Raytheon Technologies Ecosystem

Raytheon Technologies
870 Winter Street
Waltham, Massachusetts
(781) 522-3000

Outside Relationships

Regulators

Selected Subjects of US and Foreign Regulation

- International Trafficking in Arms (Restrictions on Export of Defense and Military-Related Technology)
- Arms Export Controls (Executive Dept. Control of Export of Defense Articles)
- Bureau of Alcohol, Tobacco, Firearms and Explosives Regulations (Illegal Use and Storage of Explosives & Use and Trafficking of Firearms)
- Government Contract Security Regulations (Prohibition on Disclosing Details of Certain Classified or Restricted Programs)
- Costs Under Government Contracts (Allowable and Allocable Costs under Federal Acquisition Regulation (FAR) and U.S. Cost Accounting Standards (CAS)
- Compliance Under Government Contracts (Compliance with Internal Policies and Procedures and Government Laws and Regulations)
- Audit of Government Contracts (Costs Incurred and Allocated to U.S. Government Contracts are Audited by Defense Contract Audit Agency (DCAA))
- Environmental Protection (Environmental Law Compliance)
- Foreign Corrupt Practices (Anti-Bribery)
- International Business Regulation
  - Export Controls
  - Data Privacy
  - Sanctions
  - Technology Transfer Restrictions
  - Government Contracting and Procurement
  - Foreign Investment
  - Exchange Rates and Controls
  - Foreign Corrupt Practices/Anti-Bribery
  - Anti-Boycott Laws
  - Works Councils
  - Anti-Human Trafficking
  - Taxes
  - Immunity
- Intellectual Property
- Security Restrictions

Capital

- Public Debt Holders
- Commercial Banks

Suppliers

Selected Suppliers

- Century Aluminum (Aluminum)
- Allegheny Technologies (Specialty Metals)
- Dow (Chemicals)
- 3M (Electro & communications)
- Avery Dennison (Pressure-sensitive)
- HPE (Enterprise Systems)
- International Business Machines (Hardware)
- Future Tech Enterprise (IT Solutions)
- Agilent Technologies (Semiconductor & Board Test)
- Illinois Tool Works (Polymers & Fluids)
- DuPont de Nemours (Safety & Protection)
- Microchip Technology (Microcontrollers)
- General Dynamics (information Systems Technology)
- Kaiser Aluminum (Aluminum)
- Alcoa Corp. (Aluminum)
- Emerson Electric (Appliance and Tools)
- Arcelormittal (Steel)
- US Steel (Steel)
- Freeport McMoran (Copper)
- Applied Materials (Display)
- Honeywell International (Specialty Materials)
- Nucor (Steel)
- PPG Industries (Coatings)
- Sealed Air (Protective & Specialty Packaging)

Customers

Aerospace Systems Customers

- U.S. Dept. of Defense
- U.S. Government Agencies (including National Aeronautics and Space Administration (NASA))

Raytheon Technologies Corporation (a Delaware Corporation)

Debt Structure

Total Debt ($31 Billion @12/31/20) **Credit Ratings (Long Term Debt): Moody's (Baa1) and S&P (A-)**

- Commercial Paper Program ($5 Billion Capacity)
- Other Short-Term Borrowings: $87 Million
- Other Long-term Borrowings (including finance leases): $292 Million
- Term Loans and Notes Maturing 2021-2029: $13.798 Billion (1.125% to 7.500%)
- Notes Maturing 2030-2028: $4.855 Billion (2.150% to 7.000%)
- Notes Maturing 2040-2048: $11.525 Billion (3.750% to 4.800%)
- Notes Maturing 2050: $1.000 Billion (3.125%)

Equity Structure

Equity

- Share Repurchase Program: *Authorization: $5 Billion*
- Preferred Stock: *Authorized: 250,000 Shares; Outstanding: None; Record Holders: None*
- Common Stock: *Authorized: 4,000,000 Shares; Outstanding: 3,157,018 Shares; Record Holders: 45,151*

Governance

Board of Directors

- Thomas A. Kennedy (F,S)
- James A. Winnefeld Jr. (C,F,S)
- Gregory J. Hayes (F,S)
- Marshall O. Larsen (G, F)
- George R. Oliver (G, F)
- Kelly Ortberg (F,S)
- Margaret L. O'Sullivan(G,S)
- Dinesh C. Paliwal (G,C)
- Ellen M. Pawlikowski (A,S)
- Denise L. Ramos (A,C)
- Fredric G. Reynolds (A,G,C)
- Brian C. Rogers (C,F)
- Tracy A. Atkinson (A,C,F)
- Committees: Audit (A), Compensation (C), Finance (F) Governance & Public Policy (G), Special Activities (S)

Management Team

- Chief Executive Officer: Gregory J. Hayes
- President of Collins Aerospace: Stephen J. Timm
- President of Pratt & Whitney: Christopher Calio
- President Raytheon Intelligence & Space: Roy Azevedo
- President of Raytheon Missiles & Defense: Wesley D. Kremer
- VP, Internal Audit: Jeanette Hughes
- Chief Communications Officer: Pamela Erickson
- Chief Diversity Officer: Marie Sylla-Dixon
- VP, Enterprise Services: Vince Campisi
- Chief Financial Officer: Neil G. Mitchill Jr.
- General Counsel: Frank R. Jimenez
- Chief Transformation Officer: Michael R. Dumais
- Chief Human Resources Officer: Dantaya Williams
- SVP, Operations & Supply Chain: Paolo Dal Cin
- Technology & Engineering: Mark E. Russell
- SVP, Global Government Relations: Timothy J. McBride
- Chief Investment Officer: Robin L. Diamonte
- VP, Global Ethics & Compliances Christopher McDavid

Corporate Matters

Global Human Resources
- Talent Management
- Diversity and Inclusion
- Employee Relations
- Total Rewards
- Employee Experience

Operations & Supply Chain
- Global Securities Services
- Environment
- Global Integrated Manufacturing Network
- Health & Safety

Communications
- Digital and Social Media Platforms
- Public Relations
- Employee Communications
- Executive Communications
- Global Marketing
- Corporate Social Responsibility Programs

Corporate Strategy and Development
- Planning of Initiatives
- Execution

Finance
- Financial Reporting
- Financial Controls
- Planning and Analysis
- Investor Relations
- Tax
- Treasury

Global Government Relations
- International, Federal, and State Government Relations
- Liaison and Company Voice with Policymakers and Organizations

Diversity
- Advancing Diversity, Equity, and Inclusion
- Community Engagement
- Public Policy
- Suppliers
- Talent Management

Enterprise Services
- Digital Technology Strategy
- Shared Services

Office of General Counsel
- Legal Affairs
- Regulatory Affairs
- Corporate Governance
- Corporate Transactions
- Ethics and Compliance
- Intellectual Property
- Litigation
- Contracts

Internal Audit
- Company Process Evaluation
- Compliance with Laws and Regulations

Technology & Global Engineering
- Technological Vision and Strategy
- Engineering Operations
- Investments in Research and Development

Operations

COLLINS AEROSPACE (Net Sales: $19.288 Billion)

Provides technologically advanced aerospace and defense products and aftermarket service solutions for aircraft manufacturers, airlines, and the regional, business and general aviation industry, as well as for defense and commercial space operations.

Key Facilities

Headquarters: Charlotte, North Carolina

Business Units

Aerostructures
Design, development, and manufacture of an aircraft's airframe, including all or part of the fuselage, wings, or flight control surfaces

Aftermarket Services
Provision of parts, repair, and maintenance

Mechanical Services
Provides extravehicular activity suits and supports government and defense customer missions by providing airborne intelligence, surveillance and reconnaissance systems, test and training range systems, crew escape systems

- 6th-gen Military Aircraft
- Nacelle Enhancement Program (NEP) configuration on A350-900/1000
- Future Vertical Lift (FVL) Platform Contracts
- Tactical Combat Training Systems Increment II
- Iridium Next
- High-frequency (HF) Next

Avionics
Product lines include integrated avionics systems, communications systems, navigation systems, management and distribution systems, environmental control systems, oxygen systems, flight control systems, interior and exterior aircraft lighting, aircraft seating and cargo systems

Interiors
Designs, produces and supports cabin interior, communications and aviation systems, oxygen systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management Systems; also provides information management services through worldwide voice and data communication networks and solutions

- Systems for Boeing's T-7A and VC-25B, Irkut MC-21 (single-aisle airliner), Dassault Falcon 6X (long-range business jet), Leonardo AW249, Xian MA700, COMAC C919
- NASA Deep Space Exploration Systems

Mechanical Systems
Designs, produces and supports with environmental control, communications and aviation systems, air data and aircraft sensing systems, engine nacelle systems, including thrust reversers and mounting pylons, landing systems, landing gear, wheels and braking systems, hoists and winches, fire and ice detection and protection systems, actuation systems, engine components, and propeller systems. and simulation and training solutions

Power & Controls
Electric power generation, power systems, engine control systems

- Federal Aviation Administration (FAA) CLEEN II Demonstrator
- Products for the Boeing 777x and the Embraer Preator 500 and 600
- Confident to Fly Technologies
- Distributed Pulse Oxygen System

PRATT & WHITNEY (Net Sales: $16.799 Billion)

Designs, develops, produces, and maintains families of (a) large engines for wide-, narrow-body and regional aircraft for commercial customers (nearly 30% of the world's mainline passenger fleet), (b) fighter, bomber, tanker and transport aircraft for U.S. and foreign military customers, and (c) auxiliary power units for commercial and military customers. Also provides fleet management services.

Key Facilities

Headquarters: East Hartford, Connecticut

Business Units

Commercial and Military Engines
Design, develop, produce and maintain wide- and narrow-body and large regional aircraft for commercial customers and for fighter, bomber, tanker, and transport aircraft for military customers

Pratt & Whitney Canada
Supplies engines powering regional airlines, general and business aviation, and helicopters

- Commercial Engines: Pratt & Whitney GTF Engine, V2500, GP7200, PW4000-94, PW4000-100, PW4000-112, PW2000, PW6000, JT8D, JT9D)
- Military Engines: F135, B-52, F119, F117, F100-PW-229 Engine, PW4062. TF33, T900
- Business Aviation Engines: PW800 Turbofan Engines, PW600 Turbofan Engines, PW500 Turbofan Engines
- Regional Aviation Engines: PW100/150 Turboprop Engines
- General Aviation Engines: PT6 E-Series Engine, PT6A Engine Family
- Auxiliary Power Units (APU): PW980, APS5000, APS3200, PW901A/C, APS2300
- Helicopter Units: PT6C Turboshaft Engines, PW200 Turboshaft Engines, PW210 Turboshaft Engines, PT6T Turboshaft Engines, PT6B Turboshaft Engines

Power
Produces, sells and services military and commercial auxiliary power units

Fleet Management/Aftermarket Services
Provides fleet management services and aftermarket maintenance, repair and overall services

- EngineWise (advancement and integration of engine expertise into a portfolio of offerings keeping operations efficient)
- Automation
- Customer Training
- Business, Regional, General, Helicopter & Auxiliary Power Unit Engines
- Military Engines
- Long-term Aftermarket Service
- Global Service Network Map
- Find Your Local Sales Representative
- Maintenance Programs & Solutions
- Sales, Rentals & Exchanges
- Digital Engine Services
- Parts, Maintenance and Sales
- Technical Publications
- Warranty Programs
- Engineering Services

RAYTHEON INTELLIGENCE & SPACE (RIS) (Net Sales: $10.841 Billion)

Develops and provides integrated sensor and communication systems for advanced missions, advanced training, and cyber and software solutions to intelligence, defense, federal, and commercial customers.

Key Facilities

Headquarters: Arlington, Virginia

Business Units

Advanced Tech
Tech with a purpose: engineering, coding, researching, patenting, and publishing

- Digital Innovation
- FAST-NA
- High-Energy Lasers
- Multimedia Monitoring System

Communications and Navigation
Delivering a full spectrum of secure communication and navigation solutions to meet mission-critical needs

- GPS Next-Generation Operational Control System
- Identification Friend or Foe (IFF)

Modernization, Training & Mission Support
Keeping customers mission-ready while optimizing limited resources

- V-22 Osprey Modernization and Sustainment
- Launch and Test Range System (LTRS) Integrated Support Contract (LISC)
- NORAD Operations and Sustainment

Air Dominance
Controlling the skies and dictating the terms and conditions of a flight

- AN/APG-79 AESA Radar
- AN/APG-82(V)1 AESA Radar
- Joint Precision Approach and Landing System
- Multi-Spectral Targeting System (MTS)
- Next Generation Jammer Mid-Band

Cybersecurity
Protects the most critical information, systems and operations with breakthrough solutions

- Cyber Analytics and Intelligence Services
- Data Orchestration and Resiliency

Space Solutions
Missile warning and Intelligence-to-weather, navigation and beyond to deliver end-to-end space solutions

- Advanced Weather Interactive Processing System
- Visible Infrared Imaging Radiometer Suite (VIIRS)

Command and Control
Command and Control work turns individual tools into integrated systems

- Air Traffic Navigation, Integration, and Coordination System
- Combined Joint All Domain Command and Control
- Deployable Air Traffic Control Automation and Comms System
- MSSR Condor MK3 Surveillance Radar
- Multi-Platform Automation Re-Hosting Solution

Decision Superiority
Provides multiple-intelligence technology that collects data from various sensors and sources to paint a clearer picture of the environment

- AN/APY-10 Maritime, Littoral and Overland Surveillance Radar
- Electronic Warfare Planning Management Tool (EWPMT)
- Multi-Spectral Targeting System (MTS)
- Intelligence Surveillance Target Acquisition and Reconnaissance (ISTAR)

RAYTHEON MISSILES & DEFENSE (RMD) (Net Sales: $11.660 Billion)

Designer, developer, integrator, producer, and sustainer of (a) integrated air and missile defense systems, (b) defensive and combat solutions, (c) large land- and sea-based radars, (d) command, control, communications, and intelligence solutions, and (e) naval and undersea sensor solutions.

Key Facilities

Headquarters: Tucson, Arizona

Business Units

Air Warfare
RM&D technologies deliver unprecedented combat power to the world's most sophisticated 4th and 5th generation aircraft.

- AIM-9X Sidewinder (short-range air-to-air) Missile
- AMRAAM (Advanced Medium-Range Air-to-Air) Missile
- Joint Standoff Weapon
- MALD (Miniature Air-Launched) Decoy
- Peregrine Air-to-Air Missile

Land Warfare
- 3rd GEN FLIR
- Excalibur Projectile
- Javelin Weapon System
- Sentinel Radar
- KuRFS: Ku-band Radio Frequency System
- Stinger Missile
- Lynx Infantry Fighting Vehicle
- Secure Networks and Infrastructure
- TOW ITAS System
- TOW Weapon System

Counter UAS
Countering Unmanned Aircraft Systems (UAS) by carrying out a complex counterattack of lasers, radio waves, small drones, and missiles.

- Coyote UAS
- Sentinel Radar
- KuRFS: Ku-band Radio Frequency System
- Phaser High-Power Microwave System

Naval Warfare
- Aegis
- AN/AQS-20 Minehunting Sonar
- AN/ASQ-235 Airborne Mine Neutralization System
- SeaRAM Ship Defense System
- ESSM (Evolved SeaSparrow) Missile
- Phalanx Weapon System
- Naval Strike Missile
- Tomahawk Cruise Missile
- Zumwalt-Class Destroyer
- SM-2 Missile
- SM-6 Missile

Missile Defense
- Global Patriot Solutions
- SM-3 Interceptor
- AN/TPY-2: Army Navy/Transportable Radar Surveillance
- SM-6 Missile
- Kill Vehicles
- David's Sling System and SkyCeptor Missile
- Iron Dome System and SkyHunter Missile
- LTAMDS: Lower Tier Air and Missile Defense Sensor
- NASAMS: National Advanced Surface-to-Air Missile System
- UEWR: Upgraded Early Warning Radar

Hypersonics
Hypersonic weapons can travel at five times the speed of sound – Mach 5 and faster – covering vast distances in minutes.

RAYTHEON TECHNOLOGIES RESEARCH CENTER (RTRC)

Provides scientific research and technology development for Raytheon Technologies businesses

- Quantum Computing
- Artificial Intelligence
- Machine Learning
- Advanced Materials
- Additive Manufacturing
- Autonomy
- Cyber Security
- Directed Energy
- Hypersonics
- Sensors

Outside Relationships

Customers

Commercial Aerospace Customers
- Boeing
- Airbus
- Aircraft Manufacturers

Defense Customers
- U.S. Government
- Foreign Government
- Defense Contractors

Competitors
- BAE Systems
- Boeing
- Booz Allen Hamilton
- General Dynamics
- L3Harris Technologies
- Leidos
- Leonardo
- Lockheed Martin
- Northrup Grumman
- Thales

Suppliers

Key Professional Services Firms
- The Boston Group (Advertising Services)
- pwc (Audit Services)
- VIA Group (Advertising)
- Robbins Geller Rudman & Dowd (Legal Services)
- Invariant LLC (Lobbying Services)
- Akin, Gump (Lobbying Services)
- BGR Group (Lobbying Services)

Capital

Significant Shareholders
- Vanguard Group (8.01%)
- SSgA Funds Management (7.94%)
- BlackRock Fund Advisors (4.61%)
- Wellington Management (3.61%)
- Capital Research & Management (3.01%)
- Dodge & Cox (2.58%)
- Institutional Ownership: 78.66%

Regulators

Securities Regulators
- US Securities and Exchange Commission (Securities Law Disclosure and Reporting Requirements; Anti-Bribery Law Record-keeping Requirements)
- New York Stock Exchange (Listing and Maintenance Rules)
- U.S. and Foreign Patent and Trademark Regulators

Other

- Third Party IP Owners
- U.S. Government

Relationships

- Bond Financing
- Working Capital Financing
- Securities Regulation and NYSE Listing Rules
- Dividends and Common Stock Repurchases
- Equity Capital
- Professional Services
- Intellectual Property Licenses
- Patent Licenses for Inventions Developed in Performance of U.S. Government Contracts
- Intellectual Property Registrations and Renewals
- Business and Government Contracting Regulation
- Supplies of Chemicals, Plastics, Rubber, Metal, Financing, Electric and Wiring Equipment, IT and Navigation Systems, Semiconductors, Appliances and Tools, and Engineering and Consulting Services
- Sales of Aerospace Systems for Intelligence, Surveillance and Reconnaissance, Strike Operations, Communications, Earth Observations, and Space Science (Under Cost-Type and Fixed Price Contracts)
- Services for Commercial Aerospace (including manufacturing, development, maintenance, repair of aircraft hardware and software services)
- Services for Defense Contractors (includes manufacturing, development, maintenance, repair services of aircraft, drones, missile defense systems)
- Competition for Defense, Intelligence, and Aerospace Customers
- Collective Bargaining and Labor Union Representation
- Sales of Deep Space Exploration Systems
- F135 Propulsion System Configurations Sales (for the Air Force F-35A, the Marine Corps' F-35B and the Navy's F-35C Jets)
- Aircraft Engine Sales (including Geared Turbofan or GTF Engine Program with an engine dispatch reliability rate of 99.98%)
- Sales of Auxiliary Power Units and Fleet Management and Aftermarket Maintenance Services
- Sales of Intelligence, Surveillance and Reconnaissance Electro-Optical/Infrared (EO/IR) Products; Radar for 5th and 6th Generation Aircraft; Classified Space Mission Systems; Offensive and Defensive Cyber Solutions; and the Next Generation Jammer System
- Sales of Small Satellites and Spacecraft Components, (via Blue Canyon Technologies, acquired in December 2020), Space-Based Sensors and Data Processing Systems, Multi-Domain Intelligence Solutions, Electronic Warfare Solutions (e.g., High-Energy Laser Weapons), Command and Control Systems, Mission Support Service, and Advanced Cyber Analytics, Systems Defense and Services

Collins Aerospace Customers
- Aircraft Manufacturers
- International Customers
- National Aeronautics and Space Administration (NASA)
- U.S. Armed Forces

Pratt & Whitney Customers
- Aircraft Manufacturers (e.g., Airbus Industries, which accounts for 30% of sales; Airbus A320neo, A220, Embraer E-Jets E2)
- Global & Regional Airlines
- U.S. and Foreign Government (e.g., U.S. Armed Forces and 34 Foreign Forces)
- Aircraft Leasing Companies

Intelligence and Space Customers
- U.S. Department of Defense
- U.S. Intelligence Community
- U.S. Department of Homeland Security
- Federal Aviation Administration
- NASA, U.S. Air Force, and Defense Advanced Research Projects Agency (DARPA)
- International and Classified Customers

Raytheon Missiles & Defense
- U.S. Department of Defense
- U.S. Navy
- U.S. Army
- Missile Defense Agency
- International Governments

Labor Unions (Represents 41,000 Employees)
- International Association of Machinists and Aerospace Workers

Key Company Data

(as of 12/31/2020)

Raytheon Technologies Corporation is an aerospace and defense company that provides advanced systems and services for commercial, military and government customers worldwide. The company serves commercial and government customers in both the original equipment and aftermarket parts and services segments of the aerospace industry. Its 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.

Selected Financial Data

Results of Key
- Total Net Sales: $56.587B
- Cost of Products and Services Sold: $48.056B
- Gross Profit:$8.531B
- R&D Expense: $2.582B
- Net Income: ($2.353B)

Financial Condition
- Total Assets: $162.153B
- Long-Term Debt: $31.848B
- Total Liabilities: $88.269B
- Total Shareowners' Equity: $72.163B

Net Cash Flows
- From Operations: $4.334B
- From Investing: $3.343B
- From Financing: ($3.860B)
- Cash Position: $8.802B

Share Information
- Symbol: RTX
- Exchange: NYSE
- Share Price: $83.24 (04/30/21)
- Forward Annual Dividend: $2.04
- 2020 Diluted Earnings Per Share: $2.59
- Market Cap.: $126.1B (04/30/21)

Resources
- Total Employees: 181,000
- Customers: 46% of Sales to U.S. Government
- Backlog by Segment: Collins Aerospace Systems ($23.01B), Pratt & Whitney ($78.14B), RIS ($18.68B), and Raytheon Missiles & Defense ($29.59B)

Key Developments

Separation Transactions and Distributions: Formerly known at United Technologies Corporation (UTC), Raytheon Technologies was incorporated in 1934 and represents the combination of UTC's aerospace businesses and Raytheon Company's defense business. The combination occurred on April 3, 2020, following the separation of UTC's Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) businesses. At the closing of the combination, Raytheon Company became a wholly owned subsidiary of UTC, which changed its name to "Raytheon Technologies Corporation." Raytheon Merger Integration activities will continue into 2021.

Connect Up: On April 6, 2021, Raytheon Technologies announced a $500M 10-year Social Impact Initiative aimed at advancing equitable opportunities in STEM education, career development and community wellbeing. It also challenges its Raytheon's own employees to take on one million acts of service.

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