

Welcome to

INNOVATE WITH A FRL

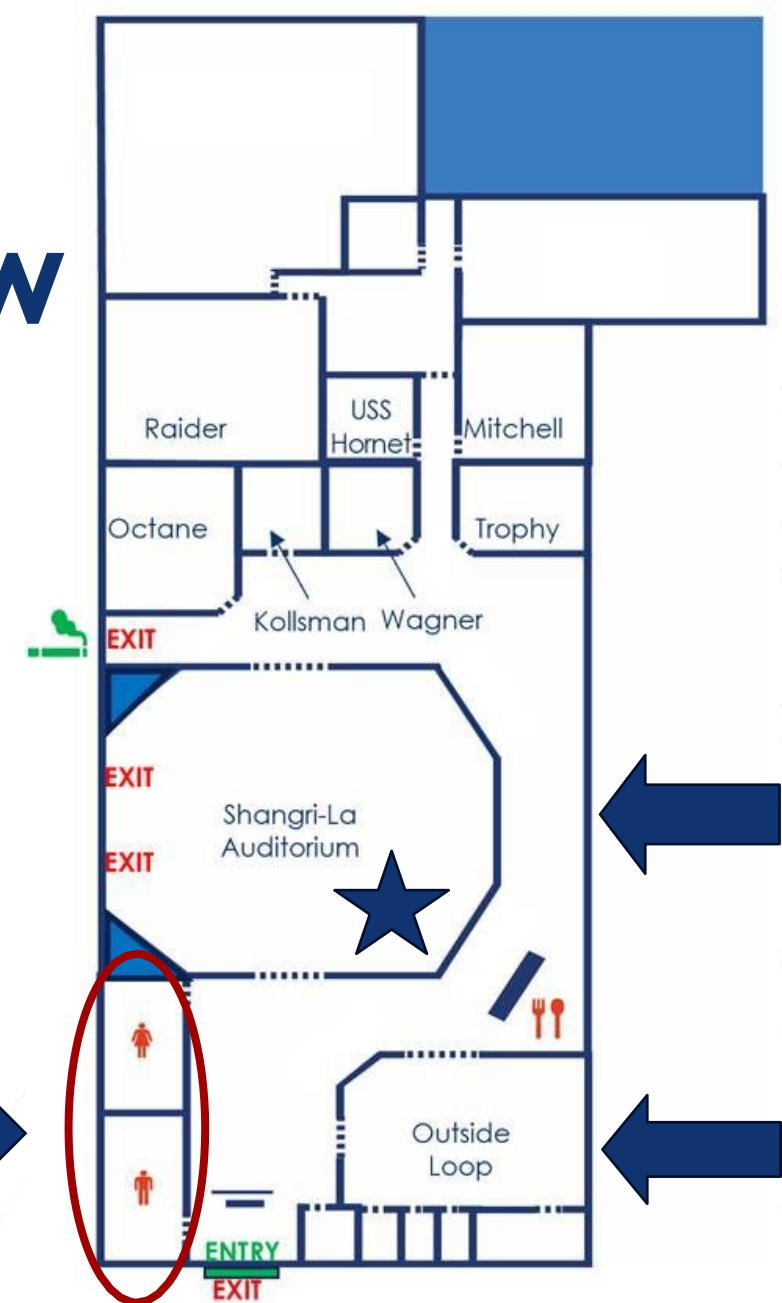
Hosted by The Doolittle Institute

Opening Remarks & Doolittle Institute Overview

Mike Edwards
Doolittle Institute Director

Restrooms:

- Located by the front entrance



What is a Partnership Intermediary Agreement (PIA)

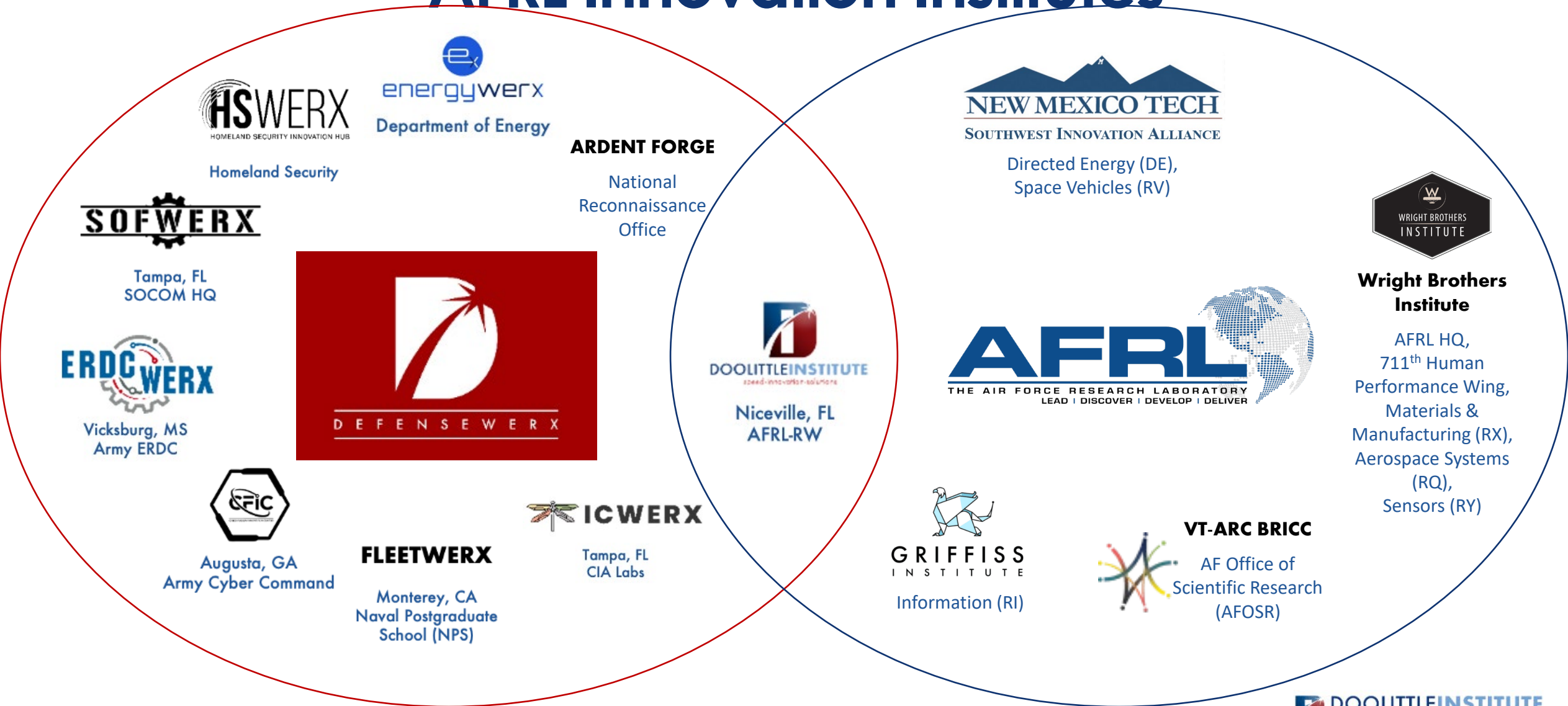


Non-Profit Neutral Third Party + Government Partner = Partner Intermediary Agreement

The primary purpose is to support, educate, and enable Technology Transfer and Transition opportunities for the government partner

Authority: 15 U.S.C. §3715 and 10 U.S.C. §4124 (Non-FAR based agreement)

DEFENSEWERX Innovation Hubs + AFRL Innovation Institutes



Who we are & What we do

Who we are:

- A DEFENSEWERX Innovation Hub
- 501 c3 Non-Profit
- Partner Intermediary for the Government (AFRL/RW)
- Neutral Third-Party

We do NOT:

- Charge for our PIA services
- Hold any IP
- Share information outside of the government partners
- Procure materials or services
- Act on behalf of the government
- Participate in any source selection

What we do:

- **Technology Transfer**
- **Facilitating Partnerships**
- **STEM Education and Future Workforce Development**

What we do

- **Technology Transfer** - PIAs focus on transferring technologies developed in government labs to the private sector for commercialization.
- **Facilitating Partnerships** - help bridge the gap between government research institutions and private companies, fostering collaboration and knowledge exchange.
- **STEM Education and Future Workforce Development** - support STEM education initiatives related to technology and innovation.

HOW do we do this?

- **Technology Transfer (Commercialization of Gov Tech)**
 - Marketing of patents available for licensing to industry
 - Innovation Discovery Events to develop new use cases for patents
- Mechanisms for Gov Collaboration: Patent Licensing Agreements

Hexagonal Efficient Coordinate System (HECS)	Low alloy high performance steel
Plasmonic-Photonic biomimicking sensor for airborne agent detection	Touch-based tracking system and method – pending license agreement
Peel-and-adhere photonic crystal	Adaptive force vehicle airbag system
Multispectral LADAR using wavelength shaping	Optical flight motion simulator target axes

- AFRL/RW Patent Portfolio: <https://doolittleinstitute.org/afrl-rw-patents/>

HOW do we do this?

▪ **Facilitating Partnerships (Between Gov & Industry/Academia)**

- Market Opportunities for Collaboration w the Government
 - Ex: University Day, Energetic Materials Industry Day
- Build and Expand Innovation Ecosystem
 - One-on-one meetings with industry partners to discuss tech/capabilities and potential for gov collaboration

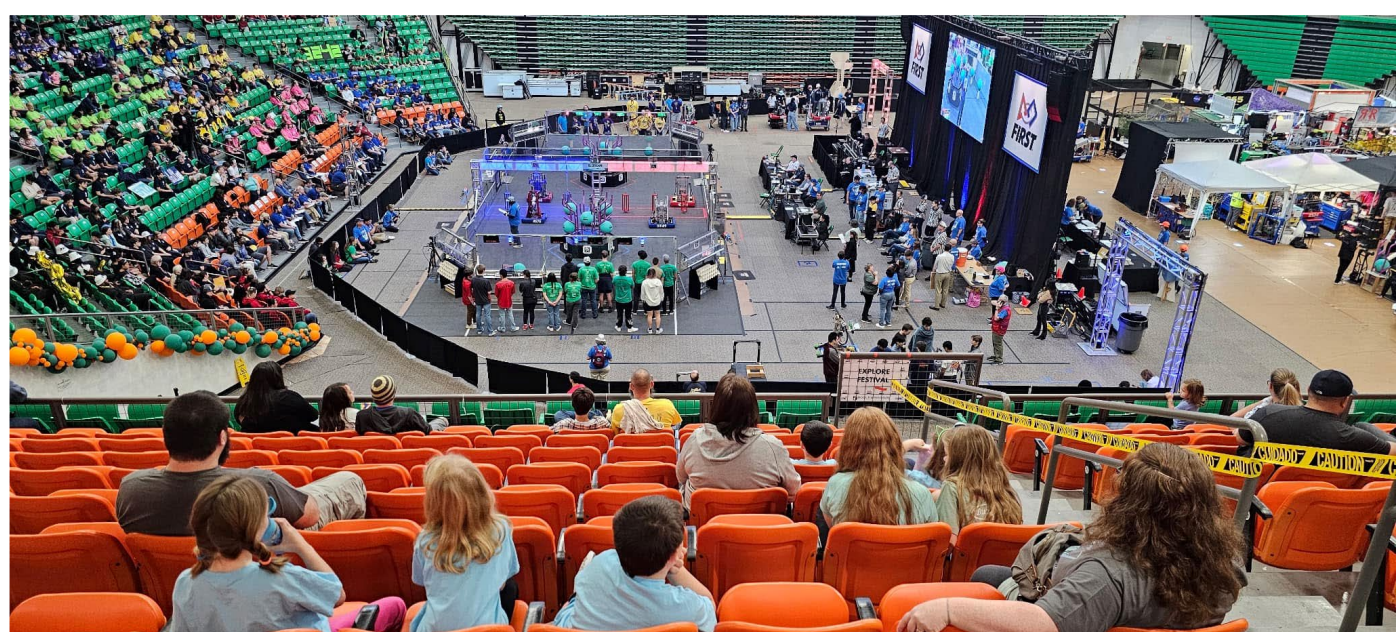
Quantum/nano-photonic sensing	Autonomy & Autonomous Target Recognition
Navigation & Estimation Technology	Low-cost secure datalinks / Common Mission Computers
S&T for manufacturing and production capacity	Cyber Resiliency Security for Precision Guided Munitions
Advanced Scene Generation	Energetics & Warhead Research

- Broad Agency Announcement (BAA): <https://doolittleinstitute.org/baa/>
- Other mechanisms include CRADAs, CTAs, etc

HOW do we do this?

- **STEM Education and Future Workforce Development** - support STEM education initiatives related to technology and innovation.





Ways to Engage

At the event:

- Network, Participate in discussions, ask questions
- View Patent Posters around our facility
- Talk to the STEM team about volunteering for events at STEM@doolittleinstitute.org

After the event:

- Read the open BAAs
 - <https://doolittleinstitute.org/baa/>
- Read AFRL/RW Patent Portfolio
 - <https://doolittleinstitute.org/afrl-rw-patents/>
- Schedule a follow-up meeting with DI
 - techtransfer@doolittleinstitute.org
- Sign up for our ecosystem
 - www.doolittleinstitute.org



Today's Agenda

0930-1015	Munitions Directorate Science and Technology Priorities <i>Interactive Audience Q&A Session (15 mins)</i> Dr. David Lambert, AFRL/RW Chief Scientist
1015-1030	Break (15 mins)
1030-1100	Munitions Directorate Office of Research and Technology Application Bill Loux, AFRL/RW Technology Transfer Program Manager
1100-1130	Munitions Directorate Fundamentals of Contracting & Broad Agency Announcements (BAAs)
1130-1200	Overview of SBIR/STTR & TACFI/STRATFI Programs
1200-1300	On-Site Lunch (60 mins)
1300-1330	Introduction to the Eglin Air Force Base Small Business Office Kristina "Tina" Mercer, Eglin AFB Small Business Program Director
1330-1400	Florida APEX Accelerator Tia Bond, APEX Accelerator Tech Transfer & Commercialization Specialist
1400-1410	Break (10 mins)
1410-1450	Interactive Audience Q&A Session
1450-1500	Closing Mike Edwards, Doolittle Institute Director
1500-1600	Networking Reception



AFRL

MUNITIONS DIRECTORATE

AFRL/RW

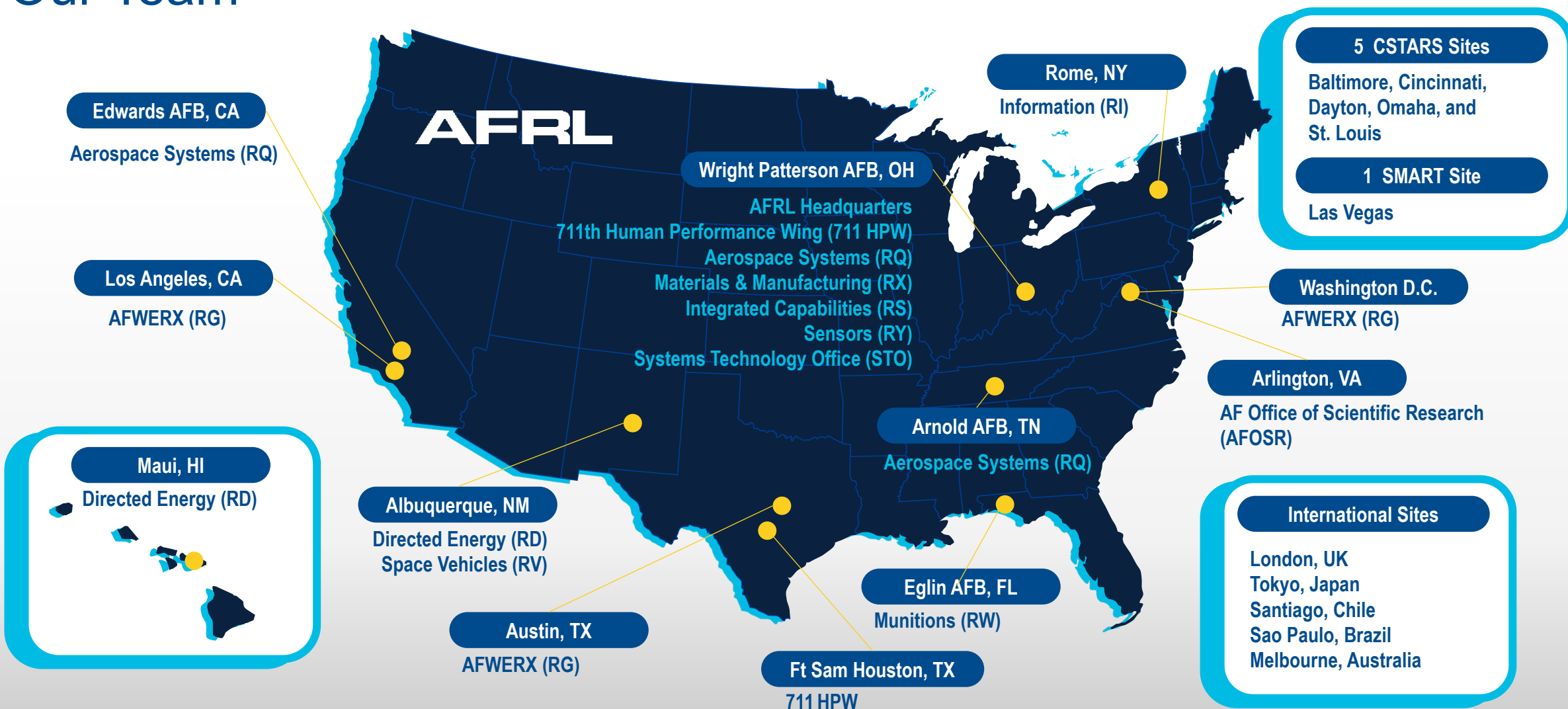
DR DAVID LAMBERT – CHIEF SCIENTIST

AUGUST 2025



Our Team

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





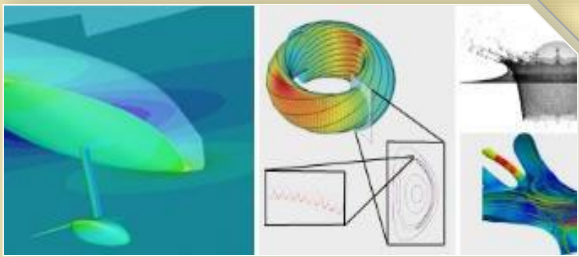
Engagement



Autonomy, Navigation
& Control

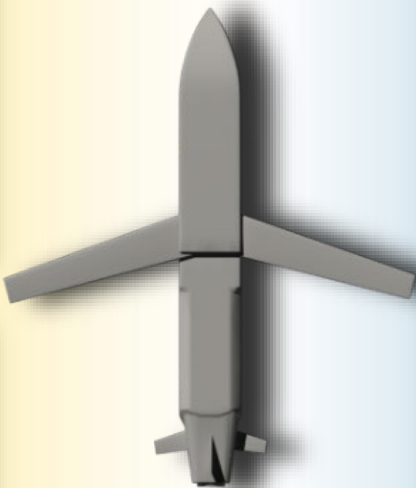


Seekers and Sensors



Computational Engineering
Sciences

Technology Integration



Digital Engineering &
Development

Open Systems
Architecture

Cyber-resiliency

Data Links

Propulsion Systems

Effects



Energetic Materials



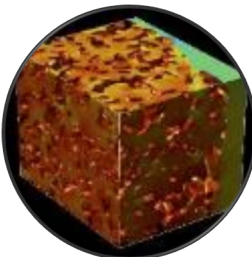
Ordnance -
(Precision Effects)



Lethality & Effects
Validation



6.1 Basic Research
\$1.6M FY24
\$1.0M FY25



**6.2 Applied
Research**
\$134.4M FY24
\$138.4M FY25

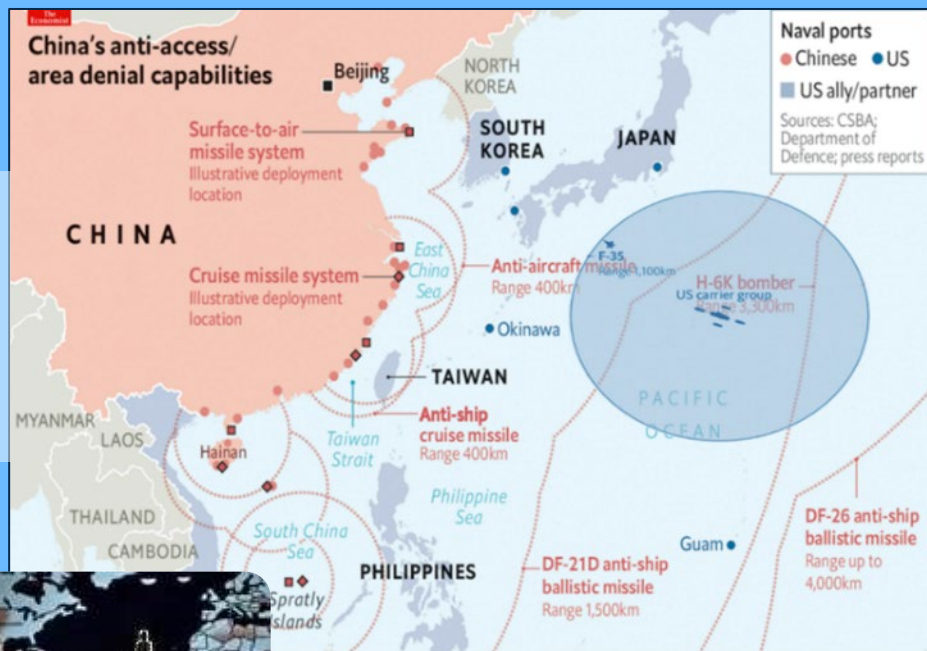


**6.3 Advanced Tech
Dev**
\$117.9M FY24
\$125.4M FY25



External
\$47.6M FY24
\$100M FY25

Modeling, Simulation & Analysis



Operational Challenges

Time - Distance



Propulsion, high temperature, survivability, miniaturization, alt. nav, PNT, adaptive structures

Capacity



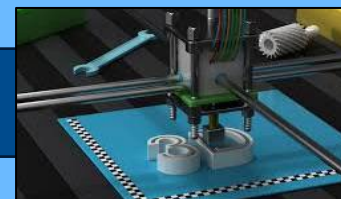
Reduced size, selectable effects, new energetics, impact survivability

Complexity



Networked & Collaborative, software defined function, multi-domain effects

Acquisition



Affordable, S&T for producibility, WOSA & GRA, partner nation approach

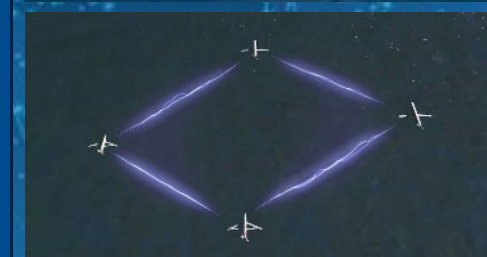
Range, range, range...with Affordable, Agile Lethal Effects at Scale



Capability Areas Impacted by DAF Munitions S&T:



- **Global Precision Attack (GPA)**
 - High-Speed & Hypersonic Strike
 - Networked Collaborative Autonomy
 - C-Maritime
 - C-HDBT
- **Air Superiority**
 - C-Air
 - Self-Protection of Blue HVAA
- **Air Expeditionary Force Protection**
 - C-UAS
 - Ground Launched





- **We are in an Infinite Game**

...we only have between now and then to be ready



- **It will be highly contested**

...we can't close known Mission Threads without S&T



- **S&T will be decisive to win... and we will need to be prepared to win again soon!**

...what *war-winning* capabilities will we have when we go again?

S&T Affordability Framework

“Premier Blue” **always** needed
to overmatch pacing technology threats

- Most exquisite technology
- Very high, military-unique investment
- Low volume production

AMRAAM,
JASSM, LRASM,
HACM, JATM

Weapons Triangle

Low cost, high volume efforts
typically focused on short range
Direct Attack Munitions

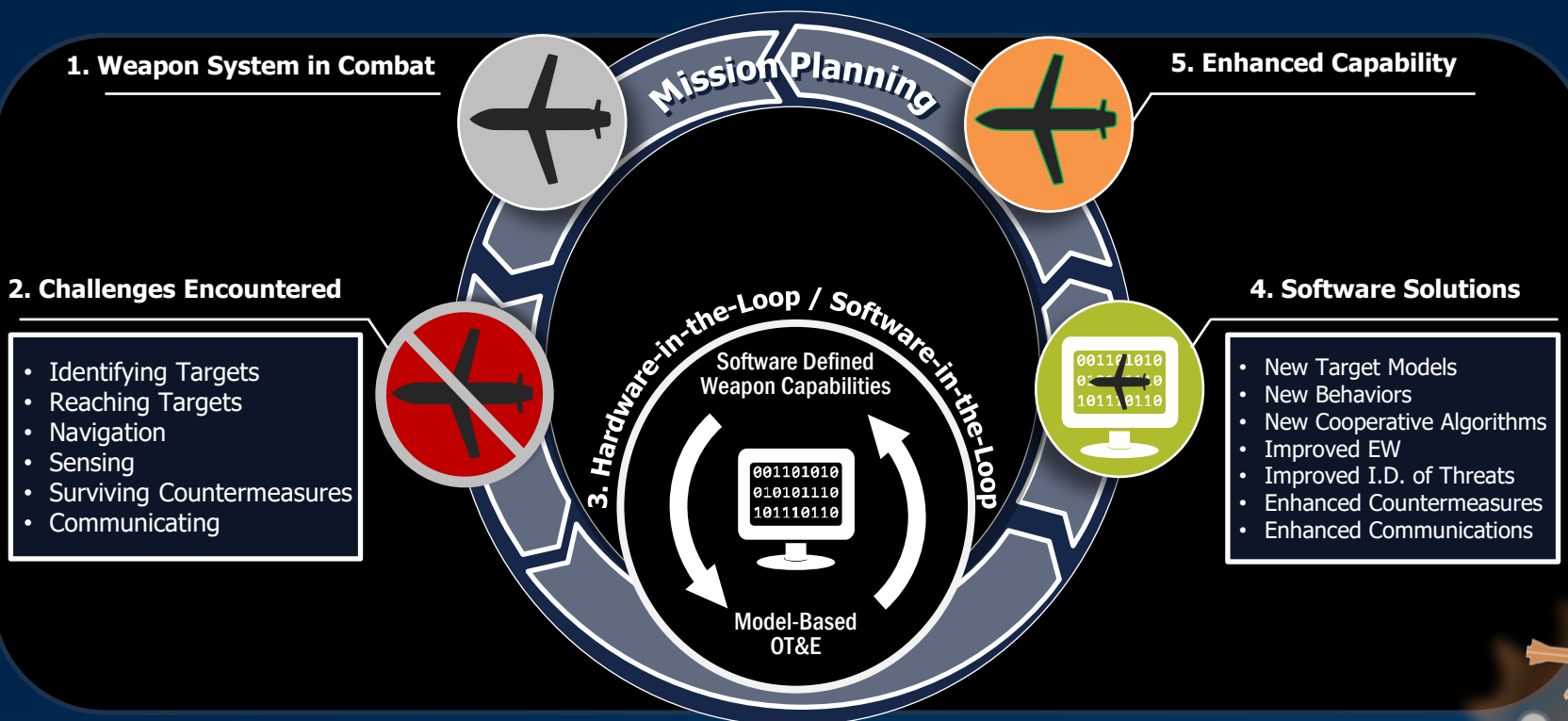
JDAM, SDB I/II,
GP Bombs

Affordable Mass Solutions for Long Range

NEED:

- Affordable
- Capable min viable product
- Mature technology
- High volume production

A Digitally Enabled Munition Enterprise

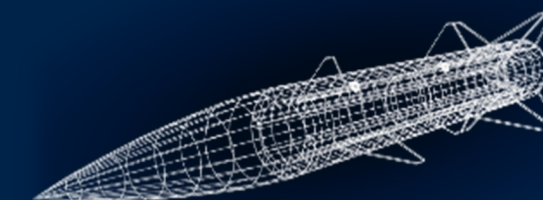


2. Challenges Encountered

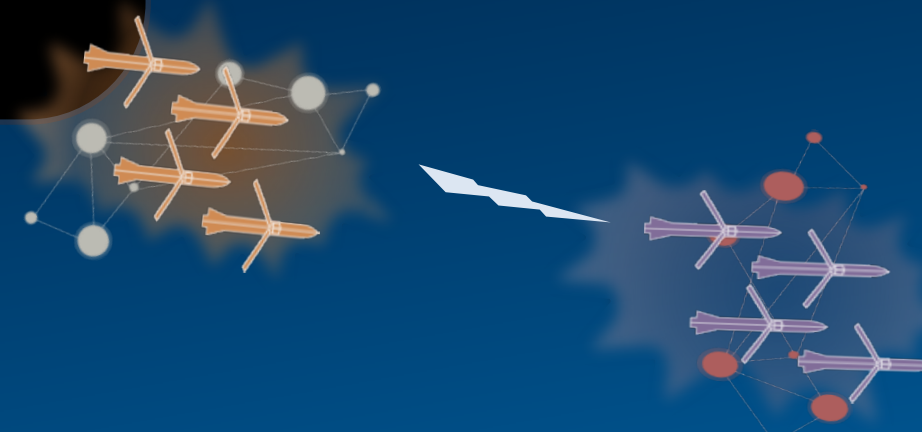
- Identifying Targets
- Reaching Targets
- Navigation
- Sensing
- Surviving Countermeasures
- Communicating

4. Software Solutions

- New Target Models
- New Behaviors
- New Cooperative Algorithms
- Improved EW
- Improved I.D. of Threats
- Enhanced Countermeasures
- Enhanced Communications



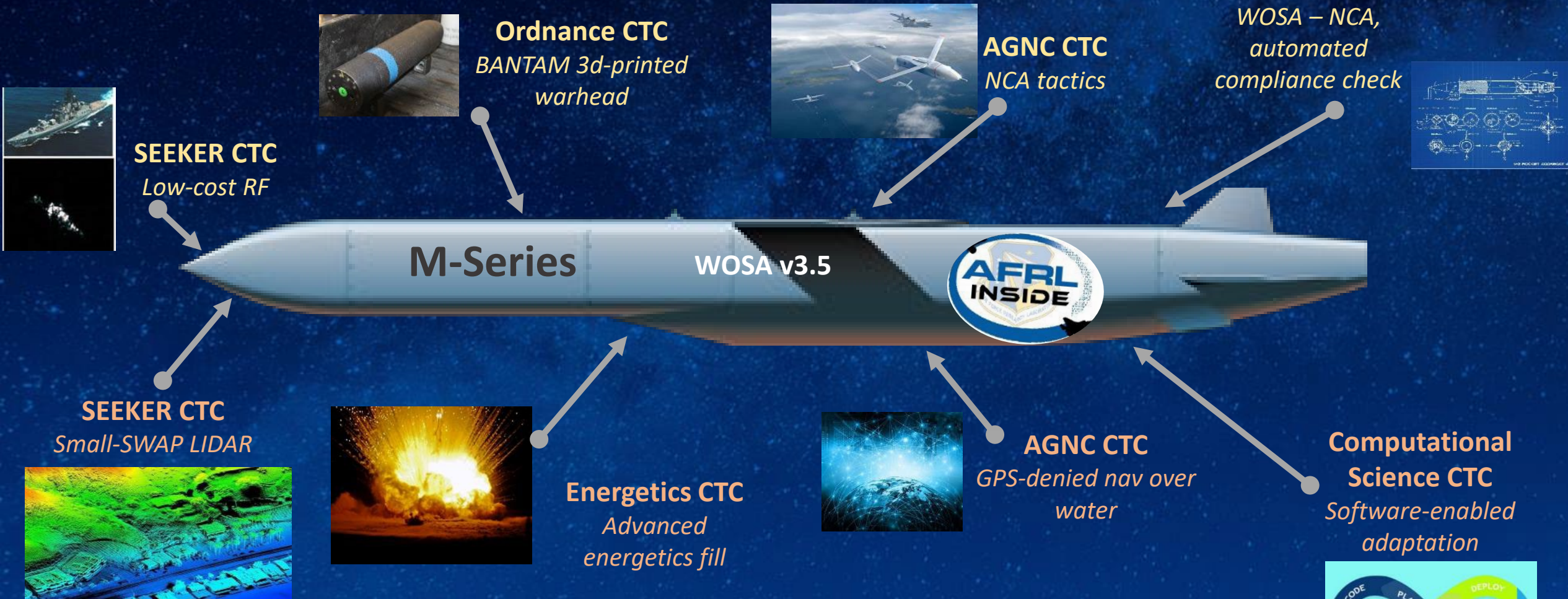
- Digital Twin Enabled Operations
- Weapon System Open Architecture (WOSA)
- Software Enabled Weapons



Data as a Weapon: Combat capability through real-time system performance updates and upgrades



EPOCH 1-2 Technology Insertions



EPOCH 2-3 Technology Insertions





Areas of Increased Focus (2025-2026)

- **Focused S&T areas to reduce technical risk in acquisition programs / PEO-Weapons**
- **Accelerate a weapons family of affordable, open-system, modular weapons technologies**
- **Moving towards Digital Innovation Pipeline**
- **Data driven capability; Software Enabled Weapons**
- **Low-Cost, capable: seekers, turbine engines, datalinks/SDR, processor, sustainment**
- **Scalable manufacturing (coalition/exportable/distributed, non-traditional vendors)**
- **Realize the Long-Range Kill Web**
 - **Maritime lethality**
 - **Autonomy**
 - **Compact munitions**
- **Balance to time Epochs build a S&T portfolio to Win and Win Again and again**



Questions?



AFRL Enterprise At a Glance



- **Primary scientific research & development center** for the Department of the Air Force.
- While our heritage dates back to 1918, AFRL officially launched in 1997 to consolidate the four former Air Force laboratories & the Air Force Office of Scientific Research. The laboratory & its predecessors have overseen more than 100 years of critical research efforts for the Department of the Air Force & Department of Defense.
- AFRL Headquarters - Wright-Patterson Air Force Base, Ohio.
- Employs approximately 11,500 military, civilian & contractor personnel, & **manages a \$7 billion portfolio of investments**.
- Supports external customers & partners with industry while investing in basic research, applied research & advanced technology development.
- As one integrated lab, AFRL seamlessly supports the Science & Technology needs of **two services: the Air Force & the Space Force**.
- **Locations** in **10** States: California, Florida, Hawaii, Nevada, New Mexico, New York, Ohio, Tennessee, Texas & Virginia.
- **International Sites** in **5** Countries: Australia, Brazil, Chile, Japan and the United Kingdom.



Munitions Directorate: Who We Are

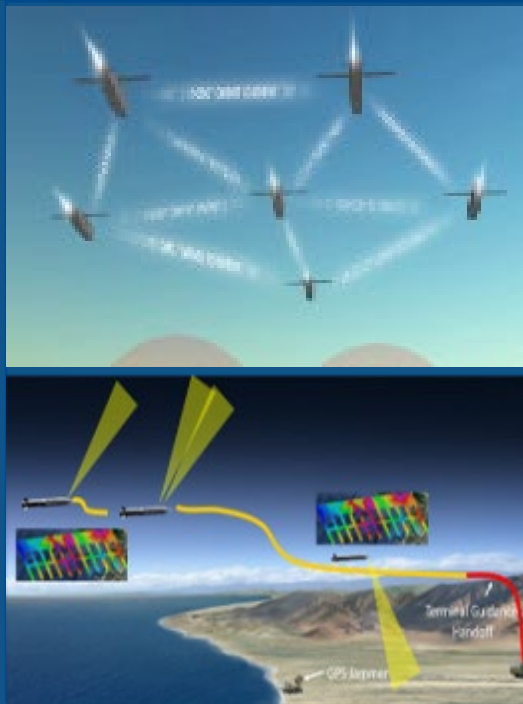


VISION: To be the global thought leader in advancing weapons science and technology

MISSION: Discover, develop, integrate, demonstrate, and transition weapons technology, enabling the Department of the Air Force to dominate across all domains



FUNDAMENTAL SCIENCE



APPLIED TECHNOLOGY



WEAPON SYSTEM 911/411



THOUGHT LEADERS



A History of Responding to the Operational Needs....



1960

1970

1980

1990

2000

2010

2020

2030



Digital Defined Weapon Capabilities

“What if... we could Ex-Fil the in-situ DATA?”



Collect Weapon Operational Data:

1. Airframe temperature, strains, pressures...
2. Environmental parameters (e.g. weather...)
3. Flight profile/trajectory/ranges/energy...
4. Guidance & control commands & errors
5. NCA tactics, signals, commands
6. INS & navigation signals and estimates...
7. Fuze/initiation parameters, signals
8. BDA and lethality
9. Data-Link: bandwidth, SNR, connectivity
10. Attrition, malfunctions, weapon-target assignments, way-points, mission planning etc.



AFRL

AIR FORCE RESEARCH LABORATORY MUNITIONS DIRECTORATE (RW) TECHNOLOGY TRANSFER

OFFICE OF RESEARCH & TECHNOLOGY APPLICATIONS (ORTA)

Bill Loux, Tech Transfer PM – william.loux.2@us.af.mil

Laura Rakas Harrigan, Tech Transfer Specialist – laura.harrigan.ctr@us.af.mil

Air Force Technology Transfer

What is Technology Transfer?

- “Technology Transfer is the process by which existing knowledge, facilities, or capabilities developed under federal research and development (R&D) funding are utilized to fulfill public and private needs.”
- Prior to instituting Technology Transfer laws, much of the innovation and technology developed by federal government organizations sat idle on the shelf, unprotected, underutilized and in many cases unknown
- Congress enacted a series of laws to help facilitate and encourage the transfer of federally funded technologies into the private sector and to incentivize companies to turn these innovations into new commercial products that improve the world, increase economic development & jobs, and ensure the continued economic & technological superiority of the US by maximizing the value of government funded research & development
- The tools put in place allow the DoD to effectively share & transfer existing knowledge, know-how, personnel & capabilities with leading edge companies to ensure the technological dominance of our fighting forces.
- **EXAMPLES:**

The first computer mouse was developed by DARPA and later was licensed to Logitech for commercial production



GPS technology originally developed by the US military has been transferred into cars, phones & many other products



Why Technology Transfer is important



Protect important Air Force intellectual property by putting in place the proper patent protection of technologies critical to future weapons programs.

Prevents private defense contractors from claiming inventions developed by Air Force funding/personnel and then charging the Air Force to develop the technology for future weapons systems.

Prevents vital Air Force technology from being patented by private industry, positioning them for sole-source production, reducing competition, and driving up acquisition costs.



Technology Transfer speeds up the development of Air Force technologies & facilitates a faster transition of these technologies into actual weapons systems to more rapidly benefit the warfighter.

Between 2000-2017, DoD IP license agreements has resulted in over \$58 billion of economic impact and created over 214,000 new jobs.

Leading to over \$4.5 billion in sales of new products to the U.S. military, speeding impact to the warfighter.



The licensing of Air Force technologies into commercial partners increases the return on federal research and development funding.

Larger commercial production of products increases the speed of technological development and reduces the cost to the Air Force for future production of weapons and equipment.

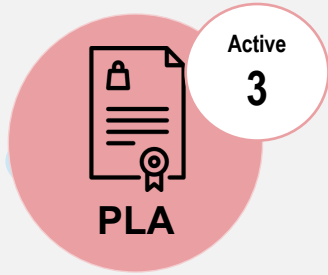
Transfer of federally funded technology increases the economic development of the country & improves our technological and scientific workforce.



How we accomplish Technology Transfer

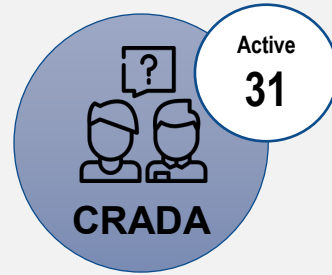
AFRL

Patent License Agreement



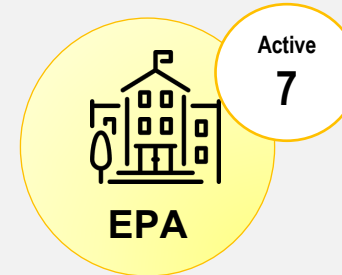
- Agreement to license RW patents into commercial companies
- Royalty bearing agreements generate revenue for lab and inventors
- Exclusive
 - Commercial value
 - New product development
 - Royalties \$\$
- Non-Exclusive
 - Multiple companies
 - Fields of use can be limited by products, markets, geographic location, etc.
- Ability to also complete software license agreements

Cooperative Research & Development Agreement



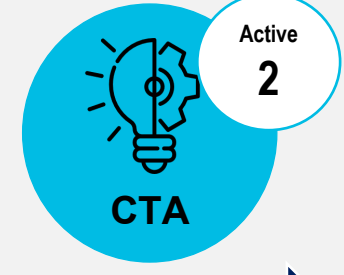
- Agreement to facilitate joint R&D efforts and to share intellectual property
- Lab can accept, retain, & use funds, personnel, services & property from partner company or university
- Lab can provide personnel, services, & use of property & testing
- CRADA may not involve payment of funds out to partner
- Lab can loan GFE
- FAR and DFARS do not apply.
- Low cost - CRADAs allow shared resources between Government and private industry
- Ability to hand pick your partner
- NDA, MTA, NSF

Educational Partnership Agreement



- Agreement to partner with educational institutes for furthering STEM mission
- Provides lab personnel to teach or assist in developing courses
- Involve students and faculty in lab research
- Enables loaning equipment
- Donate surplus equipment
- University EPAs
 - Educational research
 - Loan/donation
 - Academic credit
- K-12 EPAs
 - STEM Outreach

Commercial Test Agreement



- Agreement to allow munitions directorate to perform testing for external parties
- May make available to any person or entity, at an appropriate fee, the services of any government lab, center, range, or other testing facility
- Perform tests that are confidential and may not be disclosed outside the Federal Government without the consent of the persons for whom the tests were performed

The ORTA Office can help you put place a wide range of useful technology transfer agreements

Munitions Directorate Patent Portfolio – Research Areas

Optics/Photonics & LIDAR

Navigation & Autonomy

Advanced Energetics

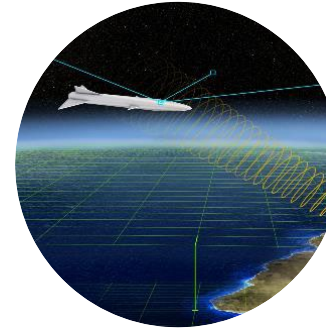
Mechanical

Electronics/Sensors & Software

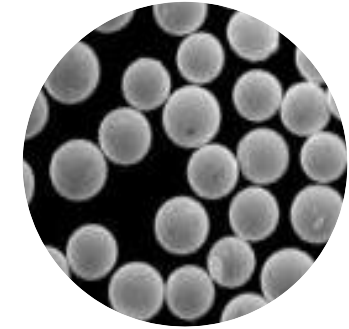
Materials & Manufacturing



Optics/Photonics &
LIDAR (27 Patents)



Navigation & Autonomy
(10 Patents)



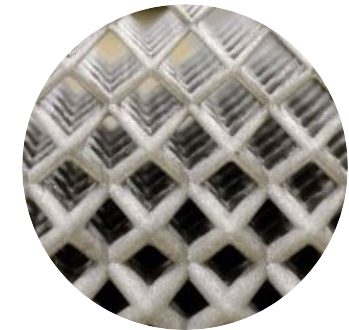
Advanced
Energetics (11 Patents)



Advanced
Mechanical (13 Patents)



Electronics/Sensors &
Software (9 Patents)



Materials & Manufacturing
(6 Patents)

USAF-9628 STEEL

Lowering Cost/Improving Performance

- Low Alloy High Performance Steel
- Invented by Dr. Rachel Abrahams (former AFRL/RW) (Patented 2019)
- Originally designed for bunker-buster bombs
- 50% cost reduction; parts additively manufactured with the steel are about 20% stronger than conventional AM alloys





AFRL/RW Technology Transfer (T2) Partnerships

44 PARTNERS

31 CRADAs

7 EPAs

15 MOAs/MOUs/LOAs/IAs

2 CTA

3 IP AGREEMENTS

CRADA = Cooperative R&D Agreement

EPA = Educational Partnership Agreement

MOA = Memorandum of Agreement

MOU = Memorandum of Understanding

LOA = Letter of Agreement

IAA = Inter-Agency Agreement

CTA = Commercial Test Agreement

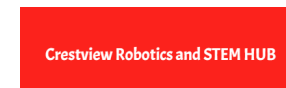
JOAEL = Joint Ownership Agreement Exclusive License

IP ASSIGNMENT = Patent Rights Assignment

IP COMMERCIALIZATION = Patent Commercialization Agreement



THE AIR FORCE RESEARCH LABORATORY





QUESTIONS?

Bill Loux, Tech Transfer PM – william.loux.2@us.af.mil

Laura Rakas Harrigan, Tech Transfer Specialist – laura.harrigan.ctr@us.af.mil





AFRL

Munitions Contracting Basics (RWK)

Shannon Paradise, Contracting Officer

MUNITIONS DIRECTORATE 20 Aug 2025

RWK Munitions Contracting

- **RWK – Munitions Contracting Division**

RWKW - Weapons Engagement Branch

RWKM - Ordnance and Integration Branch



- **SMALL and MIGHTY TEAM of Contract Specialists, Contracting Officers, Procurement Technicians and Management/Leadership**
- **Functional Support and “Business Advisors”**
 - **Team with Program Offices (Scientists and Engineers), Policy/HQ Offices, Small Business Office, Finance, Legal, Safety, Security**

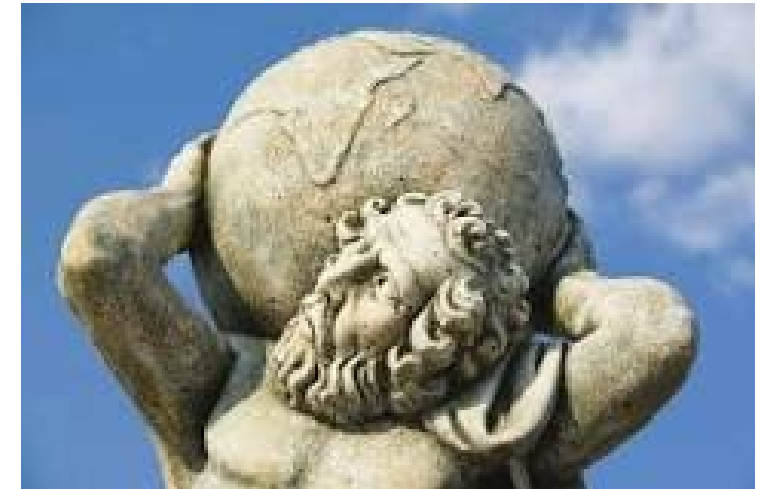
RWK Contracting Officer Basics

ENSURE ALL requirements of LAW, EOs, REGS (FAR, DFARS, DAFFARS), and ALL OTHER applicable procedures, including clearances and approvals, have been met

Ensure GOOD STEWARDSHIP of Taxpayer Funds

Ensure IMPARTIAL, FAIR AND EQUITABLE TREATMENT

Grants and Agreements Officers Authority (CFR 32 Part 22)



RWK Contracting Basics

- Issue Sources Sought/Requests for Information
- Prepare & Release Solicitations/BAAs
- Receive & Process White/Papers Proposals
- Issues Requests for Proposals
- Review Proposal Adequacy and Contractor Responsibility, Price & Cost Analysis & Negotiate Proposals
- Award & Administer Contracts & Agreements (Including Modifications)
- Terminate Contracts & Contract Closeout



RWK Contracting - Some of What We Don't Do

- **DO NOT perform Technical Functions**
 - Peer/scientific reviews or select white papers
 - Technical requirements (BAA/Small Business Innovative Research (SBIR); Statements of Objectives)
 - Answer technical questions or evaluate technical proposals
- **DO NOT Perform Security Reviews**
- **DO NOT Negotiate Direct or Indirect Rates/Perform Audits (business/accounting systems)**



RWK Munitions R&D Contracts/Agreements



**North American Industry Classification System (NAICS)
Code 541714 –
Research and Development in Biotechnology
(except Nanobiotechnology)**

**Small Business size standards
1000 employees**

**Product Service Codes R&D – Defense System
AC11 – Basic Research
AC12 – Applied Research/Exploratory Development
AC13 – Advanced Development**

**RW R&D Contracts are Defense Priorities and
Allocations System (DPAS)
DO-A5 (Weapons) Priority Rated**

RWK Contract Type for R&D

- **Cost-Plus-Fixed-Fee (CPFF)**
 - Lacks precise specifications
 - Uncertainties prevent sufficient cost estimates for FFP
 - Adequate accounting system required
- **Firm-Fixed-Price (FFP)**
 - Levels of effort specified in advance
 - Short-duration fixed-effort; Minor projects with well defined R&D sufficient for cost estimates
- **Grants/Agreements (2 CFR 200) – Cost/Cost Sharing**
- **Small Business Research Innovative Research (SBIR)/Small Business Technology Transfer (STTR) Contracts FFP**

What makes sense
for the acquisition!!

**Contracts/agreements are incrementally funded with R&D appropriations*

RWK Contract Vehicles for R&D

What makes sense
for the acquisition!!

- **Contract/Agreement Vehicles**
 - **Definitive “C” Contracts (FA865125CXXXX)**
 - **Indefinite Delivery Indefinite Quantity (IDIQ) Contracts (FA865125DXXX) with Individual Task Orders (TOs) (FA865125FXXX)**
 - **Other Transaction Authorities (FA8651259XXXX)**
 - **Grants/Cooperative Agreements (FA8651251XXXX – Grants) (FA8651252XXXX – Cooperative Agreement)**
- **Options considered**
- **Varied Periods of Performance**

RWK R&D Contract Specific Considerations

- **Safeguarding Controlled Unclassified Technical Information; National Institute of Standards and Technology (NIST) SP 800-171-DoD Assessment (score of 110)**
- **DD2345 Militarily Critical Technical Data Agreement (Export Control)**
- **DAF/AFRL Science & Technology Protection Requirements/Security Risk Review**
- **Data Rights Considerations**
- **Patent Reporting Requirements**
- **Contract Performance Assessment Reporting (CPAR) not required for R&D**
- **Final Reporting SF298 – 90 day**
- **CLASS Deviation 2022-O0005, Revision 2 Pilot Program for Streamlining Awards for Innovative Technology Projects (exception to certified cost or pricing data up to 7.5M for small business and Nontraditional Defense Contractors under BAA/SBIR)**

My White Paper/Proposal was Selected – Now What?



RWK Acquisition Timeline Overview

BAA Two-Step	Timeline
Acquisition Strategy/Plan Approved	
RFP Release	
White Paper Collection	Start
Technical Evaluation	20
Solicitation - Full Proposal (BAA 2-Step)	30
Submission Collection (BAA)	30
Technical Evaluations (BAA 2-Step)	30
Negotiations/Discussions Concluded	75
Award	15
Total Timeline	200

❖ Other Acquisition Timelines

- ❖ 180 day from Proposal SBIRs
- ❖ 115 days from RFP Release New Task Order/In-scope Modifications
- ❖ Grants/Agreements no specific timelines

❖ Funding and other considerations factored

- Letter Request for Proposal (RFP) Prepared
- RFP Released: Pre-proposal kick-off meeting is scheduled (initial discussion and opportunity for contractor to ask question)
- Proposal received:
 - Fact-finding/Technical Evaluations
 - Cost/Price Analysis
 - Data Rights Review/Legal Review
 - Safety/Security and Proposal Adequacy Reviews
 - Responsibility Determinations, Legal/Policy Reviews
- Negotiation and Award: Contract kick-off meeting scheduled

Waiting on the
acquisition process...

Is there anything I can
do to help speed the
process?

I'm glad you asked!

WAITING



Contractor Considerations

- ✓ **RESPONSIBILITY:** Current SAM.gov Registrations/Representations & Certifications
- ✓ **CUI SAFEGUARD:** Verification that the summary level score 110 of a current NIST SP 800-171 DoD Assessment is posted in Supplier Performance Risk System (<https://www.sprs.csd.disa.mil/>)
- ✓ **EXPORT CONTROLLED TECHNICAL INFORMATION:** Current DD2345 Militarily Critical Data Agreement <https://www.dla.mil/Logistics-Operations/Services/JCP/>
- ✓ **ADEQUATE ACCOUNTING SYSTEM (Cost-type contracts):** Defense Contract Audit Agency Audit readiness
- ✓ **READ the ENTIRE SOLICITATION INSTRUCTIONS** including Amendments and Attachments and **ASK QUESTIONS**
- ✓ **PROCUREMENT INTEGRATED ENTERPRISE ENVIRONMENT (PIEE):** Register/Add Roles (Wide Area Workflow, SPRS, Solicitations, etc.)

Contractor Proposal Submission Considerations

- ✓ **ATTENTION TO DETAIL** completing **ALL** SOLICITATION/RFP INSTRUCTIONS/REQUIREMENTS
- ✓ **Request a Pre-Proposal Kick-Off Meeting** (if not provided); submit questions in advance when possible
- ✓ **COMMUNICATE technical** issues and questions up-front
- ✓ **COMMUNICATE potential issues in advance** of proposal submission (NIST compliance, funding considerations, Government Furnished Property, safety considerations, e.g., special testing, munitions)
- ✓ **Be RESPONSIVE** to government fact-finding is significant

RWK Contracting Key Takeaways for Success

- ✓ **BE PREPARED** (in advance) for government contract requirements
- ✓ **ENGAGE** with Small Business Liaisons and other experts
- ✓ **ATTENTION TO DETAIL** submitting documents
- ✓ **COMMUNICATE** with Gov POCs throughout the process
- ✓ **UNDERSTAND** all Terms and Conditions (**AFTER** contract award is **NOT** the best time to ask key contractual questions)
- ✓ **RESPONSIVENESS** goes a long way (two-way street)





U.S. AIR FORCE



USSF

AFRL

QUESTIONS?



USAF SBIR/STTR Munitions Directorate SBIR/STTR Program

20 August 2025

Shirley M. Schmieder and Lisa Little
Munitions Directorate
SBIR STTR Program
AFRL/RWSP





SBIRs/STTRs Overview

- **SBIR – Small Business Innovation Research**
- **STTR – Small Business Innovation Research Technology Transfer Research = SBIR + University Researcher**
- **Access to different approaches and ideas to DoD**
- **Satisfy Department of Defense technical challenges**
- **Strengthens small business industrial base and economy**
- **Foster a culture of innovation in the United States**





SBIR/STTR Program

Managing Organization Roles:

RW manages the effort from topic development through technology transition. RW creates the specific topic, manages the topic resulting in SBIR phase I, SBIR phase II, or Direct to Phase II (D2P2).

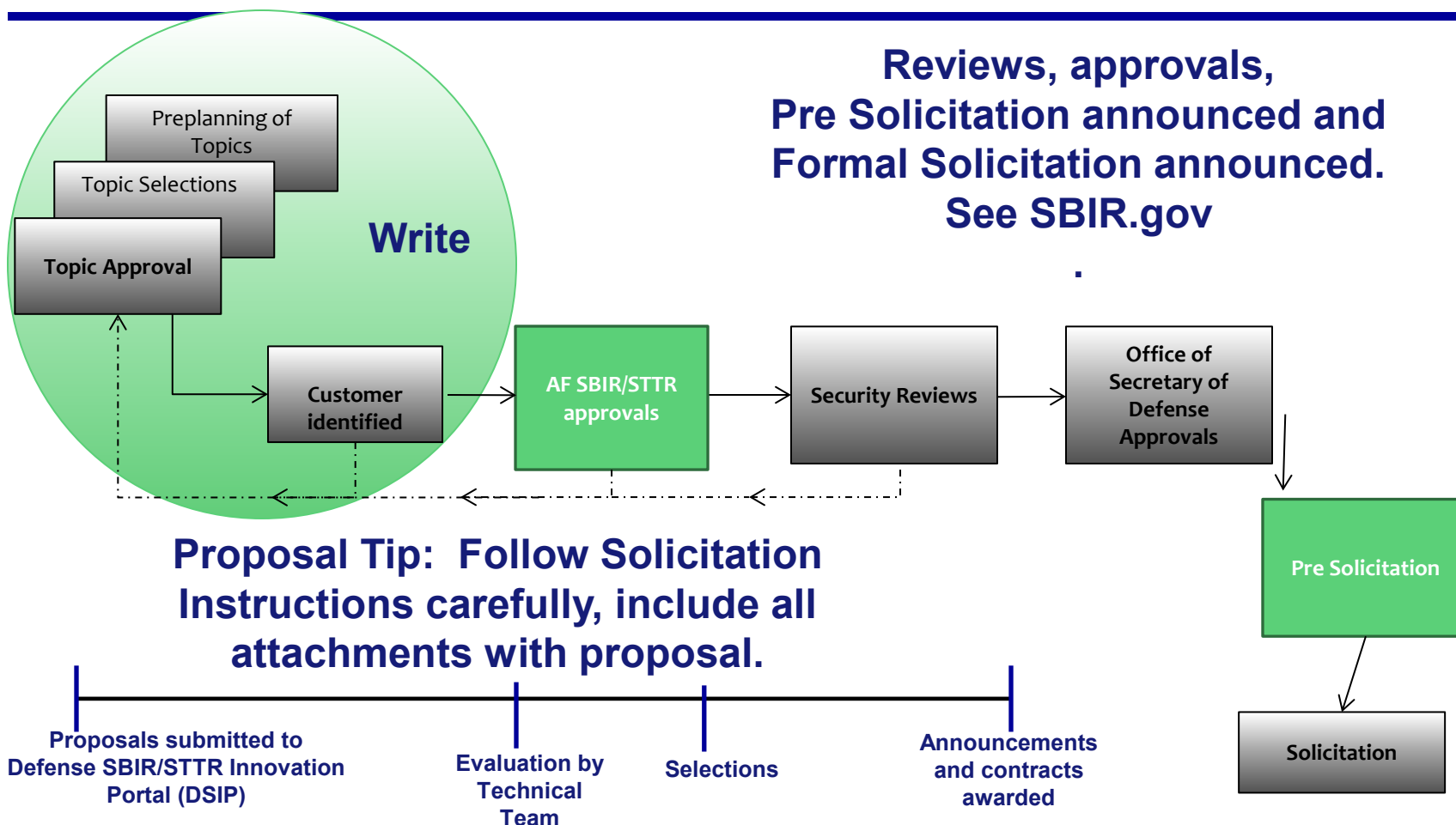
Sponsoring Organization Roles:

RW collaborates on Weapon SBIR/STTR topics developed and aligned to the technology requirements of various sponsoring DoD organizations.



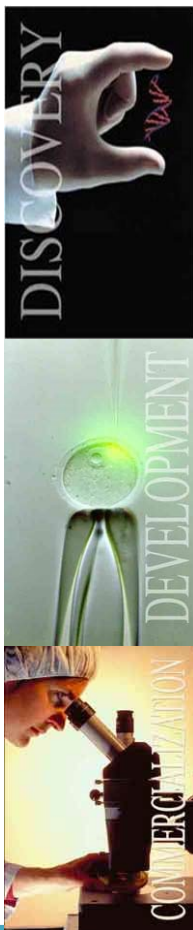


SBIR/STTR Specific Topic

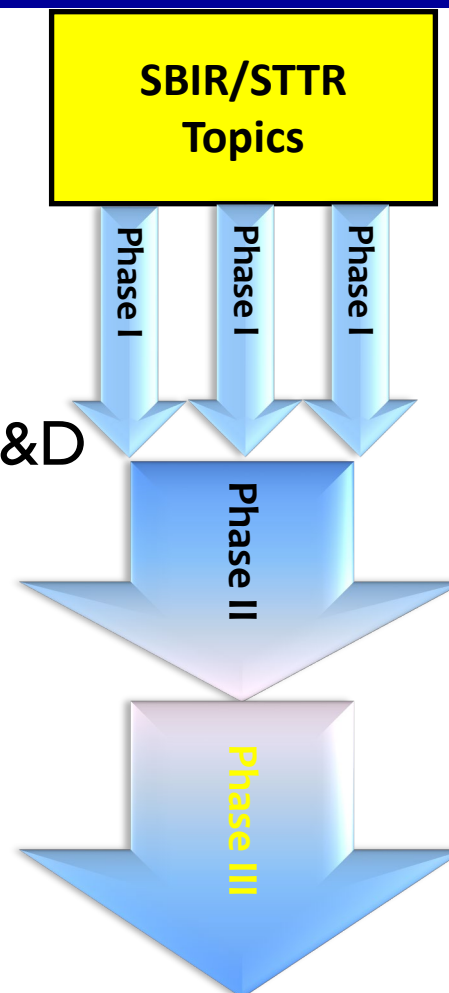




SBIR/STTR Phased Approach RW Specific Topic Funding

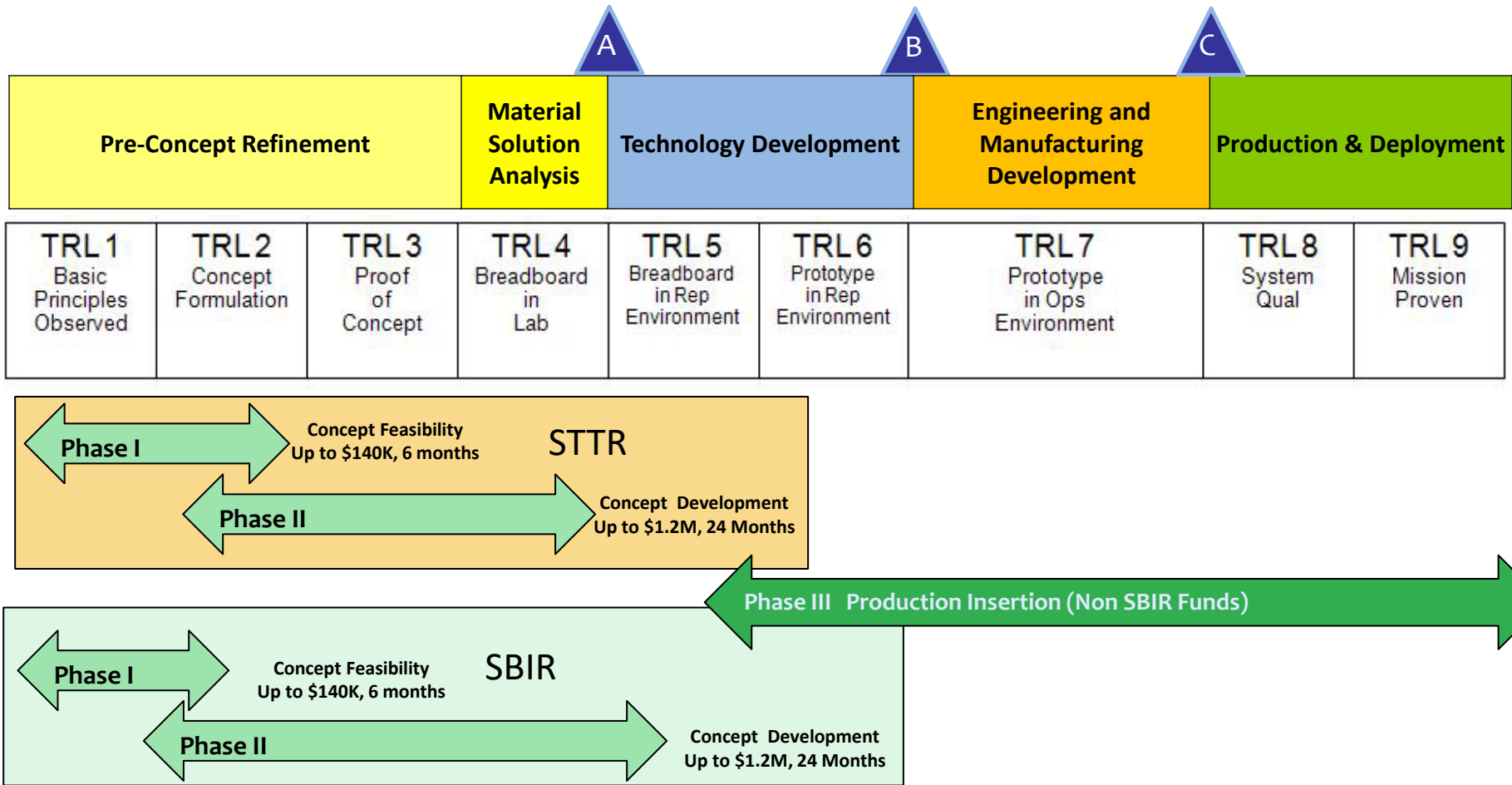


- **PHASE I** – Feasibility Study
 - \$140K, 6 months (SBIR) Award
 - \$140K, 6 months (STTR) Award
- **PHASE II and D2P2** – Full Research/R&D
 - \$1.2M, 24-months (SBIR/STTR) Awards
 - No D2P2 for STTR
- **PHASE III** – Commercialization
 - Use of non-SBIR/STTR Funds





SBIR/STTR's effect in Air Force Acquisition –





STRATEGIC & TACTICAL FUNDING INCREASE PROGRAM: STRATFI | TACFI

PURPOSE

1

Catalyze relationships between Air Force and Space Force end-users and acquisition professionals, private-sector innovators, and investors.

2

Bridge the capability gap between current SBIR/STTR Phase II efforts, resulting in SBIR/STTR Phase III scaling efforts that facilitate the delivery of strategic capabilities for the Department of the Air Force.

TACFI

Tactical Funding Increase
\$375K–\$2M

STRATFI

Strategic Funding Increase
\$3M–\$15M

ELIGIBILITY

Small Business Concern (SBC) must meet **ALL** of the following criteria.

1. Company is considered a SBC and eligible for a SBIR/STTR award
2. SBC is on an active SBIR/STTR PII or completed a SBIR/STTR PII within 2 years of Capability Package Submissions
3. The subject PII effort has not already been awarded a second (AKA "sequential") PII
4. At least 90 days have passed since the beginning of the associated PII execution
5. SBC is not executing a prior STRATFI effort at the time of submission
6. Anticipated work is to be performed in the United States

MATCHING OPTIONS

	Defense-Only	Dual-Use
TACFI	1:1 SBIR/STTR: Gov	1:1 SBIR/STTR: Private
STRATFI	1:2 SBIR/STTR: Gov	1:1:2 SBIR/STTR: Gov: Private

Notice of
Opportunity

DAF Customer
RFP Release
and Contract
Award



**PY24 STRATFI/TACFI
RESULTS**



158 Selected (30 STRATFI/128 TACFI)



\$583M in SBIR funds

\$702M in matching government funds

\$619M in matching private funds

DISTRIBUTION A, APPROVED FOR PUBLIC RELEASE, DISTRIBUTION UNLIMITED, APRIL 2024 3853





SBIR/STTR Transition Success Criteria

- **Transition Success:**
 - For purposes of SBIR and STTR, technology transition is any process that results in the use of a SBIR/STTR funded technology in a DoD program, platform, system, product, or service. Phase III Non SBIR/STTR funds. (Per DoD Transition Definition)
- **Economic Success:**
 - Includes, direct sale of SBIR/STTR technologies to the Federal Government or commercial entities supporting DoD, and Phase III awards.
- **Time to Success**
 - Length of time from Solicitation of the topic to an economic success or transition success or to the Warfighter.

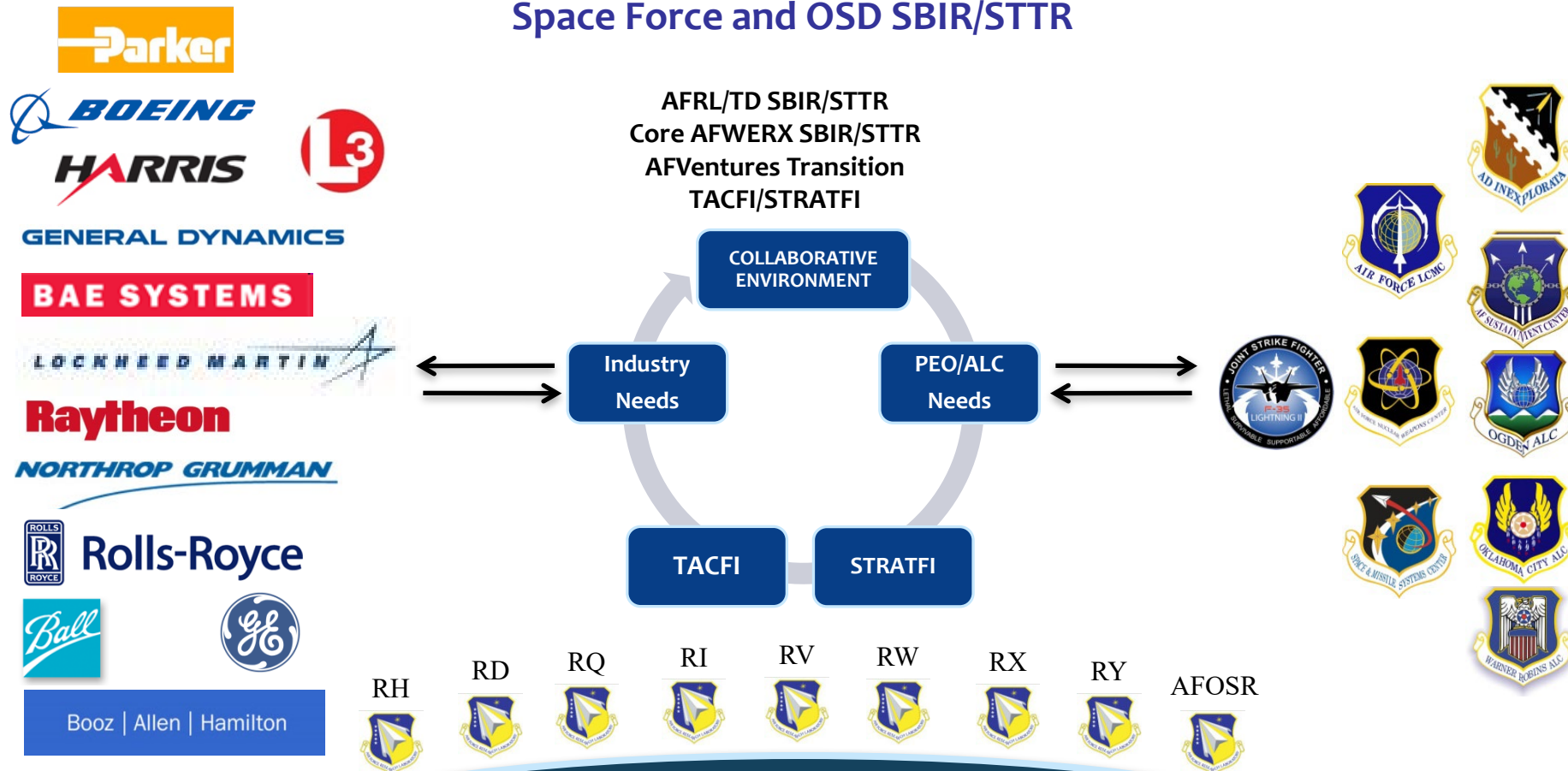




Air Force SBIR/STTR

Munitions Directorate SBIR/STTR

Space Force and OSD SBIR/STTR



SBIR/STTR Phase II Portfolio



Munitions SBIR/STTR

Managing Organization Program Manager

Contact Information

Shirley M. Schmieder,
AFRL/RW SBIR/STTR Program Manager
Shirley.schmieder@usaf.af.mil

Lisa Little,
SBIR/STTR Contractor Program Support
Lisa.little.l.ctr@us.af.mil

For more information, view AFWERX.com and SBIR.Gov





Introduction



SMALL BUSINESS OFFICE EGLIN AFB, FL

**Tina Mercer
Director, Small Business Office
AFLCMC/SB-OL Eglin
205 West D Ave, Ste 439, Bldg 350
Eglin AFB, FL 32542
Jan 2025**



OVERVIEW

- Eglin AFB Mission
- SB Office Roles
- Locating Eglin Opportunities
- Eglin SB Goals
- Eglin Contract Opportunities
- Contact Information

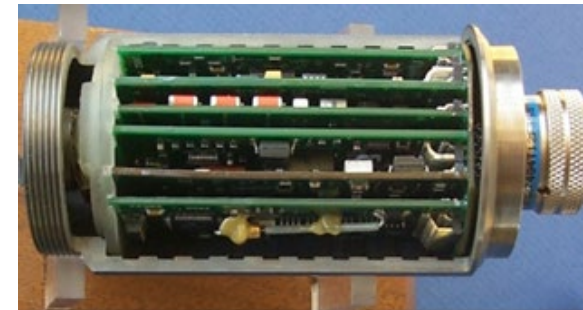




MISSION



- Air Force Research Laboratory (AFRL) Munitions Directorate





MISSION



Armament Directorate (AFLCMC)



The mission of the Armament Directorate is to equip warfighters by acquiring and supporting war-winning capabilities. In concert with the Directorate's mission is the vision to deliver affordable world-dominant armament capabilities...on time, on target. Led by the Air Force Program Executive Officer for Weapons, the directorate reports to both the Assistant Secretary of the Air Force for Acquisition, Washington D.C., and the Air Force Life Cycle Management Center, Wright Patterson Air Force Base, Ohio

Programs managed include the Joint Direct Attack Munition (JDAM), Joint Air to Surface Standoff Missile (JASSM), JASSM-Extended Range (JASSM-ER), Small Diameter Bomb I (SDB I), Small Diameter Bomb II (SDB II), Advanced Medium Range Air-to-Air Missile (AMRAAM), Miniature Air Launch Decoy-Jammer (MALD-J), Massive Ordnance Penetrator (MOP), and the QF-16 Full Scale Aerial Target (QF-16 FSAT).



MISSION



- Air Force Nuclear Weapons Center (AFNWC)



- Deliver nuclear capabilities warfighters use every day to deter and assure.

AFNWC Vision:

Ensuring our nation's most powerful weapon systems are never doubted,
always feared



MISSION



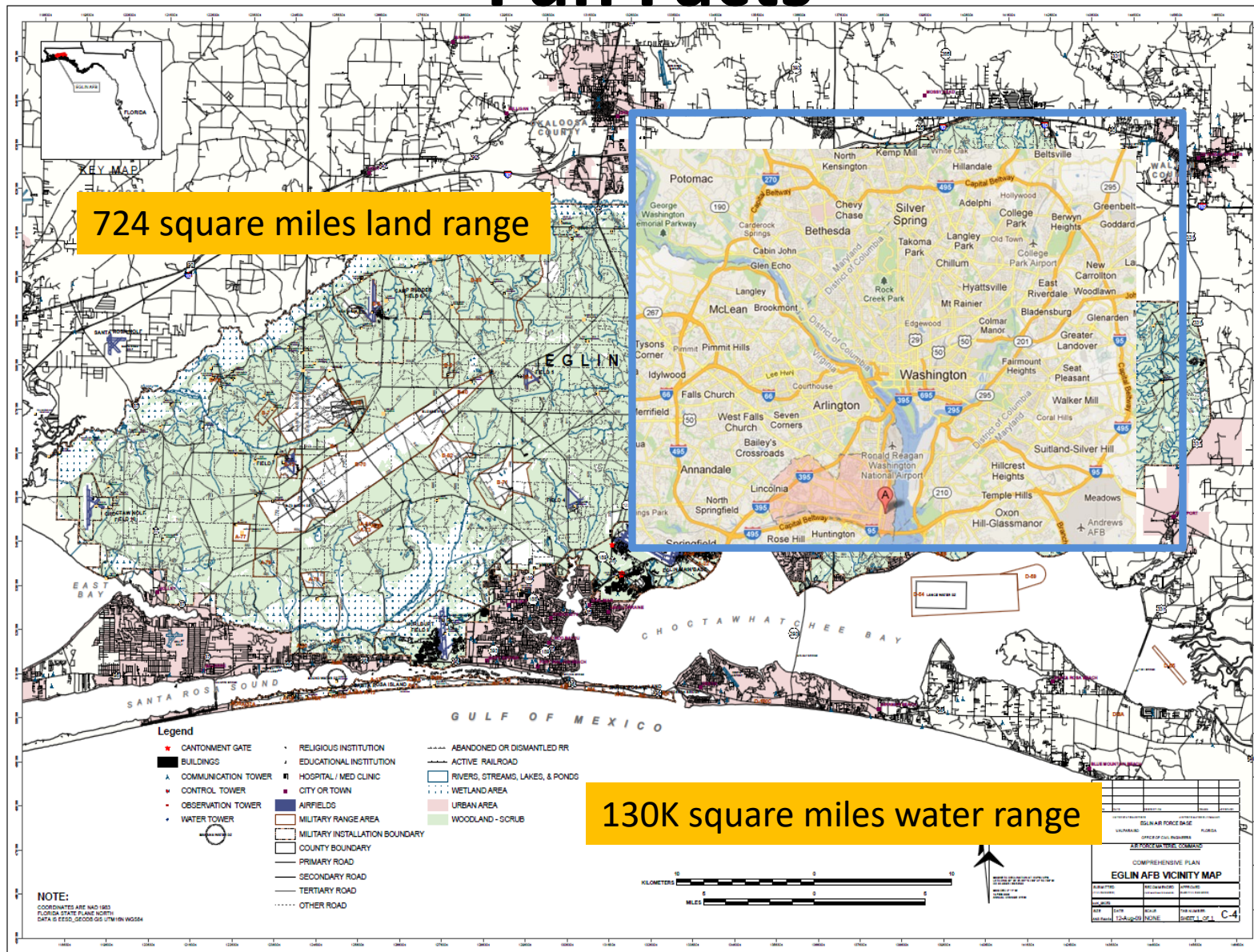
- **96th Test Wing (AFTC) – Base Operational (Test & Evaluation and Base Support)**



Eglin is the DoD's second largest test and training complex

The 96th TW executes developmental test and evaluation enabling the warfighter to put weapons on target in all battlespace media while also providing support for all other Team Eglin missions as the installation host wing.

Fun Facts





SMALL BUSINESS OFFICE ROLES



- **Support Eglin's 4 AFMC Centers**
 - Early strategy phase member
 - Assist w/market research
 - Coordinate set-aside decisions
 - Review/Coordinate on Acquisition & SubK Plans
 - Attend Acquisition Strategy Panels (ASPs)
 - Source Selection team members
 - Provide Annual/One-on-One/Specialized Training

- **Provide Guidance to Contractors**
 - Types of current/future requirements
 - Where/how to find opportunities
 - Solicitation processes
 - Policy changes/updates
 - Informational Handouts
 - Attend/Facilitate Networking Outreach Events
 - Maintain SB website for Eglin's requirements



SMALL BUSINESS OFFICE



Small Business Office

eglin.af.mil/Units/Small-Business-Office/

NEWS PHOTOS FACTSHEETS

SBO RESOURCES & INFORMATION

- Useful websites
- Mentor Protege Program
- Base support contracts list
- Local defense contractors
- Florida federal buying agencies
- Finding Eglin contracts

HELPFUL LINKS

Where to find opportunities:

Potential Air Force Opportunities

General Services Administration

SBIR/STTR

AAFES

Registration Information:

System for Award Management

Help Desk numbers

866-606-8220 toll free

334-206-7828 international

North American Industry Classification System

Dun & Bradstreet

Procurement Integrated Enterprise Environment

General Small Business Information:

Small Business Administration

APEX accelerators

Small Business Development Center

USA Spending Information

SBA Training

EVENTS

CONTACT INFORMATION

Eglin SB office

850-882-2843 - office

850-612-4686 - cell

AFLCMC.SB.EGLIN@us.af.mil

AFMC/SB

SAF SB

www.eglin.af.mil/units/small-business-office

71



LOCATING EGLIN OPPORTUNITIES



www.sam.gov

- **Armament Directorate** (*production/development of weapons systems*)

AFLCMC/EB DODAAcs are FA8656, FA8658, FA8659, FA8672
FA8575, FA8677, FA8678, FA8681 & FA8682

- **Nuclear Weapons Center** (*modernization & sustainment of nuclear systems*)

AFNWC/PZNE-Eglin (FA2103)

- **AFRL Munitions Directorate** (*innovation & new technology for weapons systems*)

AFRL/RWK (FA8651)

- **96th Test Wing** (*Base Operational – construction, support services, & supplies; and Test & Evaluation – range operations*)

AFTC/PZ DODAAcs are FA2823, FA2488, FA2489,
FA2487 & FA2486



EGLIN SB GOALS



SB Goals as of 30 Sep 2024(Final)

Agency	SB Goal / Achieved	SDB Goal / Achieved	WOSB Goal / Achieved	SDVOSB Goal / Achieved	HUBZone Goal / Achieved
AFLCMC (PEO Weapons)	3.37% / 3.86%	0.35% / 0.65%	1.04% / 0.32%	1.08% / 0.74%	0.01% / 0.09%
AFTC Eglin T&E	57.14% / 61.83%	14.29% / 15.24%	11.43% / 15.93%	.10% / .16%	.34% / 0.01%
AFTC Eglin Base Support	83.33% / 84.92%	50.00% / 55.95%	17.22% / 12.52%	12.22% / 14.62%	8.33% / 9.01%
AFTC Eglin Total	63.83% / 66.94%	23.40% / 24.26%	112.91% / 15.17%	3.19% / 2.79%	2.41% / 1.98%
AFNWC PEO	1.8% / 3.96%	0.35% / 1.03%	.20% / 0.51%	0.0% / 0.22%	0.00% / 0.00%
AFRL	50.14% / 46.80%	11.00% / 11.86%	2.53% / 2.71%	8.86% / 7.59%	0.56% / 0.57%



CONTRACT OPPORTUNITIES



- **Base & Technical Support Contracts Listings on Eglin's SBO Website** *(forecasted recurring contracts)*

➤ www.eglin.af.mil/units/small-business-office





Doolittle Institute



<https://doolittleinstitute.org/>





Eglin SB Event Dates



- Nothing until FY2026 is forecasted

□



CONTACT INFORMATION



- **Eglin Small Business Office**

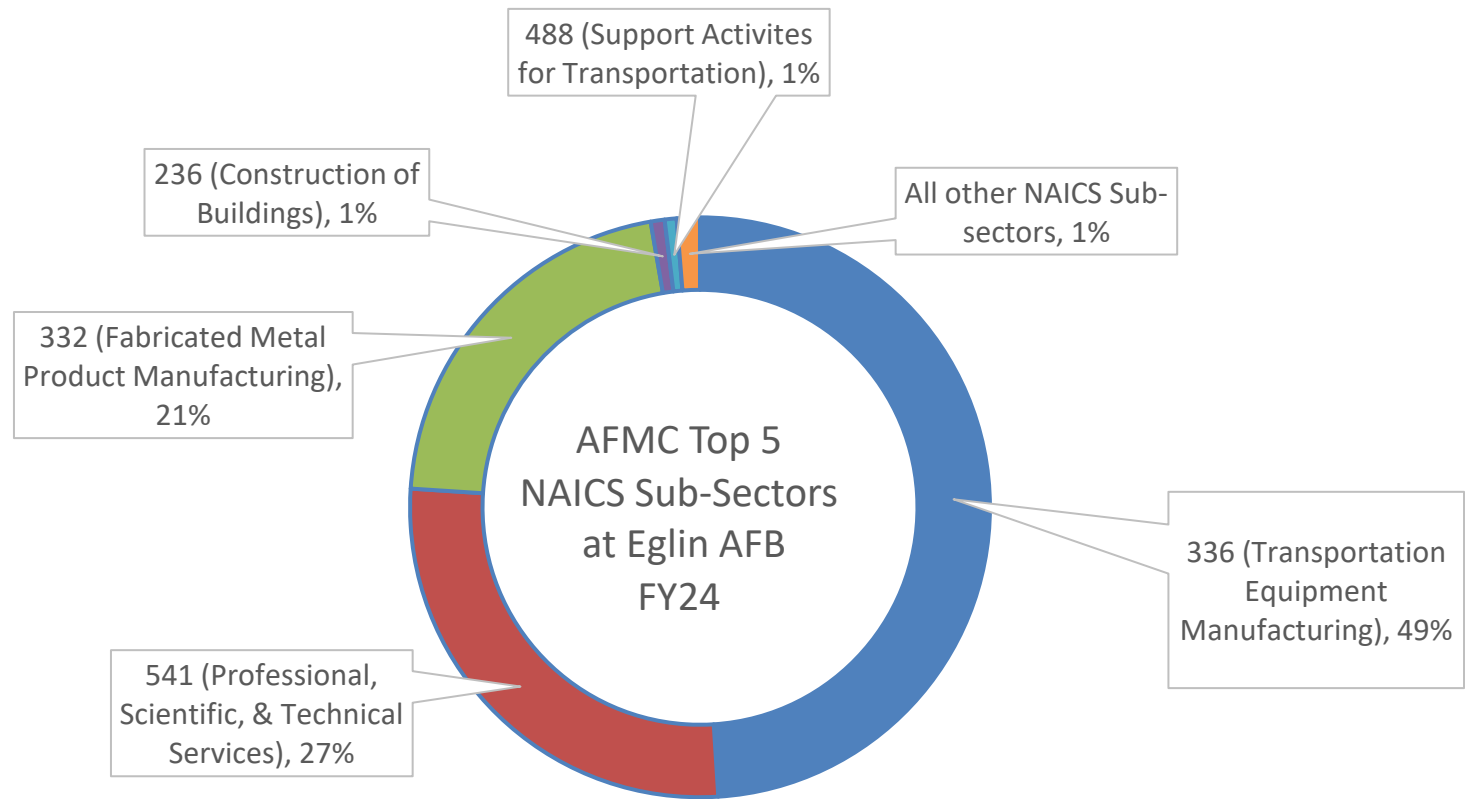
Tina Mercer

Organizational Email

aflcmc.sb.eglin@us.af.mil

- **Organizational Website**

www.eglin.af.mil/units/small-business-office



- | | |
|--|--|
| ■ 336 (Transportation Equipment Manufacturing) | ■ 541 (Professional, Scientific, & Technical Services) |
| ■ 332 (Fabricated Metal Product Manufacturing) | ■ 236 (Construction of Buildings) |
| ■ 488 (Support Activities for Transportation) | ■ All other NAICS Sub-sectors |



QUESTIONS?

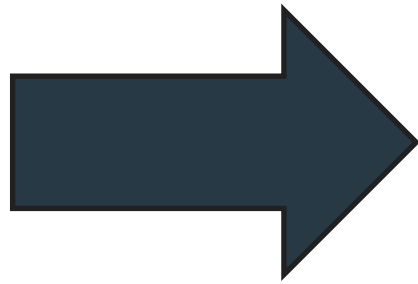


From Concept to Contract: Empowering Innovation Through Florida APEX

Tia Bond, Technology Transfer and Commercialization Specialist
Florida APEX Accelerator

August 20, 2025

History



About the Florida APEX

Get to Know the Florida APEX Accelerator

- State Office located in Pensacola since 1986
- **15 dedicated consultants**, strategically embedded in Florida SBDC regional offices & economic development councils, across **9 regions**
- Over the last 40 years the Florida APEX Accelerator has helped Florida small business clients acquire over **\$9.72 billion in government contract awards** contributing to the creation and retention of **218,172 jobs**.
- Growing partnerships with state government agencies & innovation hubs
- The Florida APEX Accelerator is funded, in part, through a cooperative agreement with the Department of Defense, State of Florida and local partners.

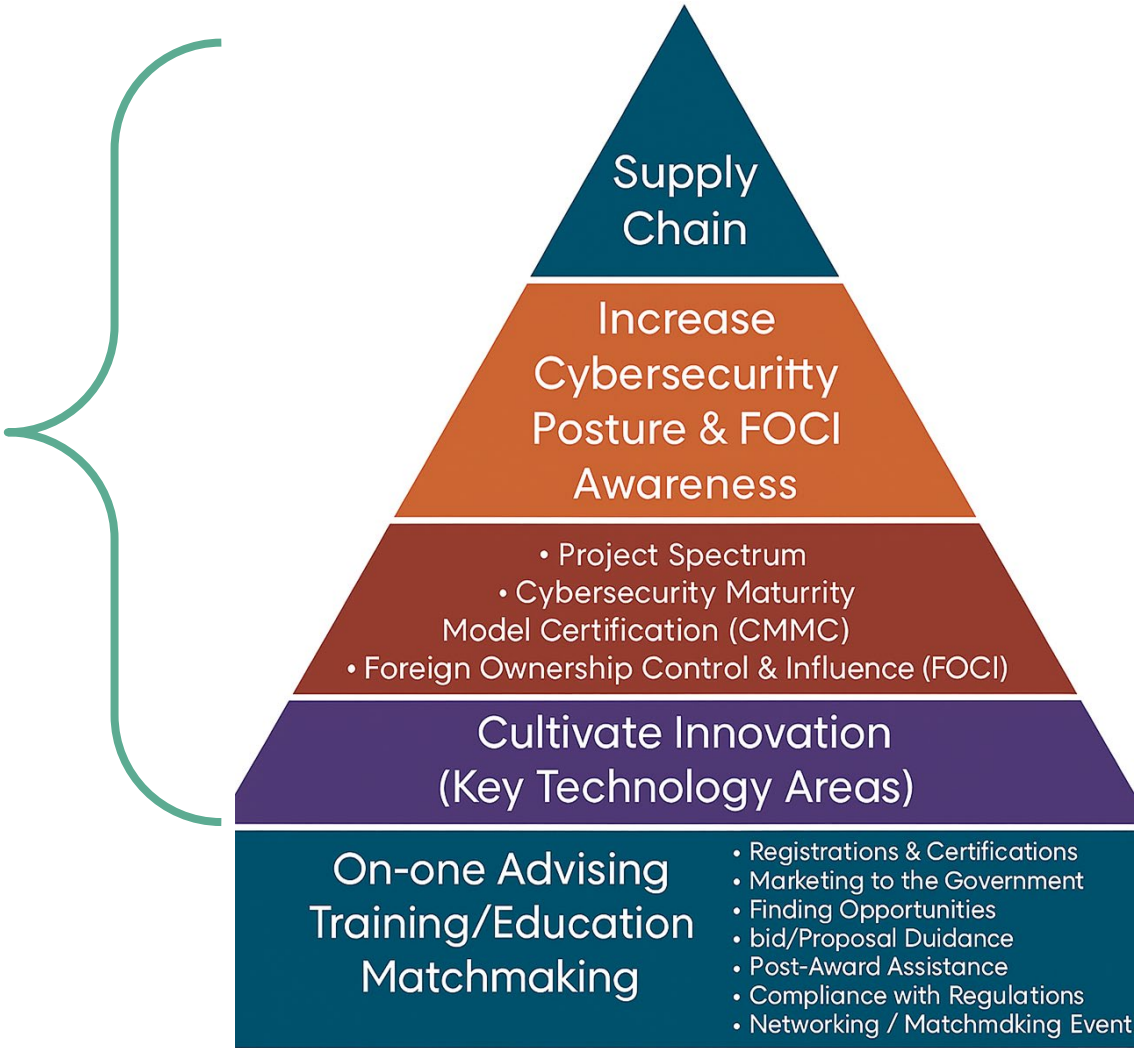


Our Team



Expanded Activities

As of 2023



Services We Offer



Our Expertise



Capital Access	Cash Flow Management	Marketing Assistance	Operational Strategy	Business Continuity	Growth & Expansion
Loan Package Assistance	Financial Analysis	Social Media Strategy	Pivoting	Grant Operations	Sustainable Growth
Business Valuations	Strategy	Branding	Efficiency	Disaster Preparation & Recovery	Funding Growth
Financial Projections	Cash Flow Projections	Website Review	Service Delivery Modeling	Business Continuity Plan	Growth Strategy
Lender Connections		Google Analytics	Business Process Optimization		

Push for Innovation

- SBA OII: Drives technological innovation through federal research and development (R&D) funding
- SBDC: SBDCs connect entrepreneurs with the necessary resources, including funding, mentorship, technology commercialization assistance, and networks, to foster innovation
- APEX 2.0 Goal 5: Facilitate Innovation for the DIB and GIB

Florida APEX Accelerator Economic Impact

Impact Results - 2024



The Florida APEX Accelerator
2024 STATEWIDE ECONOMIC IMPACT

\$596,178,710

contract value awarded to Florida APEX Accelerator clients

5,714

of contracts awarded to Florida APEX Accelerator clients

85.3%

share of contracts that are with the federal government

36.8%

share of contracts that are with the Department of Defense

By the Numbers

\$1.1 B Sales
generated
statewide

\$571.6M GRP
value added
statewide

5,473 Jobs
impacted
statewide



"I mean, it's an invaluable resource that you know, without it, we would've struggled." Ben Minichino, President of Pole Star Defense

Return on Investment

In 2024, the contracts secured by Florida APEX Accelerator clients generated a **\$136M** fiscal impact.

When compared to the **\$1.6M** in direct/matching funds for the program, that is an **\$84** return for every **\$1** invested.



Get to Know our Clients

Our Clients

2,062
clients consulted

23.23%
Prof., Sci., Tech.
Services

15.62%
Construction

8.10%
Manufacturing

7.32%
Transportation and
Logistics

7.32%
Wholesale Trade

8,494
consulting hours

116
training events


3,880
attendees

33
Service Disabled
Veteran Owned
Designations

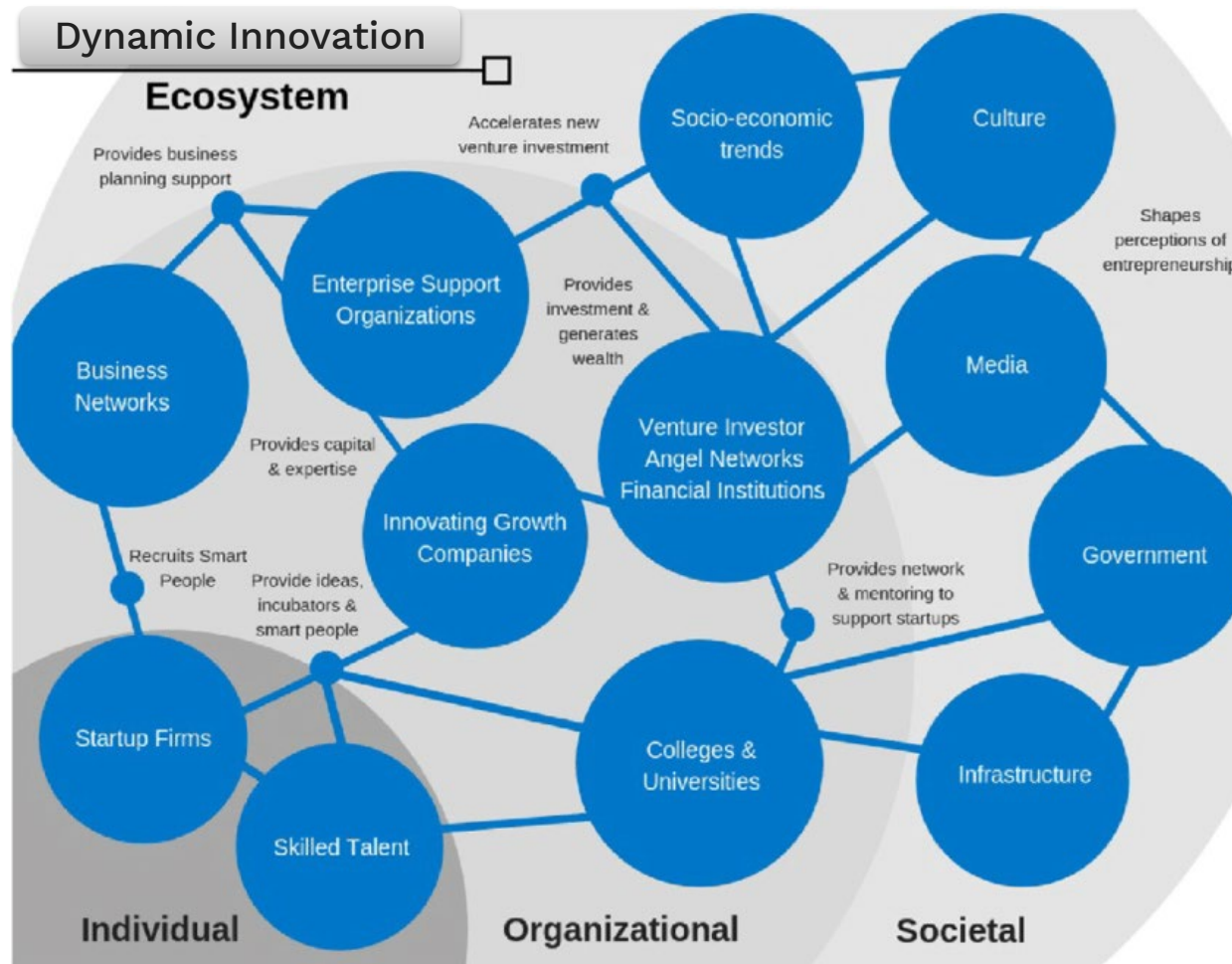
25
Women Owned
Designations

15
HUBZone
Designations

Supporting Florida's Innovation Ecosystem

The background of the slide is composed of three distinct geometric sections. The top section is a solid dark blue-grey color. The bottom-left section is a solid teal color, separated from the top by a diagonal line. The bottom-right section is white, separated from the top by a diagonal line and from the teal section by another diagonal line.

Innovation Ecosystem



https://www.researchgate.net/figure/The-inclusive-innovation-ecosystem-model_fig1_339380898

#Goals

Let's Do This!

According to Florida Chamber of Commerce's *Florida 2030 Blueprint* -

- top three state for technology jobs (4th as of 2022)
- top three state for venture capital investments (7th as of 2022)
- top three state for research and development funding (39th as of 2022)

Growing Partnerships



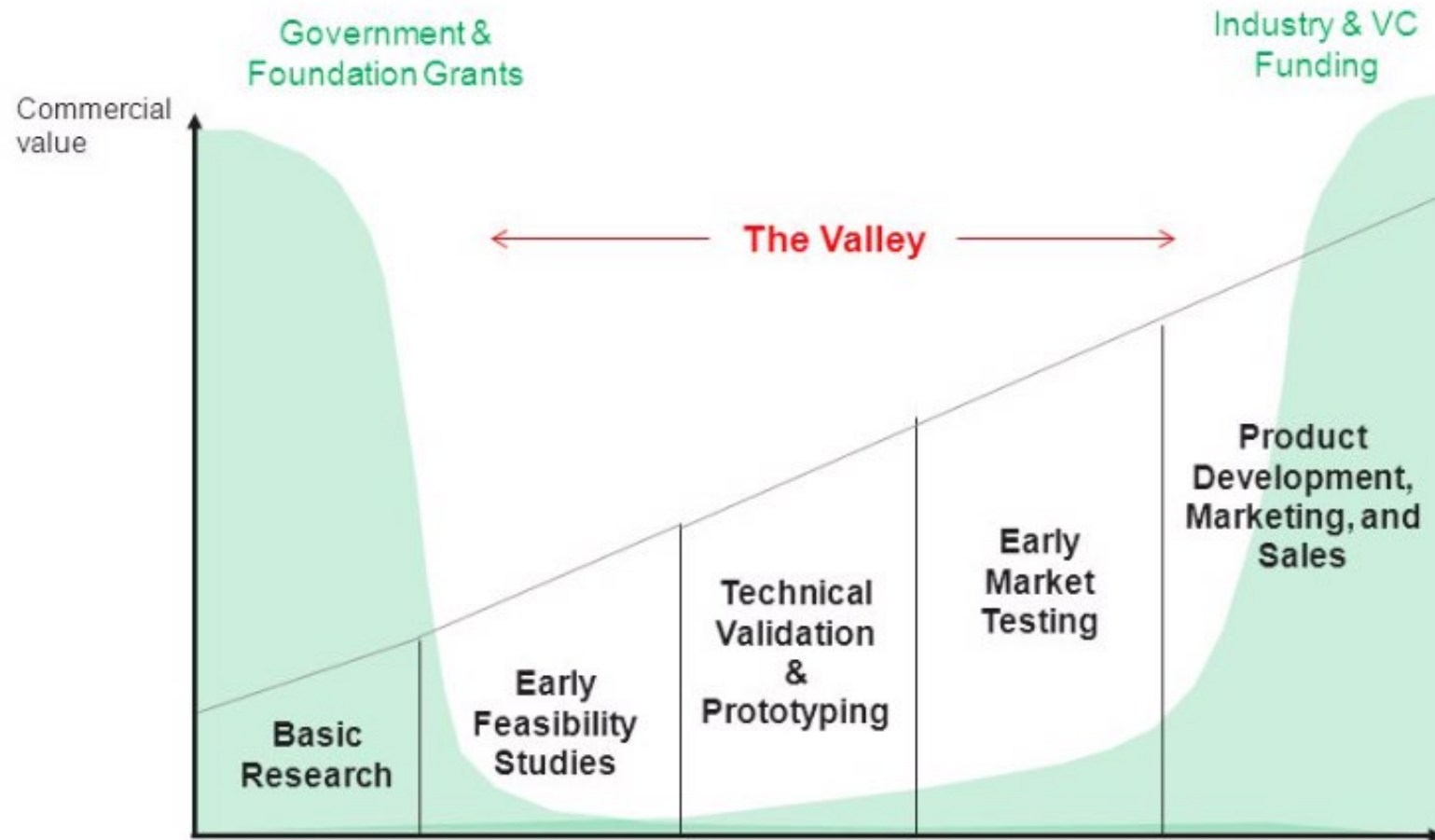
How to leverage Florida APEX Accelerator for innovation support

Advancing SB Innovation in Florida



- TTCS role at the SBDC/APEX State Office
 - Supporting Network Consultants
 - Assisting Government-led Innovation Program (GIP) clients
 - SBIR/STTR application support
 - Product validation & market research
 - Connections
 - Offering GIP training/instructions
 - Building relationships with partners & institutions throughout the State
 - Information repository and distro
 - Keeping technology development, commercialization, and funding top of mind

Valley of Death



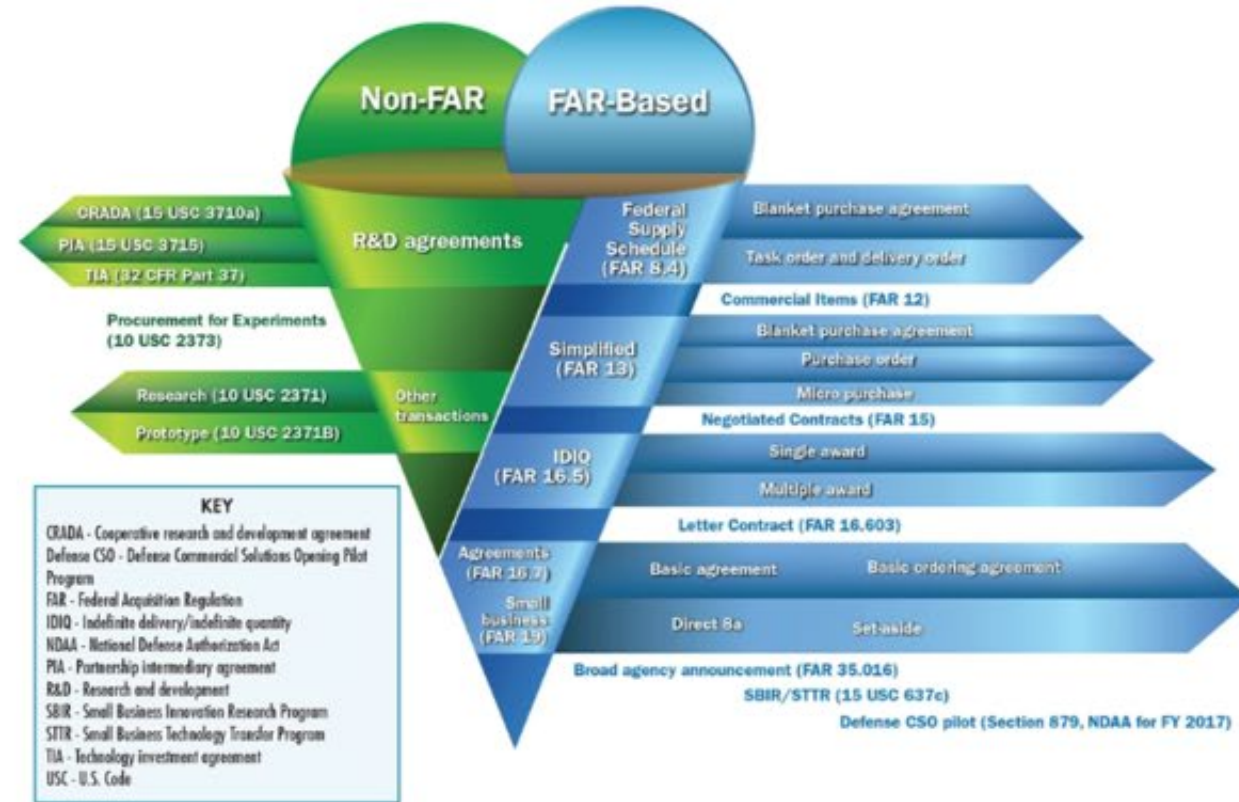
<https://www.the-waves.org/2020/08/06/ai-startups-and-vc-funding-death-valley-to-avoid/>

Defense Innovation Funding Mechanisms

- SBIR/STTR (Phase I, II, III)
- Broad Agency Announcements (BAA)
- Notice of Funding Opportunities (NOFO)
- Commercial Solutions Openings (CSO)
- Other Transaction Authorities (OTA)
- Partnership Intermediary Agreement (PIA)

OPPORTUNITIES

- Agencies with Government Partnerships & Accelerator Programs
- Challenges, Pitch Competitions, Assessment Events, Collaboration Events



U.S. Army Acquisition Support Center

* March 2025
SECDEF Memo

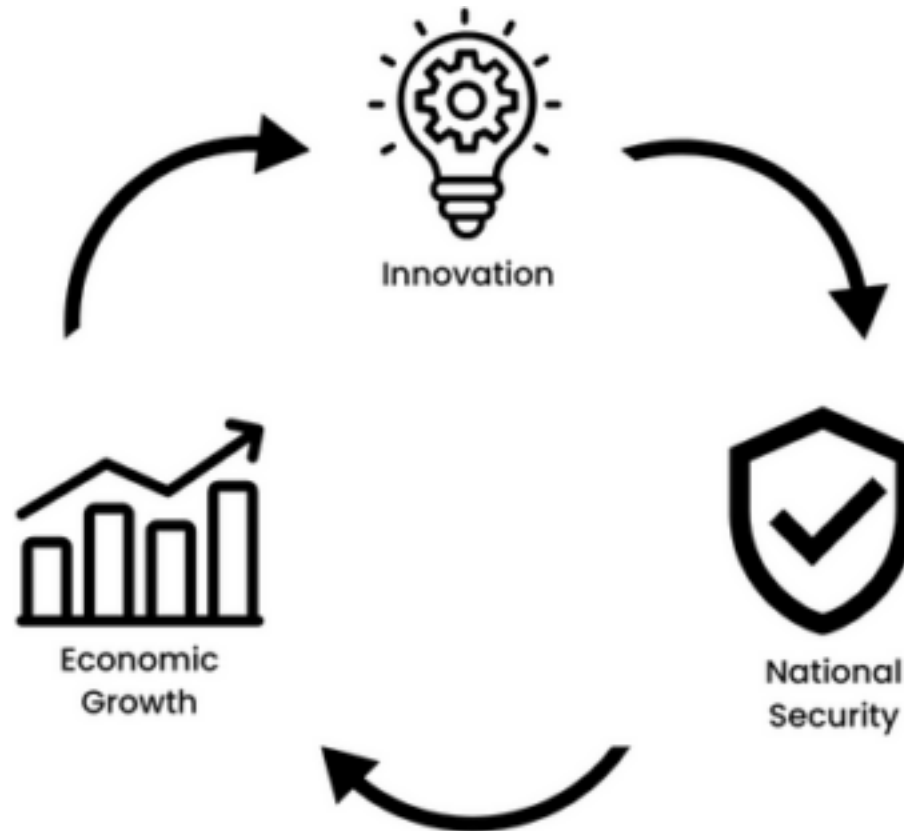
T2/Commercialization

“This concept of innovative public-private partnership where the taxpayer wins, the government wins, and the private sector wins is a no-lose.” - Tom Cellucci, first Chief Commercialization Officer in an executive agency (US Department of Homeland Security)

- University/Government IP → Commercial use case
- Small business technology development and commercialization → Economic Impact

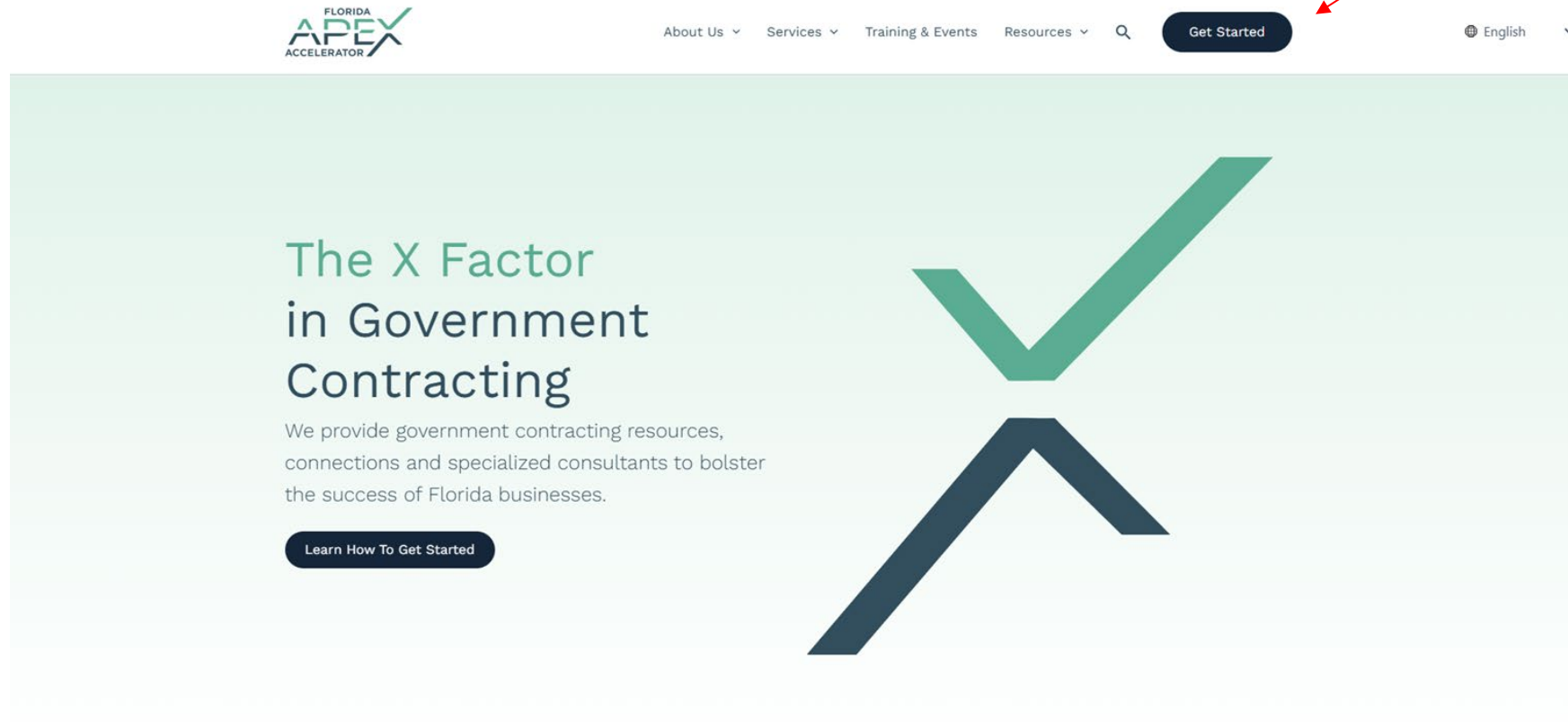


Dual-use Technology



Website

Request for
consultation



<https://www.flapex.org/>

How we work together

- Government contracting guidance with FL APEX Accelerator consultants to posture business for DIB/GIB readiness
- In parallel, co-consult with FL APEX innovation clients
 - Research for information and opportunities
 - Proposal/white paper/pitch deck reviews
 - Knowledge exchange
 - Making connections

Q&A



Questions? Let's talk.

Tia Bond
850.898.3482 | tbond@uwf.edu

FLAPEX.org



This APEX Accelerator is funded in part through a cooperative agreement with the Department of Defense

INTERACTIVE AUDIENCE Q&A

Your Questions, Your Insights

- ☐ In-Person: Please raise your hand for a microphone
- ☐ Virtual: Submit questions in the Q&A panel
(view, upvote, and comment on others)



This is your chance to ask, explore, and connect.

Thank you for attending Doolittle Institute's

INNOVATE WITH AFRL

An Air Force Research Laboratory Innovation Institute

A DEFENSEWERX Innovation Hub