Air Force Research Laboratory (AFRL) Wright-Patterson Air Force Base (WPAFB) OH FACTSHEET

Overview and Mission of AFRL: The Air Force Research Laboratory (AFRL) is headquartered at WPAFB with operating locations in New York, New Mexico, Florida, Virginia, California and Hawaii. AFRL's mission is leading the discovery, development, and integration of warfighting technologies for our air, space, and cyberspace forces. The AFRL is made up of a diverse team of incredible people dedicated to turning the impossible into reality. The workforce comprises a wealth of talented individuals who lead AFRL science and technology (S&T) development through in-house and contractual programs. The laboratory outsources approximately 75% of its budget to industry, academia and the international community - leveraging the world's knowledge to provide the most innovative S&T to the Air Force (AF). AFRL maintains a diverse S&T portfolio, ranging from basic and applied research to advanced technology development that focuses on three specific products: targeted research to shape the future battlespace, integrated technology options to satisfy identified AF requirements, and rapid technology solutions to meet urgent operational needs. Further, through its management of the laboratory, it also plays an important role in ensuring timely, reliable, and economical production and sustainment of AF systems. It is responsible for the Air Force's S&T budget of over $2 billion including: basic research, applied research, advanced technology development, and an additional $1.7 billion from AFRL customers.

AFRL Technical Directorates (TD): AFRL accomplishes its mission through nine Technology Directorates and a central staff. The directorates are the 711th Human Performance Wing (711HPW) (WPAFB and Fort Sam Huston, TX), Aerospace Systems Directorate (WPAFB and Edwards AFB), Air Force Office of Scientific Research (AFOSR) (Arlington, VA), Directed Energy Directorate (Kirtland AFB, NM and Maui, HI), Information Directorate (Rome, NY), Materials and Manufacturing Directorate (WPAFB), Munitions Directorate (Eglin AFB, FL), Sensors Directorate (WPAFB), and Space Vehicles Directorate (Kirtland Air Force Base, NM). The description of each directorate is as follows.

The 711 Human Performance Wind (HPW) is the first human-centric warfare Wing to consolidate research, education, and consultation under a single organization. The Wing's primary mission areas are aerospace medicine science and technology, and human systems integration.

The Aerospace Systems Directorate (AFRL/RQ) leads the effort to develop and transition superior technology solutions that enable dominant military aerospace vehicles.   Focus areas include vehicle aerodynamics, flight control, aerospace propulsion, power, rocket propulsion, aerospace structures, and turbine engines. Aerospace Systems Directorate programs advance a variety of aerospace technologies, including unmanned vehicles, space access, advanced fuels, hypersonic vehicles, future strike, and energy management.

The AFOSR is the basic research manager for the AFRL. AFOSR invests in long-term, broad-based research into aerospace-related science and engineering. AFOSR distributes its basic research program investment to approximately 300 academic institutions, 145 industry-based contracts, and more than 150 internal AFRL research efforts.

The Directed Energy Directorate (AFRL/RD) is the AF's Center of Expertise for directed energy and optical technologies. The directorate's focus in in four core technical competencies: Laser Systems, High-Power Electromagnetics, Weapons Modeling and Simulation, and Directed Energy and Electro-Optics for Space Superiority. The lab is transitioning game changing counter-electronics weapon technologies that can degrade, damage, or destroy electronic systems with minimum collateral damage.

The Information Directorate (AFRL/RI) develops information technologies for aerospace command and control, overseeing their transition to air, space, and ground systems. Its focus areas cover a broad spectrum of technologies, including information fusion and exploitation, communications and networking, collaborative environments, modeling and simulation, defensive information warfare, and intelligent information systems technologies, with the goal to successfully meet the challenges of the information age.

The Materials and Manufacturing Directorate (AFRL/RX) develops new materials, processes, and manufacturing technologies for use in aerospace applications. This includes aircraft, spacecraft, missiles, rockets, and ground-based systems, as well as their structural, electronic, and optical components. The directorate provides quick-reaction support and real-time solutions to AF weapon system acquisition offices, field organizations, and maintenance depots to address materials-related concerns and problems.

The Munitions Directorate (AFRL/RW) develops, demonstrates, and transitions science and technology for air-launched munitions for defeating ground-fixed, mobile/re-locatable, air, and space targets. The directorate works to assure preeminence of US air and space forces, conducting basic research, exploratory development, and advanced development and demonstrations.

The Sensors Directorate (AFRL/RY) leads the discovery, development, and integration of affordable sensor and countermeasure technologies for warfighters. In collaboration with other AFRL directorates and Department of Defense (DoD) organizations, the directorate develops sensors for air and space reconnaissance, surveillance, precision engagement, and electronic warfare systems. The directorate's vision is to provide robust sensor and adaptive countermeasures that guarantee complete freedom of air, space and cyber operations for the nation's forces, while denying these capabilities to adversaries.

The Space Vehicles Directorate (AFRL/RV) serves as the AF's Center of Excellence for space research and development. The directorate develops and transitions space technologies for more effective, more affordable warfighter missions. Primary mission thrusts include space-based surveillance (space-to-space and space-to-ground) and space capability protection (protecting space assets from man-made and natural effects). The directorate also leverages commercial, civil, and other government resources to ensure America's defense advantage.

Mission of AFRL Small Business Office: The mission of the AFRL Small Business Office (AFRL/SB) is to maximize opportunities for small businesses to deliver technology innovations and solutions to meet customer needs. AFRL/SB's duties include aiding, assisting and counseling small businesses, assisting in formulation of acquisition strategies, and to take the role of ombudsman for small business issues. The AFRL/SB team is dedicated to creating and delivering strategies that bring innovative, agile and efficient small business solutions to our customers in AFRL. The priority of AFRL/SB is to deliver the right small business options and solutions to our customers, increase awareness of small business capabilities and their contributions to the AFRL mission, and educate internal and external audiences on meeting AFRL's mission with small business solutions.

Small Business Innovation Research (SBIR) and Small Business Innovation Research (SBIR) Programs:
Included within the small business arena are the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program. Through a competitive award process, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from commercialization. The STTR program expands funding opportunities in the federal innovation arena. Central to the program is the expansion of the public/private sector partnership to include joint venture opportunities between small businesses and nonprofit research institutions. Frequently asked questions and answers on the SBIR and STRR programs can be found at http://www.sbir.gov/faq/general .

AFRL Top 25 North American Industry Classification System (NAICS) Requirements in FY13:

	TOP 25 NAICS	DESCRIPTION OF NAICS	Other Than Small Business (OTSB) $s	SB $s	Total $s
		Total $s	$1,608,999,157	$885,763,154	$2,494,762,311
1	541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	$1,479,294,268	$694,608,491	$2,173,902,759
2	561110	Administrative Management Services	$41,450,743	$9,099,462	$50,550,206
3	334210	Telephone Apparatus Manufacturing.	$0	$46,577,112	$46,577,112
4	541711	Research and Development in Biotechnology	$6,831,849	$37,758,830	$44,590,679
5	541511	Custom Computer Programming Services	$35,758,344	$2,262,054	$38,020,398
6	541990	All Other Professional, Scientific, and Technical Services	$2,919,894	$19,163,268	$22,083,162
7	334111	Electronic Computer Manufacturing	$1,704,366	$19,231,093	$20,935,460
8	541512	Computer Systems Design Services.	$15,376,850	$4,379,053	$19,755,903
9	541720	Research and Development in the Social Sciences and Humanities	$601,338	$10,131,761	$10,733,099
10	541330	Engineering Services	$2,364,800	$8,193,991	$10,558,791
11	334112	Computer Storage Device Manufacturing	$0	$9,828,024	$9,828,024
12	517110	Wired Telecommunications Carriers	$5,855,000	$515,502	$6,370,502
13	517910	Other Telecommunications	$5,108,329	$0	$5,108,329
14	511210	Software Publishers	$390,584	$4,245,140	$4,635,724
15	561210	Facilities Support Services	$1,093,946	$3,188,174	$4,282,120
16	236220	Commercial and Institutional Building Construction	$0	$3,407,010	$3,407,010
17	541690	Other Scientific and Technical Consulting Services	$3,071,547	$0	$3,071,547
18	443120	Computer and Software Stores	$1,343,463	$1,346,885	$2,690,348
19	611512	Flight Training	$0	$1,882,234	$1,882,234
20	221330	Steam and Air-Conditioning Supply	$1,618,966	$0	$1,618,966
21	541611	Administrative Management and General Management Consulting Services	$1,274,739	$337,739	$1,612,478
22	423990	Other Miscellaneous Durable Goods Merchant Wholesalers	$738,113	$712,802	$1,450,915
23	811212	Computer and Office Machine Repair and Maintenance	$59,985	$1,295,584	$1,355,568
24	541513	Computer Facilities Management Services	$0	$1,041,166	$1,041,166
25	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	$0	$1,037,103	$1,037,103
	All Others		$2,142,032	$5,520,676	$7,662,707

AFRL Top 25 Product and Service Codes (PSC) Requirements in FY13:

	TOP 25 PSC	DESCRIPTION OF PSC	OTSB $s	SB $s	Total $s
		Total $s	**$1,608,999,157**	**$885,763,154**	**$2,494,762,311**
1	AC12	R&D- Defense System: Aircraft (Applied Research/Exploratory Development)	$254,949,196	$82,744,782	$337,693,978
2	AD92	R&D- Defense Other: Other (Applied Research/Exploratory Development)	$163,850,412	$123,896,699	$287,747,111
3	AC62	R&D- Defense System: Electronics/Communication Equipment (Applied Research/Exploratory Development)	$155,578,374	$84,260,744	$239,839,118
4	AD93	R&D- Economic Growth: Other (Advanced Development)	$194,282,893	$26,906,248	$221,189,141
5	AC13	R&D- Defense System: Aircraft (Advanced Development)	$136,486,362	$22,514,542	$159,000,904
6	AC52	R&D- Defense System: Weapons (Applied Research/Exploratory Development)	$106,317,860	$48,785,380	$155,103,241
7	AC63	R&D- Defense System: Electronics/Communication Equipment (Advanced Development)	$128,737,701	$3,066,845	$131,804,545
8	AC11	R&D- Defense System: Aircraft (Basic Research)	$47,778,325	$65,349,795	$113,128,120
9	R425	Support- Professional: Engineering/Technical Includes: Systems Engineering, Technical Assistance, and Other Services Used to Support The Program Office During The Acquisition Cycle	$76,073,400	$8,871,669	$84,945,070
10	AC22	R&D- Defense System: Missile/Space Systems (Applied Research/Exploratory Development)	$24,281,872	$59,491,584	$83,773,456
11	R499	Support- Professional: Other	$63,108,911	$18,520,123	$81,629,034
12	AD95	R&D- Defense Other: Other (Operational Systems Development)	$45,559,127	$14,501,670	$60,060,797
13	AC21	R&D- Defense System: Missile/Space Systems (Basic Research)	$23,436,515	$33,352,830	$56,789,345
14	AZ12	R&D- Other Research and Development (Applied Research/Exploratory Development)	$41,460,764	$12,582,504	$54,043,268
15	AZ11	R&D- Other Research and Development (Basic Research)	$18,230,456	$30,454,140	$48,684,596
16	5805	Telephone and Telegraph Equipment	$0	$43,842,323	$43,842,323
17	AC23	R&D- Defense System: Missile/Space Systems (Advanced Development)	$19,952,417	$22,924,902	$42,877,319
18	AC61	R&D- Defense System: Electronics/Communication Equipment (Basic Research)	$30,422,664	$8,073,326	$38,495,990
19	AD91	R&D- Defense Other: Other (Basic Research)	$6,415,515	$25,665,453	$32,080,968
20	7010	ADPE System Configuration	$596,640	$23,434,628	$24,031,268
21	AJ16	R&D- General Science/Technology: Physical Sciences (Management/Support)	$205,244	$15,364,675	$15,569,919
22	AC53	R&D- Defense System: Weapons (Advanced Development)	$11,633,300	$3,181,944	$14,815,244
23	R699	Support- Administrative: Other	$11,687,042	$928,017	$12,615,058
24	R799	Support- Management: Other	$0	$10,712,983	$10,712,983
25	AC65	R&D- Defense System: Electronics/Communication Equipment (Operational Systems Development)	$0	$10,294,146	$10,294,146
	All Others		$47,954,167	$86,041,203	$133,995,370