



Top 100 Defense Contractors 2022 and Top 10 Future Defense Programs





TABLE OF CONTENTS

Introduction	3
Top 100 Defense Contractors	4
1-25	4
26-50	5
51-75	6
76-100	7
Top 10 Navy Contractors	8
Top 10 Army Contractors	9
Top 10 Air Force Contractors	10
2022 Compared To 2021	11
Top 10 Defense Programs FY24-FY28	11
Top Program Briefs	14
About	22



INTRODUCTION

Defense spending is on the rise thanks to continuing conflict in Ukraine and to saber rattling in Asia over Taiwan and on the Korean Peninsula. Consequently, top contractors such as Lockheed Martin, RTX (née Raytheon Technologies), and General Dynamics have seen strong increases in their defense contracts. Meanwhile, pharmaceutical companies have remained key funding recipients as the nation and the world recover from the COVID-19 pandemic.

The following is excerpted from the U.S. General Services Administration’s Top 100 Contractors Report – Fiscal Year 2022. This section is focused only on U.S. Department of Defense contract awards, not the whole of the federal government.

This list of the Top 100 U.S. Department of Defense prime contractors is ranked by total contract funds awarded. According to USAspending.gov, the DoD had defense contract award obligations of \$424.1 billion in FY22, up 7 percent from \$395.7 billion in FY21. The top 100 FY22 contractors accounted for \$274.0 billion (65 percent) of the obligated dollars, compared to \$245.76 billion (62 percent) in FY21.

In FY22, the DoD’s share of available funding was \$1.64 trillion, or 14.3 percent, of the FY22 U.S. federal budget. This is an increase of 8.6 percent compared to the DoD’s share of the U.S. federal budget for FY21 of \$1.51 trillion, or 12.4 percent.



Source: USAspending.gov

Also included in this report are the top 10 contractors by branch of service and a listing of the top programs for FY24-FY28 as excerpted from Forecast International’s *U.S. Defense Budget Forecast*.

Current and historical top 100 federal lists are irregularly published on the U.S. General Services Administration’s System for Award Management (SAM) Top 100 Contractors Report page. (<https://sam.gov/reports/awards/static>)



TOP 100 DEFENSE CONTRACTORS

Prime Contractor	USD	% Total Dollars
1. LOCKHEED MARTIN CORP	\$ 46,213,556,415	10.89%
2. RAYTHEON TECHNOLOGIES CORP (Now RTX)	\$ 26,131,041,978	6.16%
3. GENERAL DYNAMICS CORP	\$ 21,574,860,870	5.09%
4. PFIZER INC	\$ 16,669,419,909	3.93%
5. THE BOEING CO	\$ 14,802,123,520	3.49%
6. NORTHROP GRUMMAN CORP	\$ 13,766,613,197	3.24%
7. HUMANA INC	\$ 7,739,712,978	1.82%
8. L3HARRIS TECHNOLOGIES INC	\$ 6,747,701,907	1.59%
9. HUNTINGTON INGALLS INDUSTRIES INC	\$ 5,358,246,653	1.26%
10. BAE SYSTEMS PLC	\$ 5,088,664,721	1.20%
11. LEIDOS HOLDINGS INC	\$ 4,081,300,445	0.96%
12. CENTENE CORP	\$ 3,550,059,420	0.84%
13. ANALYTIC SERVICES INC	\$ 3,282,767,886	0.77%
14. BECHTEL CORP	\$ 3,207,751,106	0.76%
15. AMENTUM SERVICES INC	\$ 3,193,044,698	0.75%
16. ATLANTIC DIVING SUPPLY INC	\$ 3,113,338,552	0.73%
17. KBR INC	\$ 3,087,936,764	0.73%
18. MCKESSON CORP	\$ 2,912,482,434	0.69%
19. SCIENCE APPLICATIONS INTERNATIONAL CORP	\$ 2,806,561,522	0.66%
20. ELI LILLY AND CO	\$ 2,752,650,000	0.65%
21. GENERAL ELECTRIC CO	\$ 2,628,625,800	0.62%
22. OKINAWA IDEMITSU KK	\$ 2,423,675,282	0.57%
23. BOOZ ALLEN HAMILTON HOLDING CORP	\$ 2,421,741,066	0.57%
24. GENERAL ATOMICS	\$ 2,183,714,738	0.51%
25. FLUOR CORP	\$ 2,119,220,065	0.50%



TOP 100 DEFENSE CONTRACTORS

Prime Contractor	USD	% Total Dollars
26. THE BRITISH PETROLEUM CO PLC	\$ 2,089,949,769	0.49%
27. ABBOTT LABORATORIES	\$ 1,903,042,837	0.45%
28. BELL-BOEING JOINT PROJECT OFFICE	\$ 1,887,421,279	0.44%
29. MODERNA INC	\$ 1,859,856,855	0.44%
30. IHEALTH LABS INC	\$ 1,774,999,987	0.42%
31. CACI INTERNATIONAL INC	\$ 1,755,258,966	0.41%
32. OSHKOSH CORP	\$ 1,645,279,966	0.39%
33. GLAXOSMITHKLINE HOLDINGS (AMERICAS) INC	\$ 1,633,124,216	0.38%
34. AMERISOURCEBERGEN CORP	\$ 1,615,810,327	0.38%
35. JACOBS ENGINEERING GROUP INC	\$ 1,504,536,515	0.35%
36. VECTRUS FEDERAL SERVICES GMBH	\$ 1,480,090,979	0.35%
37. VALERO ENERGY CORP	\$ 1,402,887,022	0.33%
38. JOHNS HOPKINS UNIVERSITY	\$ 1,217,646,385	0.29%
39. UNITED LAUNCH ALLIANCE LLC	\$ 1,213,662,847	0.29%
40. HENSEL PHELPS CONSTRUCTION CO	\$ 1,204,195,480	0.28%
41. MASSACHUSETTS INSTITUTE OF TECHNOLOGY	\$ 1,133,916,740	0.27%
42. ROLLS-ROYCE HOLDINGS PLC	\$ 1,090,539,490	0.26%
43. KOKOSING ALBERICI TRAYLOR LLC	\$ 1,070,124,150	0.25%
44. THE MITRE CORP	\$ 1,061,316,907	0.25%
45. DELL TECHNOLOGIES INC	\$ 1,054,058,467	0.25%
46. TEXTRON INC	\$ 1,044,104,485	0.25%
47. PERATON CORP	\$ 1,040,701,404	0.25%
48. THE AEROSPACE CORP	\$ 1,036,405,128	0.24%
49. MERCK & CO INC	\$ 997,122,535	0.24%
50. MINISTRY OF DEFENSE (JAPAN)	\$ 994,144,983	0.23%



TOP 100 DEFENSE CONTRACTORS

Prime Contractor	USD	% Total Dollars
51. LEONARDO SPA	\$ 993,733,152	0.23%
52. L-3 COMMUNICATIONS VERTEX AEROSPACE LLC	\$ 978,322,794	0.23%
53. HONEYWELL INTERNATIONAL INC	\$ 949,027,685	0.22%
54. SIERRA NEVADA CORP	\$ 946,325,167	0.22%
55. AECOM	\$ 901,342,771	0.21%
56. PATRIOT TEAM	\$ 854,864,162	0.20%
57. FEDEX CORP	\$ 853,981,165	0.20%
58. M1 SUPPORT SERVICES LP	\$ 845,568,929	0.20%
59. AUSTAL USA LLC	\$ 808,398,754	0.19%
60. SPACE EXPLORATION TECHNOLOGIES CORP	\$ 806,300,407	0.19%
61. SIEMENS AKTIENGESELLSCHAFT, BERLIN UND MUNCHEN	\$ 786,967,657	0.19%
62. SERCO GROUP PLC	\$ 767,958,556	0.18%
63. EXPRESS SCRIPTS INC	\$ 737,879,208	0.17%
64. GEORGIA TECH RESEARCH CORP	\$ 692,361,606	0.16%
65. MARINETTE MARINE CORP	\$ 673,891,974	0.16%
66. SINGAPORE TECHNOLOGIES ENGINEERING LTD	\$ 657,465,302	0.15%
67. ENVIRONMENTAL CHEMICAL CORP	\$ 654,999,437	0.15%
68. GOVERNMENT OF CANADA	\$ 653,469,428	0.15%
69. PARSONS CORP	\$ 647,995,653	0.15%
70. DELOITTE TOUCHE TOHMATSU LTD	\$ 634,425,236	0.15%
71. ARCTIC SLOPE REGIONAL CORP	\$ 624,601,356	0.15%
72. B.L. HARBERT HOLDINGS LLC	\$ 616,952,175	0.15%
73. W.S. DARLEY & CO	\$ 606,773,823	0.14%
74. QUIDEL CORP	\$ 605,451,289	0.14%
75. ROCHE HOLDING AG	\$ 603,503,997	0.14%



TOP 100 DEFENSE CONTRACTORS

Prime Contractor	USD	% Total Dollars
76. TORCH TECHNOLOGIES INC	\$ 580,314,209	0.14%
77. ASTRAZENECA PLC	\$ 573,237,239	0.14%
78. CONSORTIUM MANAGEMENT GROUP INC	\$ 569,978,178	0.13%
79. MARATHON PETROLEUM CORP	\$ 568,325,224	0.13%
80. CROWLEY HOLDINGS INC	\$ 564,733,715	0.13%
81. MOTOR OIL (HELLAS) CORINTH REFINERIES SA	\$ 560,179,569	0.13%
82. CARAHSOFT TECHNOLOGY CORP	\$ 552,475,951	0.13%
83. AM GENERAL LLC	\$ 544,985,610	0.13%
84. PETROMAX REFINING CO LLC	\$ 536,081,952	0.13%
85. MICROSOFT CORP	\$ 531,282,936	0.13%
86. VITOL INC	\$ 514,742,542	0.12%
87. VIASAT INC	\$ 507,763,259	0.12%
88. HIGHMARK INC	\$ 504,912,782	0.12%
89. PORTER NOVELLI PUBLIC SERVICES INC	\$ 499,670,637	0.12%
90. NATIONAL SECURITY TECHNOLOGY ACCELERATOR	\$ 483,808,799	0.11%
91. NANA REGIONAL CORP INC	\$ 481,897,710	0.11%
92. INTERNATIONAL BUSINESS MACHINES CORP	\$ 466,478,720	0.11%
93. CARDINAL HEALTH INC	\$ 458,419,889	0.11%
94. JOHNS HOPKINS HEALTH SYS CORP	\$ 455,731,763	0.11%
95. VALIANT INTEGRATED SERVICES LLC	\$ 454,562,510	0.11%
96. NOBLE SALES CO INC	\$ 437,593,496	0.10%
97. PHILLIPS 66	\$ 434,356,265	0.10%
98. A.P. MOLLER OG HUSTRU CHASTINE MC-KINNEY MOLLERS FOND TIL ALMENE FORMAAL	\$ 427,352,768	0.10%
99. THOMAS SCIENTIFIC LLC	\$ 419,532,515	0.10%
100. 381 CONSTRUCTORS	\$ 417,629,629	0.10%



TOP 10 NAVY CONTRACTORS

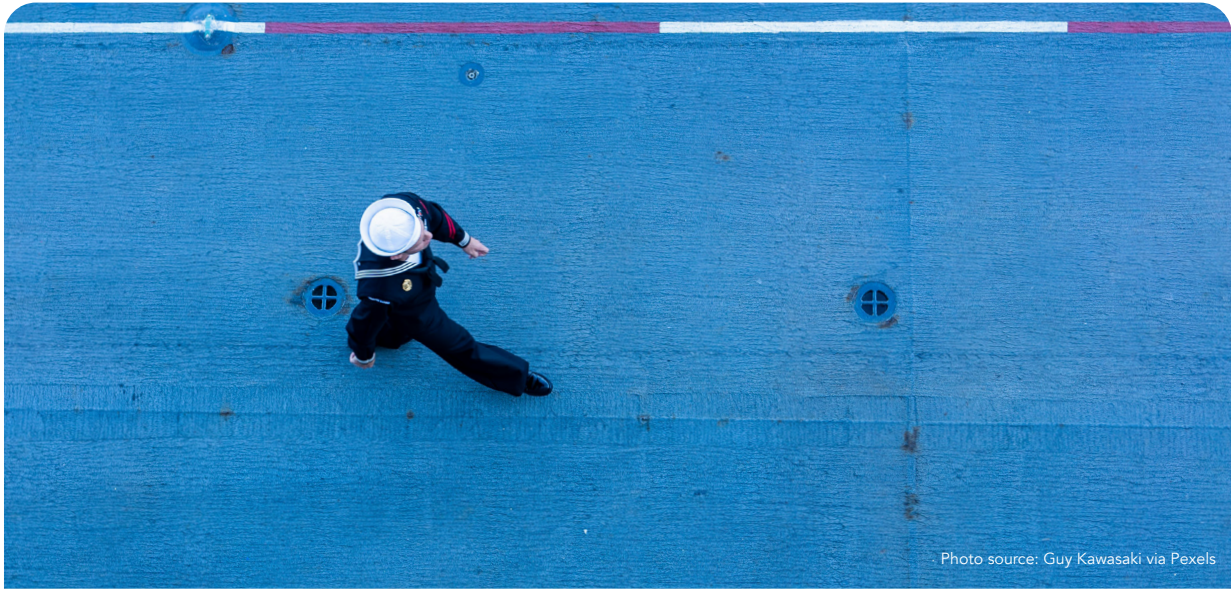


Photo source: Guy Kawasaki via Pexels

Prime Contractor	USD	% Total Dollars
1. LOCKHEED MARTIN CORP	\$ 23,969,579,929	19.18%
2. GENERAL DYNAMICS CORP	\$ 14,524,765,967	11.62%
3. RAYTHEON TECHNOLOGIES CORP (Now RTX)	\$ 12,995,818,683	10.40%
4. HUNTINGTON INGALLS INDUSTRIES INC	\$ 4,926,536,519	3.94%
5. NORTHROP GRUMMAN CORP	\$ 4,001,905,814	3.20%
6. THE BOEING CO	\$ 2,649,676,754	2.12%
7. BAE SYSTEMS PLC	\$ 2,371,540,341	1.90%
8. BECHTEL CORP	\$ 2,121,905,964	1.70%
9. FLUOR CORP	\$ 1,719,782,190	1.38%
10. BELL-BOEING JOINT PROJECT OFFICE	\$ 1,586,598,697	1.27%



TOP 10 ARMY CONTRACTORS



Photo source: Pixabay via Pexels

Prime Contractor	USD	% Total Dollars
1. PFIZER INC	\$ 16,668,407,445	14.13%
2. LOCKHEED MARTIN CORP	\$ 6,185,454,133	5.24%
3. GENERAL DYNAMICS CORP	\$ 5,845,557,804	4.95%
4. RAYTHEON TECHNOLOGIES CORP (Now RTX)	\$ 3,152,241,964	2.67%
5. ELI LILLY AND CO	\$ 2,752,650,000	2.33%
6. ANALYTIC SERVICES INC	\$ 2,480,256,973	2.10%
7. NORTHROP GRUMMAN CORP	\$ 1,918,356,307	1.63%
8. KBR INC	\$ 1,889,340,434	1.60%
9. MODERNA INC	\$ 1,847,426,961	1.57%
10. IHEALTH LABS INC	\$ 1,774,999,987	1.50%



TOP 10 AIR FORCE CONTRACTORS



Photo source: Pixabay via Pexels

Prime Contractor	USD	% Total Dollars
1. LOCKHEED MARTIN CORP	\$ 9,803,469,736	12.20%
2. THE BOEING CO	\$ 9,466,508,730	11.78%
3. RAYTHEON TECHNOLOGIES CORP (Now RTX)	\$ 6,025,898,699	7.50%
4. NORTHROP GRUMMAN CORP	\$ 5,899,539,207	7.34%
5. L3HARRIS TECHNOLOGIES INC	\$ 3,105,143,700	3.87%
6. AMENTUM SERVICES INC	\$ 1,285,125,540	1.60%
7. GENERAL ATOMICS	\$ 1,250,190,450	1.56%
8. UNITED LAUNCH ALLIANCE LLC	\$ 1,214,324,758	1.51%
9. MASSACHUSETTS INSTITUTE OF TECHNOLOGY	\$ 1,124,223,907	1.40%
10. BAE SYSTEMS PLC	\$ 1,097,441,494	1.37%



2022 COMPARED TO 2021

2022 Rank	Prime Contractor	\$ millions	2021 Rank	\$ millions
1.	LOCKHEED MARTIN CORP	\$ 46,214	1	\$ 40,336
2.	RAYTHEON TECHNOLOGIES CORP (Now RTX)	\$ 26,131	3	\$ 20,595
3.	GENERAL DYNAMICS CORP	\$ 21,575	4	\$ 17,288
4.	PFIZER INC	\$ 16,669	5	\$ 13,318
5.	THE BOEING CO	\$ 14,802	2	\$ 22,191
6.	NORTHROP GRUMMAN CORP	\$ 13,767	6	\$ 12,722
7.	HUMANA INC	\$ 7,740	7	\$ 7,144
8.	L3HARRIS TECHNOLOGIES INC	\$ 6,748	9	\$ 6,137
9.	HUNTINGTON INGALLS INDUSTRIES INC	\$ 5,358	10	\$ 5,997
10.	BAE SYSTEMS PLC	\$ 5,089	14	\$ 3,766
11.	LEIDOS HOLDINGS INC	\$ 4,081	13	\$ 3,770
12.	CENTENE CORP	\$ 3,550	15	\$ 3,218
13.	ANALYTIC SERVICES INC	\$ 3,283	12	\$ 4,391
14.	BECHTEL CORP	\$ 3,207	16	\$ 2,992
15.	AMENTUM SERVICES INC	\$ 3,193	23	\$ 2,274

TOP 10 DEFENSE PROGRAMS FY24-FY28

Data in the tables below is collated from Forecast International's *U.S. Defense Budget Forecast*. This streamlined database provides fast and easy access to the Pentagon's entire acquisition budget. The product features sorting and data visualization options and presents historical and outyear funding through an online interface with downloadable Excel spreadsheets. Please note that these are approximate funding projections based on consolidated procurement and RDT&E funding line items and may not include ancillary funding, such as spare parts.



The **Future Years Defense Program (FYDP)** represents the Pentagon’s summary of forces, resources, and equipment needed over a five-year period comprising the budget request year plus an additional four years. The first table shows the top acquisition programs ranked by the total projected spending over that five-year period. These projections fluctuate as each new defense budget request is released.

The top three programs the DoD plans to invest in over the next five years are unchanged from the previous iteration of this report: namely, the F-35, the Virginia class submarine, and the Columbia class ballistic missile submarine. New investment in the Space Development Agency’s tracking layer satellite constellation resulted in the SBIRS High/Next-Gen OPIR program jumping from 10th place to fifth in this year’s ranking. Meanwhile, two programs made a new appearance in the top 10: the Air Force’s Next Generation Air Dominance program and the Marine Corps’ CH-53K heavy-lift helicopter. NGAD funding is expected to ramp up significantly over the course of the FYDP, surpassing \$8 billion by FY28. The Ford class aircraft carrier and the KC-46A tanker fell off the top 10 list. The current KC-46A acquisition plan shows procurement ending in FY27, but the Air Force is expected to extend production while it develops a Next-Generation Aerial Refueling System (NGAS).

TOP 10 DOD PROGRAMS RANKED BY TOTAL IN FYDP (\$ MILLIONS)

Program Name & Contractor	2024	2025	2026	2027	2028	Total FYDP
1. F-35 Joint Strike Fighter (JSF) <i>Lockheed Martin</i>	\$13,590	\$13,392	\$13,373	\$13,250	\$13,558	\$67,163
2. SSN-774 Virginia Class <i>General Dynamics/HII</i>	\$11,955	\$11,624	\$10,111	\$9,699	\$9,197	\$52,586
3. Columbia Class SSBN <i>General Dynamics</i>	\$6,091	\$7,470	\$8,663	\$8,971	\$8,938	\$40,134
4. B-21 Bomber <i>Northrop Grumman</i>	\$5,309	\$6,392	\$6,645	\$5,978	\$7,130	\$31,454
5. SBIRS High/Next-Gen OPIR <i>Lockheed Martin/ Northrop Grumman/L3Harris/SpaceX</i>	\$5,496	\$4,617	\$3,874	\$6,756	\$6,543	\$27,286
6. DDG 51 Class Destroyer <i>General Dynamics/HII</i>	\$5,112	\$5,337	\$5,028	\$5,163	\$5,568	\$26,207
7. Next Generation Air Dominance <i>RDT&E</i>	\$2,326	\$3,485	\$3,784	\$5,298	\$7,164	\$22,057
8. Ground-Based Strategic Deterrent <i>Northrop Grumman</i>	\$4,784	\$4,342	\$3,543	\$2,921	\$2,164	\$17,752
9. UGM-133A Trident II <i>Lockheed Martin</i>	\$2,044	\$2,470	\$3,569	\$4,001	\$4,845	\$16,929
10. CH-53K <i>Lockheed Martin</i>	\$2,377	\$2,781	\$2,851	\$2,781	\$2,838	\$13,627

Source: [U.S. Defense Budget Forecast](#)



The rankings in the table below are based on the value of FY24 funding as it appears in the administration’s FY24 budget request. The Pentagon is seeking \$842 billion in FY24, reflecting an increase of \$26 billion, or 3.2 percent, over the FY23 enacted base budget.

The FY24 request includes \$170 billion for procurement and \$145 billion for research, development, test, and evaluation, for a total of \$315 billion for acquisition programs. Both the procurement and RDT&E accounts saw massive injections of funding from Congress over the past two budget cycles, resulting in combined growth of \$57 billion in FY22 and FY23.

A debt limit agreement that was drafted after the budget request was submitted to Congress includes federal spending caps that would lock FY24 national security funding at the level requested by the administration. The caps would then allow for only 1 percent budget growth in FY25. These caps don’t apply to supplemental spending bills used to provide security assistance to Ukraine. Lawmakers are already considering using supplemental spending bills as a loophole to increase the Pentagon’s FY24 base budget.

TOP 10 DOD PROGRAMS RANKED BY FY24 REQUEST FUNDING (\$ MILLIONS)

Program Name & Contractor	2024	2025	2026	2027	2028	Total FYDP
1. F-35 Joint Strike Fighter (JSF) <i>Lockheed Martin</i>	\$13,590	\$13,392	\$13,373	\$13,250	\$13,558	\$67,163
2. SSN-774 Virginia Class <i>General Dynamics/HII</i>	\$11,955	\$11,624	\$10,111	\$9,699	\$9,197	\$52,586
3. Columbia Class SSBN <i>General Dynamics</i>	\$6,091	\$7,470	\$8,663	\$8,971	\$8,938	\$40,134
4. SBIRS High/Next-Gen OPIR <i>Lockheed Martin/ Northrop Grumman/L3Harris/SpaceX</i>	\$5,496	\$4,617	\$3,874	\$6,756	\$6,543	\$27,286
5. B-21 Bomber <i>Northrop Grumman</i>	\$5,309	\$6,392	\$6,645	\$5,978	\$7,130	\$31,454
6. DDG 51 Class Destroyer <i>General Dynamics/HII</i>	\$5,112	\$5,337	\$5,028	\$5,163	\$5,568	\$26,207
7. Ground-Based Strategic Deterrent <i>Northrop Grumman</i>	\$4,784	\$4,342	\$3,543	\$2,921	\$2,164	\$17,752
8. Boeing F-15 Eagle <i>Boeing</i>	\$3,378	\$3,034	\$507	\$318	\$136	\$7,374
9. Boeing KC-767/KC-46A <i>Boeing</i>	\$3,027	\$3,005	\$3,118	\$1,727	\$184	\$11,060
10. CH-53K <i>Lockheed Martin</i>	\$2,377	\$2,781	\$2,851	\$2,781	\$2,838	\$13,627

Source: [U.S. Defense Budget Forecast](#)



TOP PROGRAM BRIEFS

Lockheed Martin F-35 Joint Strike Fighter

The F-35 Joint Strike Fighter program, now officially named Lightning II, is a U.S./U.K. effort to develop an affordable next-generation strike fighter aircraft. The Joint Strike Fighter is designed to replace the A-10, AV-8 Harrier, F-16, and F/A-18. Three versions of the JSF are planned. The conventional takeoff and landing (CTOL) variant (F-35A) will be built in the greatest quantity and is designed for the U.S. Air Force. The U.S. Navy's carrier variant (F-35C) features larger wing and control surfaces, additional wingtip ailerons, and a special structure to absorb the punishing catapult launches and arrested landings associated with aircraft carrier operations. The short takeoff and vertical landing (STOVL) version (F-35B) is equipped with a unique shaft-driven lift-fan propulsion system that enables the aircraft to take off from a very short runway or small aircraft carrier and land vertically.

Planned U.S. procurement totals for the F-35 have remained remarkably constant over the years. The U.S. Air Force plans to procure 1,763 F-35As, the Marine Corps plans to acquire 353 F-35Bs and 67 F-35Cs, and the Navy plans to acquire 273 F-35Cs. Planned F-35 acquisitions for the international program partners are as follows: the U.K., 138 F-35Bs; Australia, 100 F-35As; Italy, 60 F-35As and 30 F-35Bs; Canada, 88 F-35As; the Netherlands, 52 F-35As; Norway, 52 F-35As; and Denmark, 27 F-35As.

Beyond the program partners, the F-35 had nine customers by early 2023 through the U.S. government's Foreign Military Sales (FMS) program: Belgium, Finland, Germany, Israel, Japan, Poland, Singapore, South Korea, and Switzerland.

Through 2022, Lockheed Martin built two concept demonstrator aircraft, 14 F-35 System Development and Demonstration (SDD) aircraft, and 895 F-35 production aircraft. The company also built six static test aircraft.



F-35. Photo source: dvidshub.net



TOP PROGRAM BRIEFS

SSN 774 Virginia Class

Formerly known as the New Attack Submarine, or New SSN, the Virginia class operates across a broad spectrum of regional and littoral missions, as well as in blue water environments. The boat's multimission capabilities are combined with sophisticated surveillance and stealth characteristics to make it suitable for a wide range of battlefield applications, as well as special warfare and surveillance. In 1998, the team of HII Newport News Shipbuilding and General Dynamics Electric Boat was awarded a contract to begin production.

In December 2019, the U.S. Navy awarded Electric Boat a contract valued at \$22.2 billion for the construction of nine Block V submarines. The contract also includes an option for production of a 10th ship, bringing the potential contract value to approximately \$24.1 billion. Construction of Block V ships is underway, with deliveries scheduled from 2025 through 2029.

In early 2023, Australia agreed to acquire up to five boats under the AUKUS deal. Australia will buy three Virginia class subs in the early 2030s, two from U.S. stock and one new-build (as reported on The Warzone in July 2023), with the option to buy two more. All told, 21 submarines are currently in service. The projected Virginia class production run appears set at 52, which will help the U.S. Navy reach its force structure goal of 66 SSN attack submarines of all classes.



USS Virginia. Photo source: dvidshub.net



TOP PROGRAM BRIEFS

Columbia Class SSBN

In March 2016, General Dynamics Electric Boat was named prime contractor on the 12-boat Columbia class submarine program in partnership with HII's Newport News Shipbuilding. The Columbia class, formerly known as the Ohio Replacement submarine and the SSBN(X), is the U.S. Navy's replacement for the Ohio class ballistic missile submarine. Electric Boat will perform final assembly of all the new boats, with Newport News providing key components.

In November 2020, General Dynamics Electric Boat was awarded a \$9.5 billion contract to construct and test the lead and second ships of the Columbia class, SSBN 826 Columbia and SSBN 827 Wisconsin. The contract follows a five-year, \$1.85 billion award that Electric Boat received in December 2012 to perform research and development work for the Columbia class. The first submarine is expected to enter service in 2030 or early 2031. The U.S. Navy plans to build a fleet of 12 to replace its 14 aging Ohio class SSBNs.

The \$128 billion, 12-boat Columbia class program will take up a good chunk of U.S. Navy funding for several years.

B-21 Raider

In October 2015, Northrop Grumman was selected over a Boeing/Lockheed Martin team to develop and build the next-generation B-21 under the auspices of the Long-Range Strike Bomber (LRS-B) program. In September 2016, the U.S. Air Force named the new B-21 bomber the Raider.

The B-21 is aimed at eventually replacing the Boeing B-1 and B-52 aircraft currently in service. According to Air Force officials, the service intends to build 80 to 100 B-21s and targets the mid-2020s for the aircraft to be operational. The program could be worth more than \$80 billion if the Air Force buys all 100 aircraft. Northrop Grumman's B-21 Raider industry team includes BAE Systems, GKN Aerospace, Janicki Industries, Orbital ATK (now part of Northrop Grumman), Pratt & Whitney, Rockwell Collins, and Spirit AeroSystems. A Preliminary Design Review (PDR) was completed in 2017.

The Pentagon plans to spend over \$20 billion on B-21 procurement and \$10 billion on additional development work during FY24-FY28.

As of December 2022, the USAF reported that Northrop Grumman had six B-21s in various stages of production. The first aircraft was rolled out in December 2022 and will make its maiden flight in late 2023 or early 2024. The B-21 is expected to enter service around 2026 or 2027.

Northrop Grumman's industry team includes Aerojet Rocketdyne, Bechtel, Clark Construction, Collins Aerospace, General Dynamics, HDT Global, Honeywell, Kratos Defense and Security Solutions, L3Harris, Lockheed Martin, and Textron Systems.



TOP PROGRAM BRIEFS

SBIRS High/Next-Gen OPIR

The Space-Based Infrared System (SBIRS) is an advanced early warning missile identification satellite system that will replace Defense Support Program (DSP) satellites. Next-Generation Overhead Persistent Infrared (OPIR) is the follow-on to SBIRS High. The primary missions of SBIRS High are missile defense, technical intelligence, analysis of battle situations, and provision of initial warning of a ballistic missile attack. OPIR has the same missions but is improved and is a follow-on to SBIRS High.

In order to replace its current-generation SBIRS satellites, the U.S. Air Force began investigating follow-on systems in 2014. A \$2.9 billion contract was awarded to Lockheed Martin in August 2018, and in FY20, the name Evolved SBIRS was changed to Next-Generation OPIR. Lockheed Martin is to build the GEO OPIR satellites. Northrop Grumman was awarded \$2.36 billion in May 2020 for the polar-orbiting portion of the constellation. The planned constellation is to consist of five satellites, with three in GEO and two in polar orbits. The first GEO bird is planned to be completed in 2025, and the first polar satellite in 2027. These satellites are known as Block 0, and there is a planned Block 1; however, that will happen in the distant future, with the first satellite delivery planned for 2030.

As the current plan stands, all Block 0 satellites will be in orbit by 2029. This pushes back earlier estimates of a target date of 2025.

An aspect of Next-Gen OPIR that has recently come to light is the future acquisition of LEO satellites with OPIR payloads to augment the Next-Gen OPIR system. In September 2021, L3Harris completed its PDR of a new missile warning satellite under development for the U.S. Space Development Agency. As an aspect of the Next-Gen OPIR program, the satellites will provide the capability to detect and track ballistic and hypersonic missiles via overhead persistent infrared sensing from low-Earth orbit. In October 2020, the SDA awarded \$193 million to L3Harris and \$149 million to SpaceX to build four satellites each under the Tracking Layers Tranche 0 effort. In July 2022, the SDA awarded contracts valued at \$1.3 billion for 28 Tracking Layer Tranche 1 satellites to Northrop Grumman and L3Harris. The contractors will manufacture 14 satellites each for the network.



SBIRS GEO-6 satellite launch. Photo source: davidshub.net



TOP PROGRAM BRIEFS

DDG 51 Arleigh Burke Class

The DDG 51 class ships are AEGIS guided missile destroyers designed for the escort of aircraft carrier battle groups and surface action groups in high-threat areas and during anti-air, anti-submarine, and anti-surface warfare. General Dynamics Bath Iron Works and HII Shipbuilding produce this series. A total of 73 ships of the class have been commissioned so far. Under current plans, at least 20 DDG 51 Flight III ships are proposed to be built.

Next Generation Air Dominance (NGAD)

The U.S. Air Force's Next Generation Air Dominance (NGAD) program is designed to replace the F-22 Raptor with a sixth-generation fighter capable of achieving air superiority in the face of advanced integrated air defense systems and fighter aircraft. The Air Force plans for NGAD to incorporate a "family of systems" approach to create a new manned stealth fighter design that works seamlessly in combat with uncrewed assets.

In March 2023, Air Force officials discussed a notional plan for a fleet of 200 manned NGAD fighters, which is roughly the size of the original F-22 fleet. It should be noted that the Air Force originally wanted a much larger F-22 fleet, but production was terminated early. The service said it also foresees acquiring 1,000 collaborative combat aircraft (CCAs), which would be enough for two to accompany each NGAD jet, as well as two CCAs each for 300 F-35A fighters.

In May 2023, the Air Force released a classified contract solicitation for EMD of the NGAD manned fighter platform only with the intent to sign a deal by 2024. Competitors for the program will likely include Boeing and Lockheed Martin. In July 2023, Northrop Grumman bowed out, saying it would not bid on the program.

Ground-Based Strategic Deterrent

The LGM-30 Minuteman has been the main land-based strategic deterrent for the U.S. since 1963 (when it was deployed in its LGM-30A and LGM-30B configurations). The Minuteman is no longer in production, but the LGM-30G Minuteman III remains in service thanks to numerous life extension programs.

The Ground-Based Strategic Deterrent (GBSD) program aims to replace the Boeing LGM-30 Minuteman III intercontinental ballistic missile around 2030. In September 2020, the U.S. Air Force selected Northrop Grumman to modernize the nation's aging ICBM system under a \$13.3 billion contract for the engineering and manufacturing development (EMD) phase of the GBSD program. Current plans call for the acquisition of more than 600 new ICBMs. However, a future arms control agreement (or lack thereof) involving the U.S., Russia, and perhaps China may affect the GBSD procurement figure.



TOP PROGRAM BRIEFS

UGM-133A Trident II

The Trident is a strategic submarine-launched ballistic missile (SLBM). Lockheed Martin is the prime contractor on this program. Over the Trident's production life, 599 UGM-96A Trident I C-4 missiles were constructed. Approximately 367 Trident I missiles are known to be deployed on U.S. Navy ballistic missile submarines.

The U.S. approved initial low-rate production of the Trident II in April 1987, followed by serial fabrication in 1990. The U.S. Navy received 453 UGM-133A Trident II missiles and the U.K. Royal Navy, 58. Approximately 288 UGM-133B Trident IIs were acquired.

The U.S. Navy has ended "missile production" and is focusing on funding of Trident II upgrades. The first objective of this modernization program is to enable the Trident II SLBM to remain operational through 2042. Initially, the armament for the new Columbia class SSBN will be the Trident II SLBM.

CH-53K King Stallion

The CH-53K King Stallion is an all-new heavy-lift transport helicopter designed to replace the U.S. Marine Corps fleet of CH-53E Super Stallions, which were introduced in 1980. The Marine Corps currently plans to buy a total of 200 helicopters, including four system demonstration test articles purchased with RDT&E funding and 196 production aircraft.

The first helicopter was delivered in May 2018, but additional technical issues surfaced that resulted in a restructured test program and delays in declaring the aircraft operational. Initial Operational Capability (IOC) was achieved in May 2022, and full-rate production (FRP) was approved in December 2022.

The Pentagon will begin the program's FRP phase with 10 Lot 7 aircraft in FY23. However, technical deficiencies identified during testing led the Navy to slow procurement temporarily, cutting the planned rate of near-term deliveries.



The CH-53K King Stallion. Photo source: dvidshub.net



TOP PROGRAM BRIEFS

Boeing KC-767/KC-46A Tanker

The KC-767 and KC-46A are twin-engine aerial tanker conversions of the commercial 767-200ER transport. The KC-46A Pegasus provides aerial refueling support to U.S. Air Force, Navy, and Marine Corps aircraft. In February 2011, Boeing was selected over rival Airbus parent EADS (now Airbus SE) in the long-running USAF KC-X Tanker program. Boeing's NewGen Tanker, dubbed the KC-46, will replace 179 of the service's 400-plus KC-135 tankers. The program passed its Critical Design Review (CDR) in 2013. Ultimately, the program could be worth more than \$30 billion.

However, delays and issues with the KC-46A program have led to losses of several billion dollars for Boeing since 2016. These costs were attributed to certification and flight-testing issues and the incorporation of changes into the aircraft, among other issues. The program continues to deal with technical deficiencies, which have slowed delivery plans. The USAF procured 109 production aircraft through FY22 and had taken delivery of 68 by mid-2023. The service has delayed a decision on full-rate production to mid-2024 as it waits to make sure Boeing can deliver an upgraded remote vision system and other improvements.

The USAF opened the next phase of the KC-135 Tanker Recapitalization tanker replacement effort – formerly known as KC-Y – to competitive bidding. Lockheed Martin is teaming with Airbus to offer the LMXT, a new U.S.-built version of the Airbus A330 multirole tanker transport. Boeing is sorting out the KC-46A's remaining technical problems and will continue to do so over the next several years. Buying the A330 MRTT will come with a new set of development risks and face headwinds in Congress. As long as Boeing continues with the improvements, the service is likely to stick with the KC-46A rather than risk working with a new design. A Request for Information on this effort is expected to be issued by the USAF in late 2023.



KC-767. Photo source: dvidshub.net



TOP PROGRAM BRIEFS

Boeing F-15 Eagle

The F-15 is a twin-engine, single-seat, high-performance air superiority fighter and two-seat all-weather strike fighter aircraft designed for long-range air superiority and all-weather conventional and nuclear strikes. To date, over 1,700 aircraft have been delivered, including test aircraft and licensed production in Japan.

In July 2020, the U.S. Air Force awarded Boeing a nearly \$1.2 billion contract to build the first lot of eight new F-15EX fighters. The Air Force also announced the overall indefinite delivery/indefinite quantity (IDIQ) contract with a ceiling value of nearly \$23 billion for the F-15EX. The most significant difference between the F-15EX and legacy F-15s lies in the former's Open Mission Systems architecture. The OMS architecture enables the rapid insertion of the latest aircraft technologies. The F-15EX also has fly-by-wire flight controls, a new electronic warfare system, advanced cockpit systems, and the latest mission systems and software capabilities. Deliveries to the USAF began in March 2021.

The USAF once planned to buy at least 144 F-15EXs over the life of the program, but its budget plan for FY24 indicates that its target is now down to 104 aircraft, which is a reversal from FY23 plans to cut the fleet to 80 aircraft.



F-15. Photo source: dvidshub.net

ABOUT FORECAST INTERNATIONAL

Accurate and reliable market forecasts are more critical than ever to achieving success. For over 50 years, Forecast International has been setting the industry standard for defense and aerospace research and analysis. Our unmatched expertise has served our clients well when markets change rapidly in response to dramatic global events. FI remains steadfast in its mission of delivering actionable intelligence that reduces uncertainties and makes the future as predictable as it can be. Visit forecastinternational.com to learn more.

SERVICES AND CONTRIBUTORS

Defense & Aerospace Companies

The Volume I North America companies service, authored by **Richard J. Pettibone**, includes coverage of over 100 key U.S. and Canadian primes and their subsidiaries. Each of the 39 reports contains data on recent programs, mergers, and joint ventures. Among the notable corporations covered are OEMs such as Boeing, Lockheed Martin, Raytheon Technologies, and General Dynamics. Also featured are Tier I and Tier II contractors such as Pratt & Whitney, Honeywell, Parker Hannifin, and Spirit AeroSystems.

The Volume II International companies service includes coverage of over 90 top companies and subsidiaries outside North America, with a focus on key players in Europe and Asia. Each of the volume's 50+ reports contains data on recent programs, mergers, and joint ventures. Among the notable corporations covered are OEMs such as Airbus, Aviation Industry Corporation of China (AVIC), BAE Systems, and Embraer. Also featured are Tier I and Tier II contractors such as Rolls-Royce, Hanwha, Rafael, RUAG, and IHI Corporation.

U.S. Defense Budget Forecast

Managed by **Shaun McDougall**, the U.S. Defense Budget Forecast product is a streamlined database providing fast and easy access to the Pentagon's entire acquisition budget. The product features new sorting and data visualization options, and presents the entire FYDP through an online interface with downloadable Excel spreadsheets. This is the go-to service for anyone familiar with the grind of wading through the massive DoD budget. This online interactive service provides real-time tracking of every program in the Pentagon's acquisition portfolio, starting with the request and moving through the six congressional authorization and appropriations markups that occur throughout the year. The service also offers easy access to the Pentagon's five-year spending plan for its Procurement (P1) and Research, Development, Test & Evaluation (R1) accounts, all the way down to the program level. We also offer quick access to consolidated and program-level justification documents, and provide custom market segment filters to facilitate your search.



75 Glen Road, Ste 302,
Sandy Hook, CT 06482 USA



Telephone: + 1.203.426.0800
Fax: 203.426.0223



www.forecastinternational.com