



AFRL

AIR FORCE RESEARCH LABORATORY OVERVIEW

INFORMATION DIRECTORATE



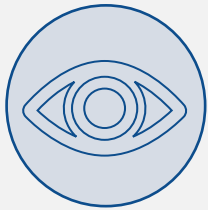
Air Force Research Laboratory

Mission & Vision



AFRL MISSION:

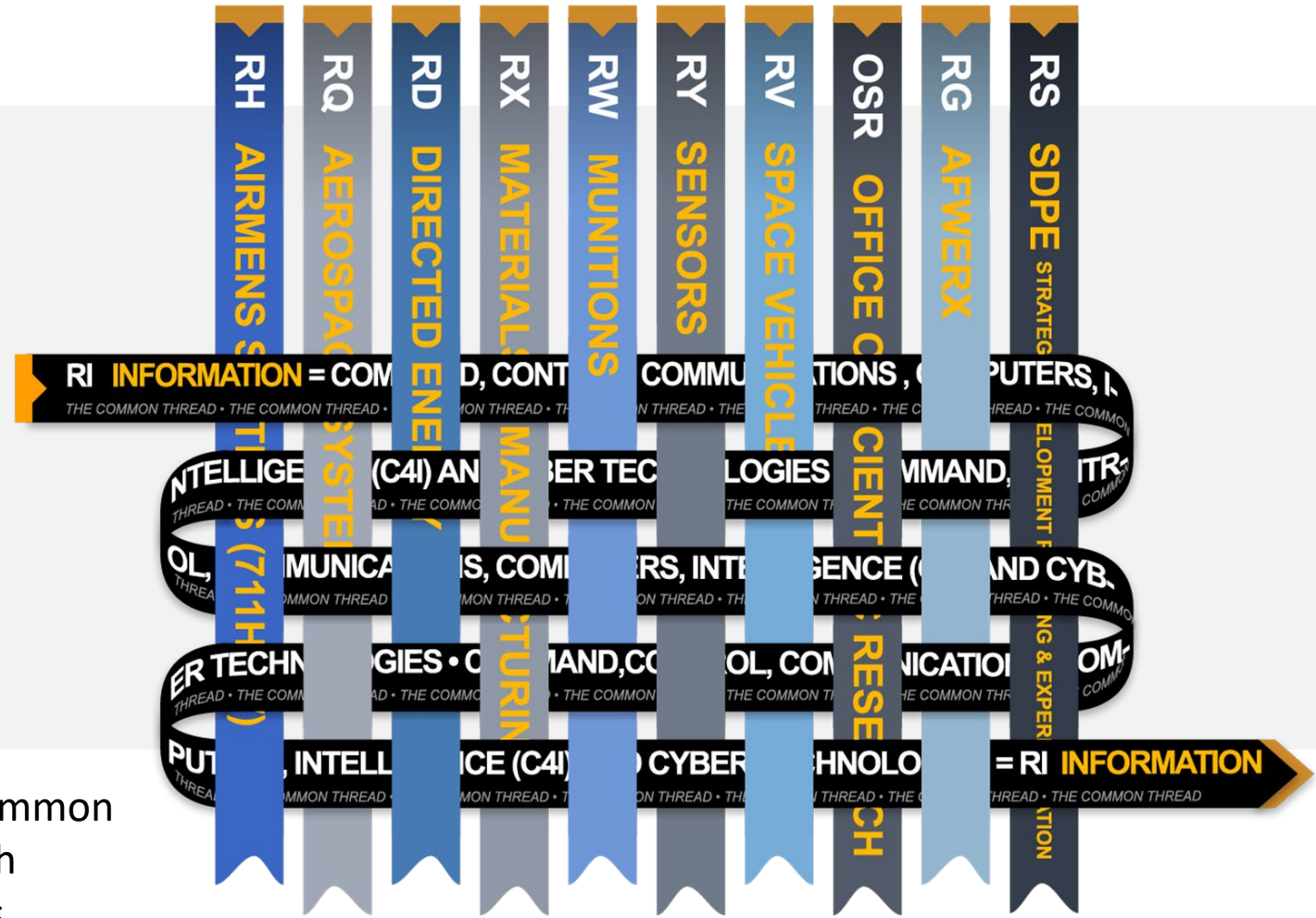
We lead, discover, develop and deliver science, technology and innovation for Warfighters.



AFRL VISION:

To arm Warfighters that dominate in time, space and complexity across all operating domains.

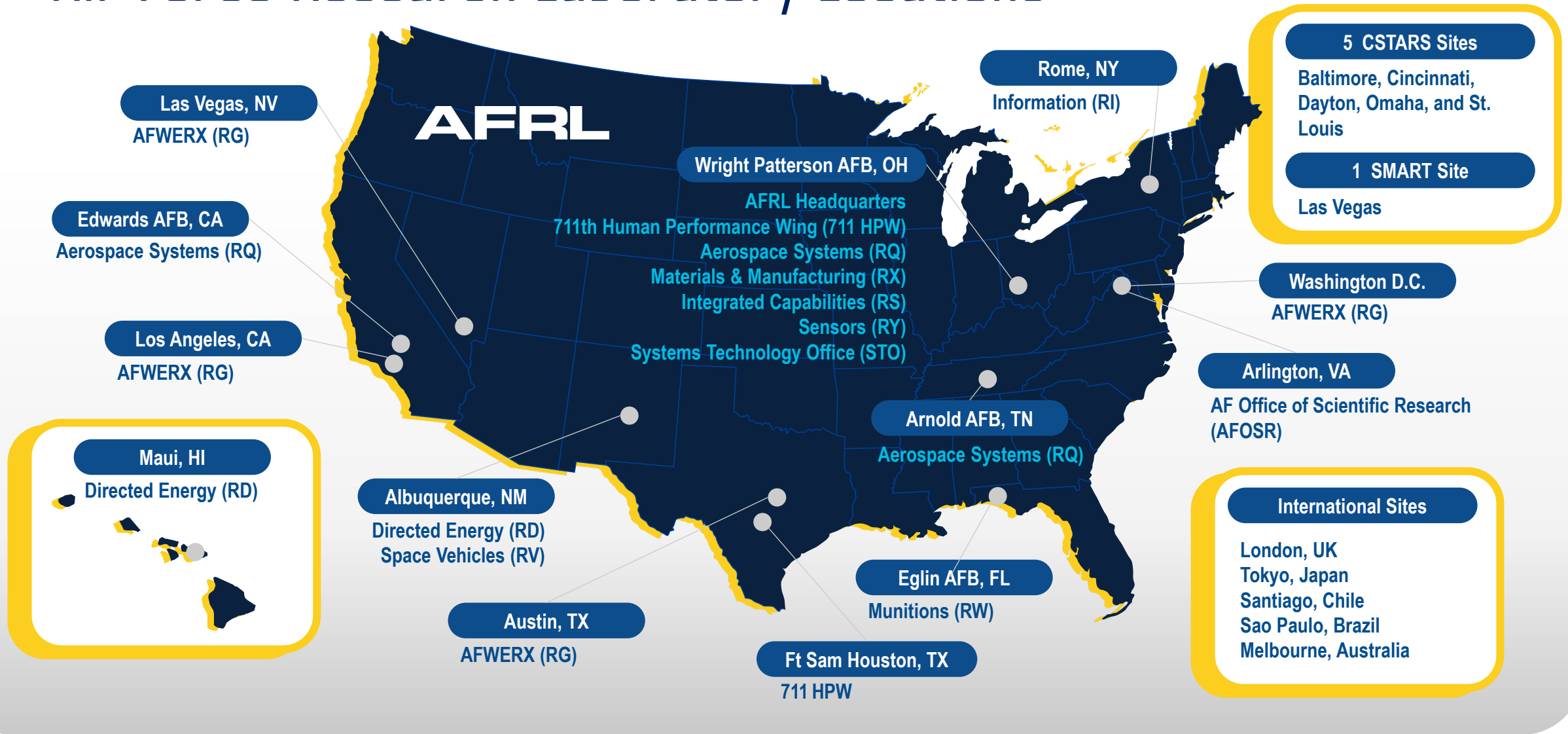
The Information Directorate is the common thread between all Air Force Research Laboratory directorates and locations





Air Force Research Laboratory Locations

*C-STARS: Center for the Sustainment of Trauma and Readiness Skills
*SMART: Sustained Medical and Readiness Trained





Air Force Research Laboratory

Information Directorate Mission & Vision



MISSION:

To explore, prototype, and demonstrate high-impact, game changing technologies that enable the Department of Air Force and Nation to maintain its superior technical advantage.



VISION:

To lead the Department of Air Force and Nation in command, control, communications, computers, and intelligence (C4I) and cyber science, technology, research and development.



The Information Directorate focus is



Information Directorate Leadership

Acting Chief Engineer



Lt Col Eric Like

Associate Director/Tech. Advisor



Dr. Bryant Wysocki

Chief Scientist



Dr. Mark Linderman

Deputy Director



Dr. Michael Hayduk

Director/Commander



Col Fred Garcia II

Deputy CC (Section CC)



Lt Col Michael Butler

First Sergeant



MSgt Christopher Budhu

Technical Divisions

Intelligence Systems



Col Bai Lan Zhu

Computing & Communications



Mr. Gregory Zagar

Information Systems



Ms. Julie Brichacek

Information Warfare



Mr. Scott Shyne

Special Programs



Mr. Brent Holmes

Processing & Exploitation



Dr. Qing Wu

Information Superiority



Dr. Lee Seversky

Command & Control



Dr. Mark Linderman

Quantum Science & Technology



Dr. Kathy Anne Soderberg

Core Technical Competency Leads

Processing & Exploitation



Dr. William Bennette

Connectivity & Dissemination



Mr. Corey Pardee

Autonomy, C2 & Decision Support



Vacant

Cyber Science & Technology



Dr. Erich D. Devendorf

Senior Planner



Mr. John Vergis

Mission Support

Comptroller



Mr. Gary Tarantino

Strategic Planning & Integration



Mr. John Grieco

Contracting



Mr. Robert Stadelmaier

Integration & Operations



Mr. Gabriel Sbaglia

Judge Advocate



Lt Col Dean Korsak

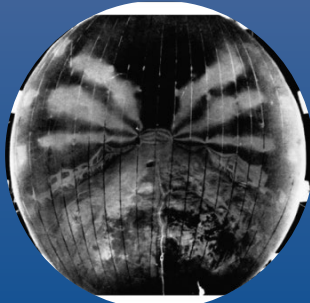
Historic Moments from the Labs



**Minicard
Intelligence
Data Handling
System**



**ARPA Network
RADC**



**First
Communication
Satellite Echo 1**



**Cognitive
Assistant That
Learns and
Organizes
(CALO)**



**John F. Dove
Laser Disc
Technology
Creator**



**Micro-Electro-
Mechanical
Systems
(MEMS)**



A rich heritage of research innovation



Surveillance Radar



PAVE Mover



Airborne Digital Map System



IR Camera for B-52



Moving Target Indicators Experiment



Single Pass AirDrop



Selective Cyber Operations Technology Integration



ECHO-I SATCOM (1st SAT Comm)



Russian to English machine translation



3D Memory



Advanced Planning System



Multi-Level Security



Cyber Situational Awareness



NSDC



Rome Air Development Center
Established 1951 – 1991



Rome Laboratory
Established 1991 – 1997



AF Research Lab Information Directorate
Established 1997 – Present



Intelligence Data Handling Systems



DARPA's agent for ARPANET



Skylab Tracking



Research Facility Newport & Stockbridge



SEM-E Modules For the F-22



Track & ID Fusion Algorithms for AWACS



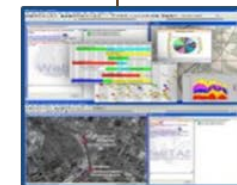
Software Programmable Radio (forerunner of JTRS)



Off-Board Data On J-STARS



CONDOR Supercomputer



WebTAS



DCGS



Talent at the Information Directorate

AN EFFECTIVE, EFFICIENT, & DIVERSE CROSS-FUNCTIONAL TEAM: S&E - Program Management - Operations - Finance - Legal - Contracting

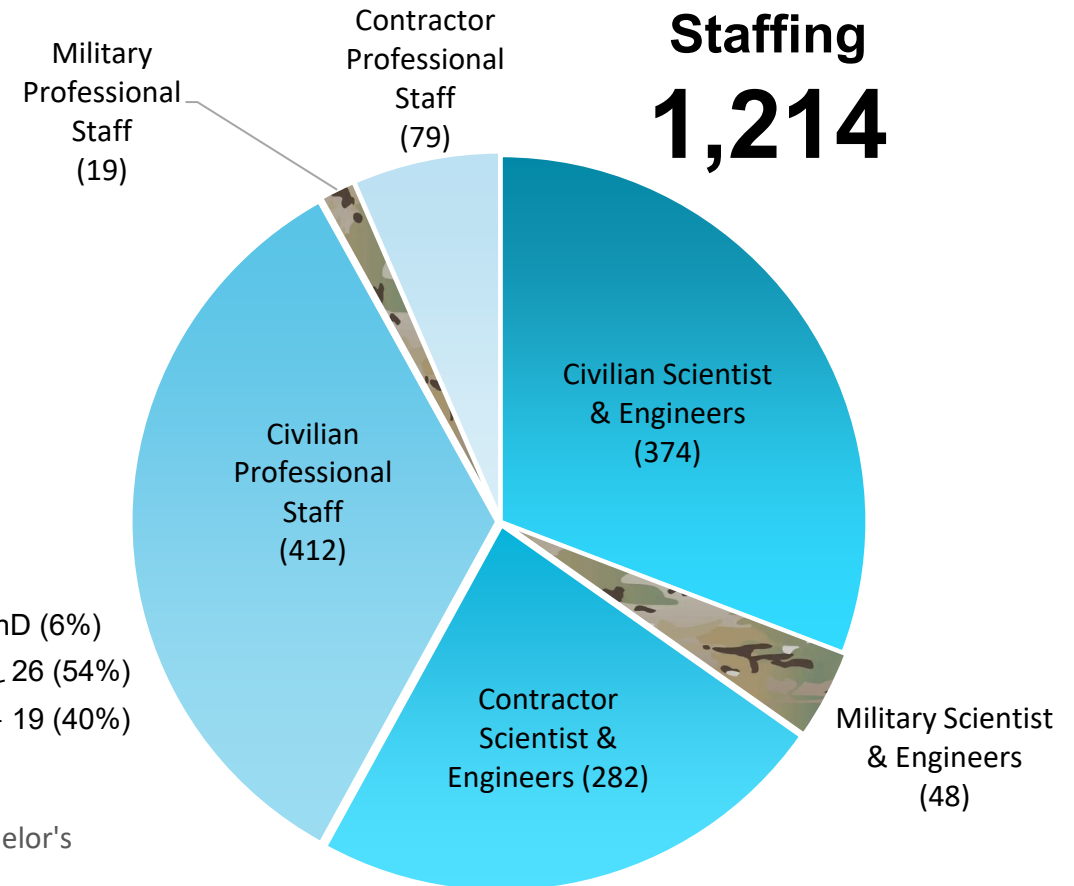
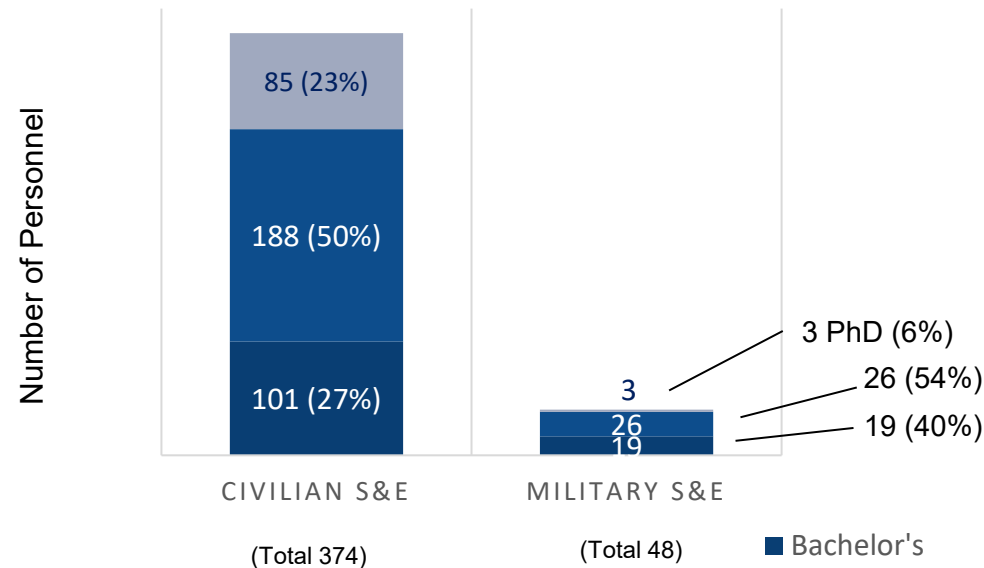
GOVERNMENT CAREER CLASSIFICATIONS

- Electronics Engineering
- Computer Science
- Engineering (General, Computer, Mechanical, Materials, Civil, Environmental, Industrial)
- Physics
- Mathematics
- Operations Research
- Telecommunications
- Human Resources Management
- Logistics Management
- Public Affairs
- Architecture
- Business Administration
- Financial Management
- Contracting
- Patent Attorney & Legal Services
- Police

Total Govt Staffing
853

Total Directorate Staffing
1,214

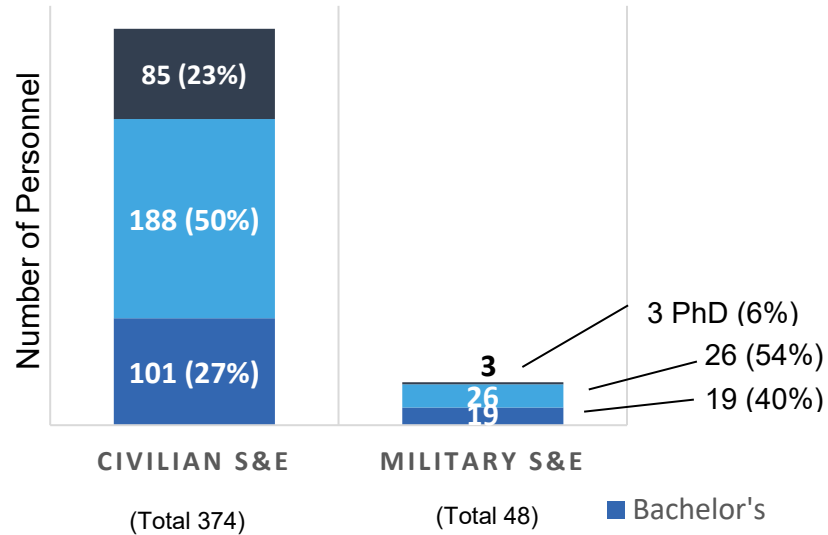
GOVERNMENT S&E ACADEMIC DEGREES
FY 2023 (TOTAL 419)



Academic Talent



GOVERNMENT S&E ACADEMIC DEGREES FY 2023 (TOTAL 419)



DISCIPLINES

80+ different disciplines in Science and Technical Fields



DEGREES

88 PhD | 212 Master's
119 Bachelor's



LOCATIONS

32 US States & Puerto Rico



UNIVERSITIES

136 Educational Institutions including HBCU's, Tribal Colleges and Hispanic serving institutions.



Table 1: Personnel

Classification	Total	Multiplier	Impact Area Total
Appropriated Fund Military*	57	98.2%	56
Appropriated Fund Civilians*	786	93.9%	738
On-Site Contractors**	399	93.9%	375
Total Personnel	1,242		1,169

Table 2: Annual Payroll

Classification	Total	Multiplier	Impact Area Total
Appropriated Fund Military	\$9,040,936	98.2%	\$8,878,199
Appropriated Fund Civilians	\$105,305,456	93.9%	\$98,881,823
On-Site Contractors	\$61,852,182	93.9%	\$58,079,199
Total Annual Payroll	\$176,198,574		\$165,839,221

Table 1: * SOURCE: WebEIS, 30Sep2022

** SOURCE: AFRL/RI Comm-Computers System, 30Sep2022

Table 2: SOURCE: WebEIS, 30Sep2022

The Secretary of the Air Force for Financial Management (SAF/FM) specified the methodology for compiling the economic impact of an Air Force installation. This methodology is consistent with the methodology of the Office of the Secretary of Defense (OSD) Base Realignment and Closure (BRAC) Commission. The economic impact area of the Information Directorate consists of the counties of Herkimer, Madison, Oneida, Onondaga, and Oswego. 98.2% of the military personnel and 93.9% of the civilian personnel and on-site contractors reside in these five counties.

Total annual payroll is a summation of total gross wages, payroll taxes and fringe benefits.

Table 3: Expenditures within the Impact Area

	Annual Expenditures
Facility Modernization/Sustainment	\$3,355,688
Service Contracts ¹	\$7,715,597
Research and Development ²	\$254,301,578
Materials, Equipment, and Supplies	\$3,468,115
Education ³	\$39,875
Travel ⁴	\$3,357,546
Total Annual Expenditures	\$272,238,399

¹ Includes only contracts in the economic impact area or contracts requiring the use of locally supplied goods and services.

² Includes only Research and Development contracts granted to contractors in the economic impact area for scientific and technical work not elsewhere included.

³ Includes cost of registered classes in the economic impact area.

⁴ Includes travel expenditures of military and civilian personnel on temporary duty at the Information Directorate and local travel expenditures of AFRL/RI personnel on travel.

SOURCE:

- WebEIS, 30Sep2022, for Facility Modernization/Sustainment, Service Contracts, Research and Development, and Materials, Equipment, and Supplies.
- AFRL/RIOW for Education
- AFRL/RIFC and Defense Travel System for Travel



Table 4: Estimate of Number and Dollar Value of Indirect Jobs Created

The number of **indirect jobs created** is the mathematical product of the actual number of Information Directorate jobs (Military, Civilians, and On-site Contractors) and the DoD Indirect Job Multipliers for the respective economic area. The estimated **annual dollar value of jobs created** is the mathematical product of the number of indirect jobs created and the average annual pay in the economic area (as published by the Bureau of Labor Statistics, US Department of Labor).

Classification	Impacted Jobs (from Table 1)	Multiplier ¹	Indirect Jobs Created
Appropriated Fund Military	56	0.35	20
Appropriated Fund Civilians	738	1.21	893
On-Site Contractors	375	1.21	454
Total	1,169		1,367

Estimated Number of Indirect Jobs Created as a Result of the Information Directorate 1,367
Average Annual Pay for the Local Community² \$53,414

Estimated Annual Dollar Value of Jobs Created \$73,016,938

¹ Economic Impact Analysis (EIA), Indirect Job Multipliers for the Air Force Installations

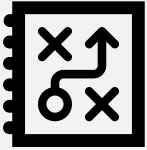
² Bureau of Labor Statistics <http://www.bls.gov/>

Total Jobs Impacted

Classification	Impacted Jobs	Dollar Value of Impacted Jobs
Appropriated Fund Military	56	\$8,878,199
Appropriated Fund Civilians	738	\$98,881,823
On-Site Contractors	375	\$58,079,199
Total Direct Jobs	1,169	\$165,839,221
Indirect Jobs Created as a Result of the Information Directorate	1,367	\$73,016,938
Total Jobs Impacted - Direct & Indirect	2,536	
Total Annual Dollar value of Impacted Jobs - Direct & Indirect		\$238,856,159

NOTE: Direct jobs are the number of Military, Civilians, and On-site Contractors working at the Information Directorate in the Economic Impact Area in FY 2022.

Indirect jobs are the estimated number of jobs created as a result of the Information Directorate.



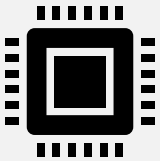
C2 Mission Area

Mission Statement: synchronize actions & accelerate decision making both at pace and scale to overwhelm our adversary



Communications Mission Area

Mission Statement: connect the force via a seamless, multi-domain, network of networks communications fabric across the enterprise



Cyber Superiority Mission Area

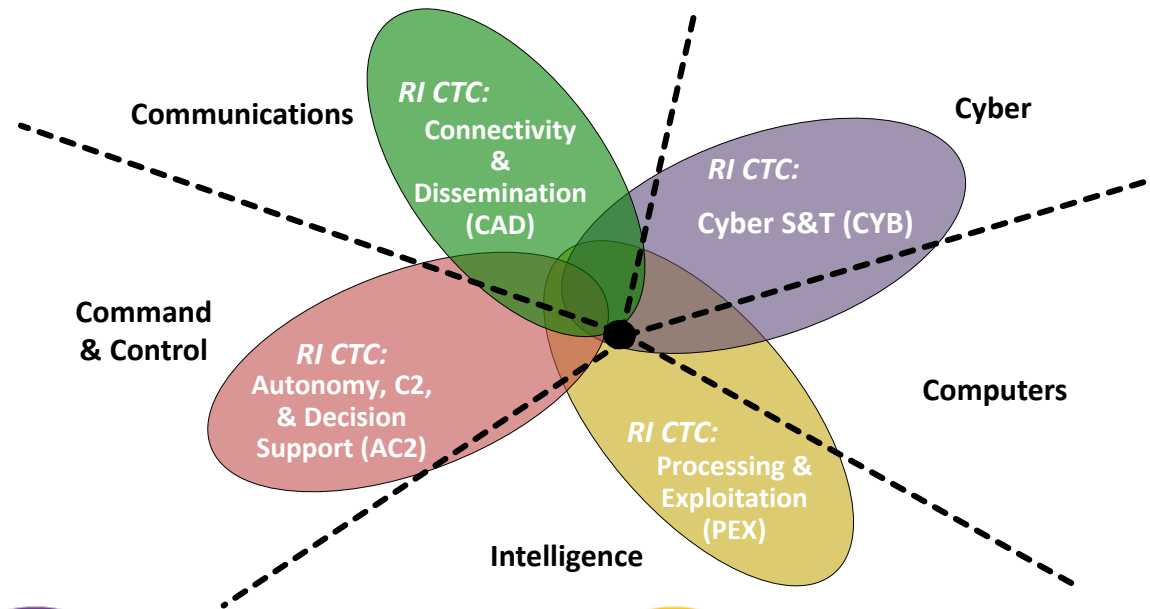
Mission Statement: lead the development of cyberspace science and technology necessary to ensure cyberspace superiority and support the conduct of full-spectrum cyberspace operations integrated with other domains.



Global Integrated ISR Mission Area

Mission Statement: collect and process decision-quality intelligence and act on it faster than adversaries can react. Develop and field sensing and sense-making capabilities to operate in contested environments, detect hard targets, and disseminate data.

Core Technical Competencies at RI



PUTTING THE RIGHT INFORMATION INTO THE RIGHT HANDS AT THE RIGHT TIME
Vision: Seamless, resilient networked communications fabric across the command, and control intelligence, surveillance and reconnaissance (C2ISR) enterprise



LEVERAGING AND SHAPING THE CYBER DOMAIN TO THE NATION'S ADVANTAGE
Vision: An Air Force equipped with technologies that enable our freedom to operate in cyberspace while denying the adversary the same.



EXPLOITING COMPUTING & ALGORITHMS TO TRANSFORM BIG DATA INTO INFORMATION
Vision: Innovator of technologies that process and exploit data in near real time, analyze massive collections over time and employ continuous learning to deliver asymmetric decision speed to the Air Force and Intelligence Community.



MASTERING COMPLEXITY OF MULTI-DOMAIN COMMAND & CONTROL
Vision: Mastering and imposing complexity to C2 joint all-domain operations in an evolving battlespace at speed and scale

Connectivity and Dissemination (CAD)



CONNECTIVITY & DISSEMINATION



Vision

Seamless, multi-domain, *network of networks* connectivity fabric across the command and control intelligence, surveillance and reconnaissance (C2ISR) enterprise, assuring delivery of timely, secure, and actionable information to warfighters and systems.

Mission

Provide agile and secure mission-responsive communications and information sharing globally.

Goals

- Agile and secure communications and networks
- Platform agnostic connectivity
- Autonomous link discovery, creation and utilization
- Dissemination of information at need, securely

Putting The Right Information Into The Right Hands At The Right Time



Cyber Science and Technology (CYB)



CYBER SCIENCE AND TECHNOLOGY



Vision

An Air Force equipped with technologies that enable our freedom to operate in cyberspace while denying the adversary the same.

Mission

Deliver the science and technology necessary to ensure cyberspace superiority and support the conduct of full-spectrum, multi-domain, integrated cyber operations.

Goals

- Secure, composable, risk-based compute options
- Cyber operations integrated and on par with air & space
- Ability to conduct cyber operations agnostic to medium and geography

Leveraging And Shaping The Cyber Domain To The Nation's Advantage

Processing and Exploitation (PEX)



PROCESSING AND EXPLOITATION



Vision

Innovator of technologies that process and exploit data in near real time, analyze massive collections over time and employ continuous learning to deliver asymmetric decision speed to the Air Force and Intelligence Community.

Mission

Deliver fast sense-making for situational awareness and adversarial insight for the AF, DoD, and Intelligence Community.

Goals

- Multi-INT correlation and fusion of massive amounts of intelligence, surveillance, and reconnaissance (ISR) and publicly available data
- Exploit targets in denied areas
- Adversarial and secure machine learning
- Dynamic, hybrid computing advancing neuromorphic, nanotech, and quantum systems to efficiently process ISR information

Exploiting Computing And Algorithms To Transform Big Data Into Information

Autonomy, Command & Control and Decision Support (AC2)



**AUTONOMY, COMMAND & CONTROL
(C2) AND DECISION SUPPORT**



Vision

Mastering and imposing complexity to command & control future multi-domain operations in an evolving battlespace with speed and scale.

Mission

Deliver revolutionary, trusted, affordable information technologies for agile, resilient and distributed Air Force command & control and autonomous systems.

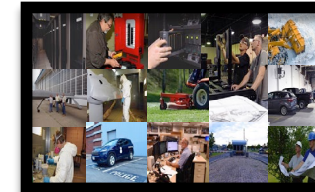
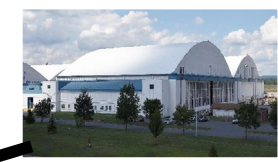
Goals

- Master complexity through development of adaptive command & control systems-of-systems and services
- Control, impose and synchronize complex multi-domain effects chains
- Harness machine intelligence to increase command & control speed and scale of operations
- Realize large-scale multi-agent systems for autonomous planning, tasking and execution

Mastering Complexity of Multi-domain Command & Control



AFRL/RI Location Info



- **ROME, NEW YORK**
- **65 Acre Campus**
- **30 Laboratories & Facilities**
- **882,000 Sq Ft Floor Space**
- **Offsite specialty locations in Newport, NY and Stockbridge, NY**



AFRL/RI Labs, sites and facilities



Machine Intelligence
for ISR Laboratory



Situation Awareness
Laboratory



Cyber Experimentation
Environment (CEE)



Audio Processing Lab



Operational Information
Management Lab



Integrated Intelligence
Innovation Facility (I3F)



Newport Remote Research Site



Secure Embedded High
Performance Computing



Small Unmanned Aerial System
Experimental Capability (SUAS-EC)



Command and Control
Technology Center (C2TC)



High Performance Computing Facility



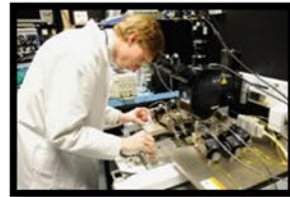
Advanced Computing
Applications Laboratory



Quantum Information
Science Facility



Quantum Communications
Laboratory



Nanotechnology & Computational
Intelligence Laboratory



Corporate Collateral
Facility (CCF)



Cyber Integration &
Transition Environment



K5 Laboratory



Corporate Research and
Development Server
Facility (CRDSF)



Microwave and
Optical
Communication
Range



RF Technology Center



Cyber Operations
Technology
Facility (COTF)



Network-Centric Integration &
Interoperability Facility (NCIIF)



Command and Control
Concept Center (C2CC)



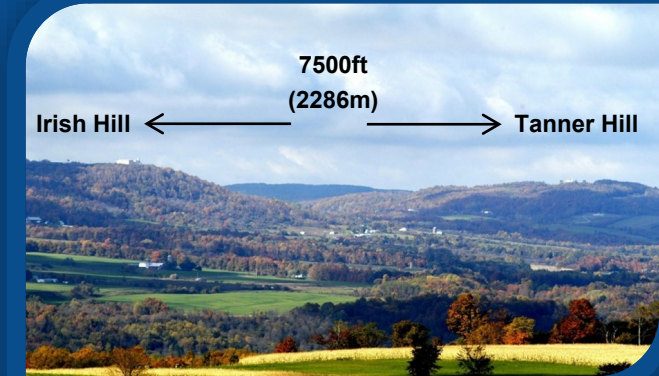
Stockbridge Remote Research Site



AFRL/RI Newport Site

Far Field, Elevated Outdoor Antenna Test Range

- 78 Acres
- 360° pattern measurement
- Established in 1972
- Ideal geography
- Essential measurements of the F-35 aircraft antenna patterns
- Inflatable reflector antennas for SOCOM
- 12 Commercial Test Agreements
- Aircraft and vehicle antenna performance measurements
- Critical capability for future aircraft/vehicle design and development
- Terahertz comm demonstration - provides LPI/LPD/AJ air-to-air comm links

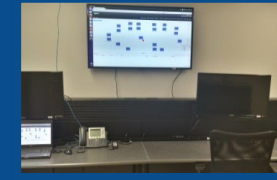




AFRL/RI Stockbridge Site

RF and Small UAS Experimental Facility

- 300 acre flexible test site, varying in relative distance, topology and foliage density
- Heavy-duty turntable with A 200' high arched measurement probe – large aircraft and vehicle capable
- 120' walkup tower for LOS and optical links
- Controllable contested environment
- All weather, full season, configurable RF capability
- C4ISR, cyber, spectrum, networking
- Flexible frequency authorizations
- SUAS airfield
- Fixed wing and VTOL platforms
- Trained flight personnel
- Experiment, management and control facility
- Flexible laboratory space
- Operations and control room





AFRL/RI Extreme Computing Facility

A Computing Challenge Space

- Foundational advances in computing architectures
- Quantum
- Neuromorphic
- Nanoelectronic
- Machine Learning
- Artificial Intelligence



AFRL/RI Neuromorphic Computing

Brain-inspired, extremely low SWaP, intelligent computing at the-edge in dynamic & contested mission environments

- Neurosynaptic processors
- Nanoelectronics

AGILE CONDOR

- Real time situational awareness
- Neuromorphic architecture on-board
- Actionable intelligence with anomaly detection models, target recognition, and data fusion





Quantum Research at the AFRL Information Directorate (RI)



Superconducting Qubits (SCQs)

Status at Rome Labs (Started in 2019)

Installed multiple cryostats and DAQ instrumentation for operation of SCQs at milli-Kelvin temperatures

Partnering with multiple external entities on SCQs & circuitry fabrication

Demonstrated initial measurements of high performance superconducting transmon qubits



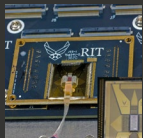
Innovare Advancement Center Partnership Opportunities

Visiting researcher/student opportunities

Quantum Software Layer Applications & Access

Heterogeneous qubit interfaces for entanglement distribution applications

Verify and validate quantum networking components – classical or quantum on heterogeneous network



Programmable Nanophotonics Processors

Developing component dense, phase stable interferometric circuits for manipulating quantum states and processing quantum information

Developing efficient methods to calibrate nested photonic devices

Transitioning devices for uses other than quantum

Neuromorphic computing

NxN optical routing

Classical signal encoding



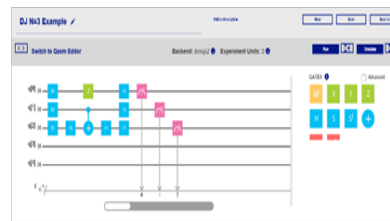
Quantum Hardware Effort

Trapped Ions

Integrated Quantum Photonics

Superconducting Qubits

Heterogeneous Quantum Interfaces



Quantum Software Effort

Coding to commercial hardware & developing advanced algorithms for ML, optimization & materials discovery



Innovare Advancement Center

World-Class Facility for a Global Network of Researchers

Agility + Innovation + Partnerships

- Led by (AFRL/RI) and Griffiss Institute
- Driving Critical Innovations Accelerate Next-Gen Tech
- Advancing Artificial Intelligence/Machine Learning, Cybersecurity, and Quantum Computing
- Inspiring the Next Generation, Elevating New Talent for the Future and Beyond
- 150,000 square feet
- 13,000 square feet of Open Research Area
- Located in the Heart of New York State
- Two Leading-Edge Quantum Labs
- Event Space: Training Areas, Conference, & Breakout Rooms
- Co-Located Small Unmanned Aircraft Systems (sUAS) Site
- Two Neuromorphic/Nanoelectronics-Focused Labs





Innovare Advancement Center | *Agility + Innovation + Partnerships*

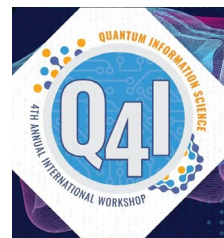
INNOVARE WILL BOLDLY...

- Build Rome's runway to the world, engaging a global community of **100 diverse partners** to introduce game-changing capabilities built in Air Force core strengths in AI/ML, cyber and quantum.
- Advance the economy with **100 entrepreneurial ventures** and tech startups.
- **Elevate by 10%, our community's intellectual leadership** in AI/ML, cyber and quantum

INNOVARE ASPIRE TECHNICAL CHALLENGES

- Neurosymbolic C2
- AI-Enabled Change Detection Non-Traditional Events
- Internet of Things (IoT) Living Laboratory
- Harnessing Weird Machines
- Multi-Source Workflow for Event Detection and Evaluation

INNOVARE OPPORTUNITIES



AFRL



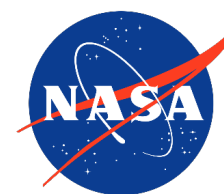
The State University
of New York



GRIFFISS
INSTITUTE

BROOKHAVEN
NATIONAL LABORATORY

Google IBM



AF





Technology Transfer



Created to ensure Air Force S&E activities are transferred or shared with state and local governments, academia and industry.

The exchange of knowledge, expertise, equipment, and testing facilities leverages DoD research and development investment

FY23 OPEN Agreements per AF Org per Transfer Mechanism			
AF Org	CRADA	EPA	CTA
711 HPW	2	2	
711 HPW/RH	39	5	2
AFRL/SB	128	16	1
RD	5	41	
RI	91	126	13
RQ	39	36	2
RV	14	3	1
RW	24	5	
RX	71	24	
RY	27	9	



176

Active Licenses
For FY23

**FY23 OPEN Agreements
per AF Org per
Transfer Mechanism**



**91 CRADA's
126 EPA's
13 CTA's**

Information Directorate Engagements



INDUSTRY ENGAGEMENTS



ACADEMIC ENGAGEMENTS

Academic Institutions, Partnerships, EPAs, and Visiting Faculty Research Program





Academic Partnerships | Educational Partnership, CRADA & Visiting Researchers

 Air Force Academy	Johns Hopkins University	Princeton University	University of Michigan	Wichita State University
Arizona State University	Kansas State University	 Purdue University	University of Minnesota, Twin Cities	Worcester Polytechnic Institute
Auburn University	LaSalle University	Rose-Hulman Institute of Technology	University of Missouri, Kansas City	York College of Pennsylvania
Augusta University	Louisiana State University	Rutgers – State University of New Jersey	University of Nevada	 Historically Black Colleges & Universities (HBCU)
Boise State University	Louisiana Tech University	Stevens Institute of Technology	University of Notre Dame	Central State University
Brescia University	Massachusetts Institute of Technology	Temple University	University of Oklahoma	Dillard University
Brown University	Michigan State University	 Toyota Technological Institute at Chicago (TTIC)	University of Pennsylvania	Florida A&M University
Carnegie Mellon University	Michigan Technological University	Universidad Ana G. Mendez	University of Puerto Rico	Howard University
Clayton State University	Minnesota State University	University of Arkansas	University of Southern Alabama	Monash University
Colorado State University	Missouri University of Science & Technology	University of Colorado, Denver	University of South Carolina	Norfolk State University
 Cornell University	Montana State University	University of Connecticut	University of Southern Mississippi	North Carolina Agricultural & Tech State University
Dartmouth College	New Jersey Institute of Technology	University of Illinois	University of Tennessee	Prairie View A&M
Duke University	Northeastern University	University of Kansas	University of Tulsa	Tennessee State University
Fairleigh Dickinson University	Northern Arizona University	University of Maryland	 University of Wisconsin - Madison	Texas Southern University
Georgia Tech	Northwestern University	University of Massachusetts, Amherst	Utah State University	Tuskegee University
Hamilton College	Norwich University	University of Massachusetts, Dartmouth	Vanderbilt University	 Tribal Colleges and Universities (TCU)
Harvard University	Oklahoma State University		Villanova University	Navajo Technical University
Imperial College London	Pennsylvania State University		Washington University in St. Louis	
Indiana University of Pennsylvania			Western Michigan University	
Iowa State University				

 Denotes AFRL Regional Hubs

 Denotes Centers of Excellence



K-12 STEM OUTREACH

The Air Force Research Laboratory Information Directorate K-12 STEM Outreach Program offers a variety of programs and services that effectively engage, inspire and attract the next generation of STEM talent.

PARTNERSHIP INTERMEDIARY AGREEMENT WITH THE GRIFFISS INSTITUTE TO SUPPORT ENTIRE AIR FORCE STEM PROGRAM.

SPROUT PROGRAM (NEW) 'WISH LIST' FOR TEACHERS

STEM Materials awarded to 28 teachers from the Mohawk Valley. Impacted over 8500 students locally

MID YORK LIBRARY EDUCATIONAL PARTNERSHIP AGREEMENT SIGNED.

\$1,083 worth of STEM materials/equipment donated

STEM SUMMER CAMPS

- LEGO Robotics Camp
- Cyber Summer Camp
- Arduino Camp
- Engineering Camp
- Drone Camp
- Quantum Camp
- 3-D Printer Camp (w/ SUNY)
- 17 Scholarships awarded

SUPPORTED NATIONAL PROGRAMS

- FIRST LEGO League
- FIRST Tech Challenge
- FIRST Robotics Competition
- CyberPatriot

ORGANIC PROGRAMS

- Annual Challenge Competition
- Staying Safe Online Workshop

ORGANIC PROGRAMS

- Take Your Student to Work Day
- Lab Tours
- Teacher Professional Development
- DoD DimensionU Math Video Game Tournament
- Central New York Hackathon

STUDENTS IMPACTED

EDUCATORS IMPACTED

SCHOOL INVOLVED

HOURS OF STEM ACTIVITIES

34+

38+

1,200+

1,450+





INFORMATION DIRECTORATE

Global Persistent Awareness
Resilient Information Sharing
Rapid, Effective Decision-Making
Complexity, Unpredictability, and Mass
Speed and Reach of Disruption and Lethality

Building a more lethal force – modernizing key capabilities

Strengthening our alliances and attracting new partners

Reforming our organization for greater performance and affordability

- Innovating at speed

- Employing rapid, iterative approaches for development → fielding



WE UNDERSTAND THE URGENT NEED TO “OUT-THINK, OUT-MANEUVER, OUT-PARTNER, AND OUT-INNOVATE...”
THE AIR FORCE RESEARCH LABORATORY



INTERACTIVE SESSION

ACADEMIA

- Grants
- Partnerships

INTERNAL

- Department of the Air Force Challenge
- AFWERX Spark Program
- AFRL CC's Challenge

SMALL BUSINESS

- Open Innovation Challenges
- Tech Accelerators
- AFRL's Innovation Institutions
- IP Licensing
- Small Business Innovation Research (SBIR)



For more information visit

[AFRESEARCHLAB.COM](https://afresearchlab.com)



SCAN ME

INDUSTRY

- AFRL Institutes
- AFWERX, SpaceWERX
- AFVentures
- Open Solicitations
- beta.sam.gov
- Defense Innovation Marketplace

Partnering with AFRL