Aerospace & Defense

Maryland is a thriving location for space exploration, satellite technology and research, design and manufacturing of UAVs and robotics. The industry includes Department of Defense related activities such as biodefense, cybersecurity, avionics, informatics and ordnance and weapons testing. Fifteen of the world's top 20 aerospace and defense companies have a presence in the Maryland, with Lockheed Martin headquartered in the state. Under the Base Realignment and Closure (BRAC) process, Maryland added thousands of jobs, primarily at Aberdeen Proving Ground, Fort Meade, and the Naval National Medical Center at Bethesda. Maryland's 9,600 aerospace and defense businesses annually generate $37.8 billion in economic activity and secure $11.5 billion in federal contracts.

Major Aerospace & Defense Employers in Maryland

Employer	Employment	Product / Service
Fort George G. Meade	54,000	Military installation; intelligence
Aberdeen Proving Ground	21,000	Military installation
Joint Base Andrews Naval Air Facility Washington	17,500	Military installation
Naval Air Station Patuxent River	11,725	Military installation
Northrop Grumman	10,365	Electronic systems
Fort Detrick	6,400	Military installation
Johns Hopkins Applied Physics Laboratory	5,545	R&D systems engineering
Lockheed Martin	3,255	Aerospace and electronics
NASA – Goddard Space Flight Center	3,000	Space research
National Oceanic and Atmospheric Admin.	2,900	Monitoring and research
Leidos	2,595	National security, health and engineering services
Booz Allen Hamilton	2,100	IT services and systems engineering

Notes: Numbers are rounded. Employee counts for federal and military facilities exclude contractors to the extent possible; embedded contractors may be included.
Source: Maryland Department of Commerce, June 2017.

Selected Rankings

- Maryland ranks third among the states in the percentage of professional and technical workers (27.8%) in the workforce.
- Maryland ranks second in total federal obligations for research and development ($15.4 billion), and first among the states on a per capita basis.
- Maryland has the highest concentration of computer information and research scientist in the nation, and is second in the total number of these scientists. Further, the state ranks third in the nation in the concentration of aerospace engineers in the workforce, with more than twice the average for the U.S.
- According to *U.S. News and World Report's* Best Colleges survey, the University of Maryland College Park ranks 13th in undergraduate and 14th in graduate aerospace engineering, as well as fourth in graduate homeland security and emergency management.

Industry Snapshot – Aerospace & Defense in Maryland

- Employment (2018) – 100,860 private sector jobs (142,280 including public sector)
  Leading subsectors:
  - Computer systems design and related services – 72,600 jobs

- National security – 35,740 jobs
- R&D in physical, engineering and life sciences – 12,010 jobs

- Business establishments (2018) – 9,600
- Total wages (2018) – $16.21 billion
- Average salary (2018) – $113,930
- Gross state product (2017) – $37.80 billion
- Federal procurement (FY2018) – $11.53 billion

Sources: Maryland Department of Labor; U.S. Bureau of Economic Analysis; U.S. Census Bureau.

Employment by Occupation

Maryland Employment – May 2018

Selected Occupations	Employment	Location Quotient*	
		Index	Rank
Aerospace engineering and operations technicians	340	1.82	8
Aerospace engineers	2,890	2.44	3
Aircraft mechanics and service technicians	2,090	0.85	21
Atmospheric and space scientists	500	2.90	6
Cartographers and photogrammetrists	450	2.22	10
Computer network support specialists	8,130	2.42	1
Computer programmers	4,790	1.12	15
Computer systems analysts	18,340	1.68	2
Electrical and electronic engineering technicians	3,380	1.44	8
Electrical engineers	4,550	1.38	8
Electronics engineers, except computer	4,760	1.68	6
Materials engineers	920	1.85	5
Mechanical engineers	5,670	1.01	16
Software developers, systems software	15,430	2.05	3

* Location Quotient indicates concentration of the occupation in Maryland, with national average equal to 1.0. Rank indicates Maryland's rank among the 50 states.
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics.

Assets & Resources

- **Aberdeen Proving Ground (APG)** – Army Research, Development and Testing Command; Army C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance).
- **Maryland Defense Technology Commercialization Center (DefTech)** – Resources for companies and entrepreneurs interested in commercializing technology developed at APG.
- **Army Research Laboratory** – The Army's basic and applied research laboratory.
- **Fort George G. Meade –** National Security Agency; Defense Information Systems Agency; U.S. Cyber Command.
- **Naval Air Station Patuxent River** – Naval Air Systems Command; Naval Air Warfare Center, Aircraft Division.
- **NASA Goddard Space Flight Center** – The largest earth and space science research organization in the world.
- **Johns Hopkins University Applied Physics Laboratory** – Research center with expertise in air and missile defense, national security, space and satellites, and undersea warfare.
- **University of Maryland College Park** – A top ranked school in aerospace engineering; home to the Glenn L. Martin Wind Tunnel.

New & Expanding Businesses

- **RADA Technologies** (Montgomery County) – Company which produces electronics for the aerospace and defense industries is planning a new headquarters, including R&D and manufacturing operations, anticipating 80 new jobs through 2023.
- **Coherent Technical Services** (St. Mary's County) – Engineering and technology services company that works with DOD, NASA and other customers is opening a 40,000-square-foot fabrication and prototyping facility and anticipates hiring at least 35 over the next five years.
- **L2 Defense** (Baltimore County) – Rapidly growing firm that provides technical and training expertise to the defense and national security industries has signed a lease for 8,200 square feet.
- **Northrop Grumman** (Cecil County) – Global security company is expanding its manufacturing operations and plans to add 175 new jobs over the next five years. The facility, which manufactures rocket motors for space launch and military applications, was formerly Orbital ATK.
- **Systems Engineering Group (SEG)** (Howard County – Subsidiary of Telephonics Corp. and leading provider of combat, radar, and missile systems engineering and analysis has hired 40 new employees in Columbia, with additional growth expected.
- **Chesapeake Technology International** (St. Mary's County) – Systems engineering and support operation for military, space-based and electronic warfare systems opened a new headquarters near the county airport.
- **The Aerospace Corporation** (Prince George's County) – Federally funded research and development center with 20 locations nationwide leased 12,000 square feet in Greenbelt.
- **Mistral Group** (Baltimore County) – Bethesda-based firm providing solutions to the U.S. market through adaptation and integration of Israeli defense technologies has opened a new manufacturing facility resulting in 50 new jobs.
- **Wilcoxon Sensing Technologies** (Frederick County) – Manufacturer of sensing and vibration equipment for the defense and other industries moved their 40,000-square-foot headquarters to Frederick.
- **Nammo Energetics Indian Head** (Charles County) – Norwegian missile manufacturer announced plans to open a production facility for rocket motors and warheads at the Naval Surface Warfare Center Indian Head, creating 130 jobs over five years and investing $30 million.
- **ELTA North America** (Howard County) – Israeli defense giant ELTA announced plans to triple its footprint in Maryland by adding up to 50 new jobs over the next three years, and signed a lease for 21,500 square feet.

Programs & Incentives

- **Maryland Venture Fund** – State funded seed and early-stage equity fund.
- **Maryland Technology Development Corporation** – Facilitates technology transfer from academic and federal labs into the private sector with seed funding, technical assistance and entrepreneurial support programs.
- **Research & Development Tax Credit** – Credit for R&D expenses for certified businesses.
- **Cybersecurity Investment Incentive Tax Credit** – Refundable tax credit for investment in a qualified cybersecurity company.

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