquisitions	(19)
Reductions credited to income tax expense	(37)
Other adjustments	(12)
Balance, December 31, 2021	825
Additions charged to income tax expense	54
Reductions credited to income tax expense	(82)
Other adjustments	45
Balance, December 31, 2022	\$ 842

(1) Amounts prior to 2020 within this schedule include valuation allowances related to discontinued operations.

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Shareowner information

Corporate office

Raytheon Technologies Corporation
1000 Wilson Blvd.
Arlington, VA 22209
U.S.A.
www.rtx.com

Annual Meeting

This report is made available to shareowners in advance of the annual meeting of shareowners to be held at 8 a.m. Eastern time on May 2, 2023. The 2023 Annual Meeting will be held solely by remote communication via the internet. Details are available in the Raytheon Technologies Corporation Notice of 2023 Annual Meeting and Proxy Statement.

Stock listing

New York Stock Exchange
(NYSE: RTX)

Transfer agent and registrar

Computershare Trust Company, N.A. is the transfer agent, registrar and dividend disbursing agent for Raytheon Technologies common stock. Questions and communications from registered shareowners regarding the transfer of stock, replacement of lost certificates, dividends, address changes and the Stock Purchase and Dividend Reinvestment Plan administered by Computershare should be directed to:

Computershare Trust Company, N.A.
P.O. Box 43006
Providence, RI 02940-3006
U.S.A.
800.488.9281
781.575.2724 (outside U.S. and Canada)
800.952.9245 (TDD)
www.computershare.com/investor

Electronic access or delivery of shareowner communications

Registered shareowners can help conserve natural resources and reduce printing and mailing costs incurred by Raytheon Technologies by signing up for electronic communications, including annual meeting materials, stock plan statements and tax documents at: www.computershare-na.com/green

Both registered and beneficial shareowners may be able to request electronic access or delivery by contacting their broker or bank or Broadridge Financial Solutions at: <https://enroll.icsdelivery.com/rtx>

Investor Relations

Questions and communications regarding Raytheon Technologies' financial performance should be addressed to our Investor Relations team at:

Investor Relations
Raytheon Technologies Corporation
1000 Wilson Blvd.
Arlington, VA 22209
U.S.A.
781.522.5123
email: investors@rtx.com

Investor information is also available on the Raytheon Technologies website at investors.rtx.com. Our website offers financial information and facts about the company and our products and services. We periodically add additional news and information. The website content is available for informational purposes only. The site should not be relied on for investment purposes, nor is it incorporated by reference into this annual report.

Media relations

For media inquiries regarding Raytheon Technologies, contact us at 202.384.2474, email us at corporatepr@rtx.com or visit the Media Resources page on our website at: www.rtx.com/news/media-resources

Copies of reports

Copies of the company's annual report may be requested by emailing investors@rtx.com or by calling 781.522.5123

Raytheon Technologies Corporation and its subsidiaries' names, abbreviations thereof, logos, and product and service designators are either the registered or unregistered trademarks or trade names of Raytheon Technologies Corporation and its subsidiaries. Names of other companies, abbreviations thereof, logos of other companies, and product and service designators of other companies are either the registered or unregistered trademarks or trade names of their respective owners.

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1000 Wilson Blvd.
Arlington, VA 22209
U.S.A.

www.rtx.com