

# ***Rapid Innovation Fund (RIF) 101***



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# Agenda



- **Background / General RIF Information**
- **Participating in the RIF Broad Agency Announcement (BAA)**
- **Project Examples**
- **Points of Contact / References**



# RIF: Background / General RIF Information



# Background

- Established as the Rapid Innovation Program (RIP) in Section 1073 of the Fiscal Year 2011 National Defense Authorization Act (NDAA)
  - A competitive, merit-based program
  - Accelerate fielding of innovative technologies into military systems
- Re-designated as the Rapid Innovation Fund (RIF) within the Department of Defense (DoD)
- Made a permanent program in 2017 NDAA

***Bottom Line Goal: Transition Small Business Technologies into Defense Acquisition Programs***



# Key Requirements



## ***Proposals or Projects:***

- **Satisfy an operational or national security need**
  - Accelerate or enhance military capability
  - In support of major defense acquisition program
- **Stimulate innovative technologies**
- **Reduce acquisition / lifecycle costs**
- **Address technical risk**
- **Improve timeliness & thoroughness of test & evaluation outcomes**
- **Can be completed within 24 months of award**
- **Cost is not more than \$3 million**

***Selection Preference to Small Business Proposals***



# RIF Implementation

- ***Competitive, Merit-Based Two-Step Process***

- ***Step 1:***

- Issue Broad Agency Announcement (BAA) with DoD component requirements
- Industry Response: 3-page White Paper + Quad Chart
- Evaluations are “Go” or “No Go”

- ***Step 2:***

- Highest rated “Go” offerors invited to submit full proposals
  - Further competition – invite for proposal DOES NOT guarantee an award
- Highest-rated proposals lead to award

- ***Public Notice:***

- Federal Business Opportunities: [www.FedBizOpps.gov](http://www.FedBizOpps.gov)
- Research & Engineering Defense Innovation Marketplace: <http://defenseinnovationmarketplace.mil/RIF.html>



# Key Responsibilities & Roles

## OSD-Level (R&E / OSBP)

- **Issue / Publish:**
  - Annual Implementation Guidelines
  - Acquisition Plan
  - Source Selection Milestones
    - Detailed Review Process w/ Defense Agencies / CCMDs
  - BAA
  - Communication Guidelines
  - White Paper (WP) Notifications to Offerors
- **Track Project Results**
  - Annual IPRs
- **Issue Funds & Monitor Financial Execution**

## Component-Level

- **Execute Allocated Funds**
  - Supplement OSD Guidelines (as needed)
- **Provide BAA Requirements**
  - Address Offeror Technical Questions
- **Establish Source Selection Teams**
  - Evaluate WPs & Proposals
  - Make Contract Awards
  - Monitor & Report Technical Progress
- **Request Funds & Report Status –**
  - Financial Execution
  - Report Results of Project IPRs / End of Project Results



# RIF Demand FY 2011 – 2016



## Summary Data:

- Over \$1.4B Invested (FY11-16)
- 14 Defense Component Participants (FY11-16 average)
- 14,853 White Papers Submitted & Evaluated (FY11-16)
- 957 Full Proposals Submitted & Evaluated (FY11-15)
- 553 Contract Awards (FY11-15)

- **486 awards to Small Businesses**
  - 88% of all awards
- **309 awards to current or prior Small Business Innovative Research (SBIR) participants**
  - 56% of all awards

	FY11	FY12	FY13	FY14	FY15	FY16 (Act. or Est.)
Appropriated	\$439M	\$200M	\$250M	\$175M	\$225M	\$250M
Available	\$432M	\$187M	\$225M	\$175M	\$225M	\$250M
DoD Participants	7	10	16	19	17	17
White Papers (WPs)	3,626	2,405	2,763	2,291	1,955	1,813 *
Full Proposals	264	124	234	149	186	TBD
Awards	175	86	104	85	103	TBD
- Small Biz	93%	90%	85%	86%	84%	
- SBIR (Current / Prior)	54%	60%	63%	65%	52%	
Avg. Award (\$M)	2.2	2.1	2.1	2.1	2.2	TBD

\* WPs Submitted to Requirements for: Army (442), Navy (611), Air Force (428) & Defense Agencies (332)





# Participating in the RIF BAA



# FY 2016: BAA Participation

## 246 Requirements from 17 Defense Activities

### Spanning Over 50 Program Offices



#### DEPARTMENT OF THE ARMY

##### • Acquisition Program Offices

- Ammunition
- Aviation
- Soldier / Soldier Systems
- Command, Control, Communications – Tactical
- Intelligence, Electronic Warfare and Sensors
- Combat Support / Combat Support Systems
- Missiles & Space Systems
- Simulation, Training & Instrumentation

##### • Research & Development Centers / Other Activities

- Aviation and Missile Research Development & Engineering Center (AMRDEC)
- Armament Research, Development & Engineering Center (ARDEC)
- Army Research Lab (ARL)
- Communications-Electronics Research, Development & Engineering Center (CERDEC)
- Edgewood Chemical Biological Center (ECBC)
- Natick Soldier Research, Development & Engineering Center (NSRDEC)
- Tank Automotive Research, Development & Engineering Center (TARDEC)
- Defense Forensics & Biometrics Agency (DFBA)
- Corps of Engineers (COE)

#### DEPARTMENT OF THE AIR FORCE

##### • Acquisition Program Offices

- Battle Management
- Business Enterprise Systems
- Command, Control, Communications, Integration & Network
- Fighter / Bomber
- Joint Strike Fighter
- Space
- Strategic Systems
- Weapons
- Intelligence, Surveillance Reconnaissance & Special Operation Forces

##### • Other Activities

- Air Force Life Cycle Management Center
- Air Force Test Center
- Air Force Nuclear Weapons Center Commander
- Air Force Propulsion Directorate
- Air Force Sustainment Center

#### DEPARTMENT OF THE NAVY

##### • Acquisition Program Offices

- Naval Air Systems Cmd. (NAVAIR)
  - F-35 Joint Strike Fighter
  - Tactical Aircraft Programs
  - Air Anti-Submarine Warfare
  - Assault & Special Mission Programs
  - Unmanned Aviation & Strikae Weapons
- Naval Sea Systems Cmd. (NAVSEA)
  - Aircraft Carriers
  - Integrated Warfare Systems
  - Littoral Combat Ship
  - Ships / Submarines
  - Special Warfare
- Space & Naval Warfare Systems Cmd. (SPAWAR)
  - Cmd., Control, Comms. Computers & Intel.
  - Enterprise & Integrated Systems
  - Space Systems

##### – Marine Corp (MARCOR)

- Ammunition
- Armor & Fire Support Sys.
- Chemical & Biological Sys.
- Combat Support Systems
- Enterprise Info. Systems
- Infantry Weapons Systems
- Info. Systems & Infrastructure
- Light Armored Vehicles
- Marine Air-Ground Task Force Cmd., Control & Comms.
- Marine Intelligence
- Land Systems
- Training Systems

Other Activities: Warfare Centers, Naval Supply Systems Cmd., Navy Strategic Systems Programs, Naval Facilities Engineering Command, Bureau of Medicine & Surgery

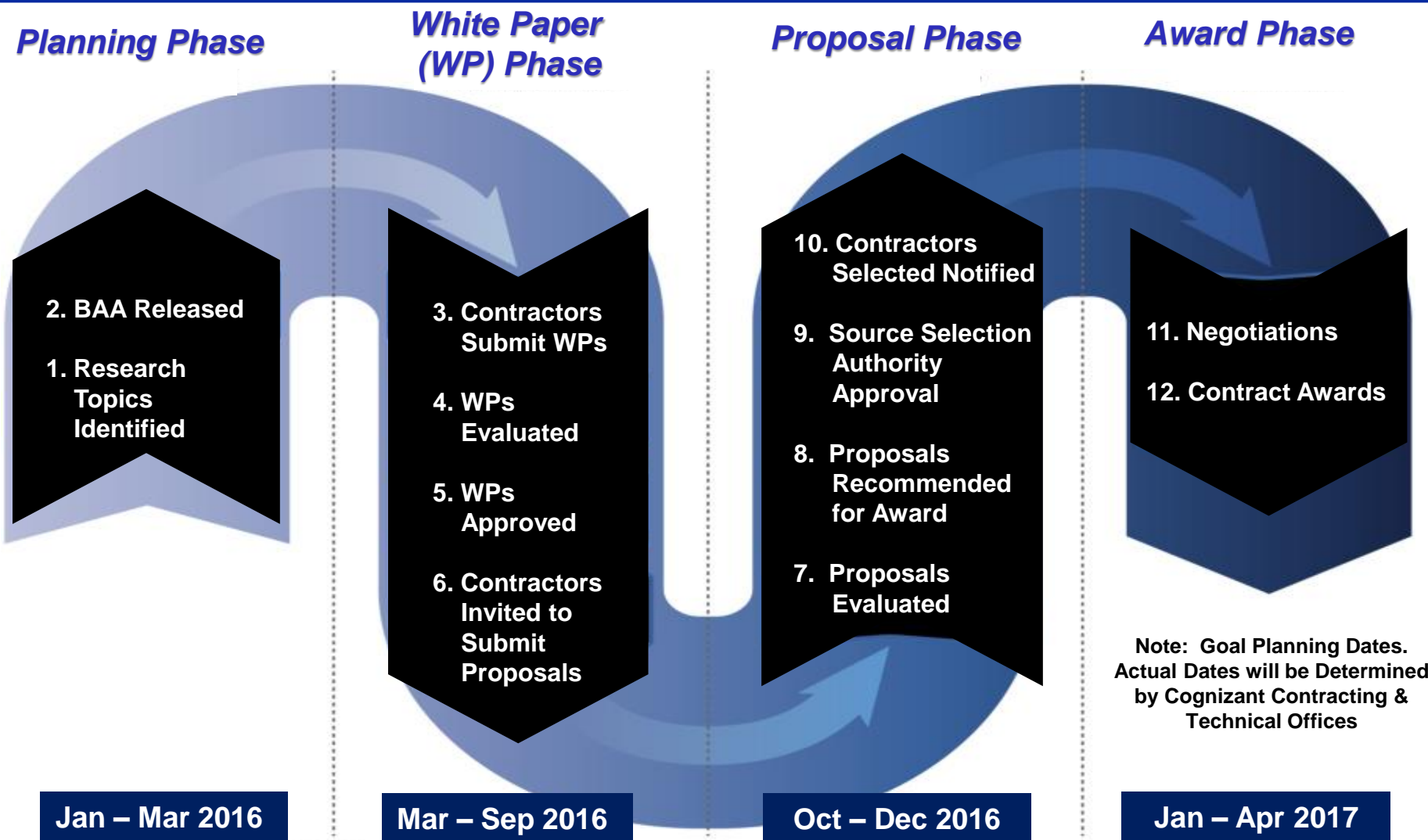
#### DEFENSE AGENCIES, OSD ACTIVITIES & COMBATANT COMMANDS

- Chief Information Officer / Defense Information Systems Agency (CIO / DISA)
- OASD(R&E): EC&P, Research, Joint Improvised-Threat Defeat Agency (JIDA)
- Defense Threat Reduction Agency (DTRA)
- Missile Defense Agency (MDA)
- Defense Logistics Agency (DLA)
- National Reconnaissance Office (NRO)
- Combating Terrorism Technical Support Office (CTTSO)
- Joint S&T Office for Chemical and Biological Defense (JSTO / CBD)
- U.S. Africa Command
- U.S. Northern Command / North American Aerospace Defense Command
- U.S. Pacific Command
- U.S. Southern Command
- U.S. Special Operations Command
- U.S. Transportation Command



# FY16-17 Source Selection Process

## Key Steps & Timeline



Source: GAO analysis of DOD data. | GAO-15-421



# RIF FY 2017 – 2017 Milestones



Date(s)		Action
2017	3 March	• Collect and Finalize Requirements COMPLETE
	17 March	• Release BAA in FBO.gov COMPLETE
	19 May	• BAA Closes: White Papers (WPs) due from offerors
	NLT 1 September*	• Components complete WP evaluations • Components are complete initial priorities and ranking
	NLT 13 October*	• Components notify all offerors of WP disposition • Invite full proposals
	NLT 17 November*	• Full proposals due from offerors • Components start full proposal review
2018	NLT 3 January*	• Components complete full proposal evaluations • Negotiations, begin contract awards
	January – April*	• Goal for completing contract awards
	NLT 1 May*	• FY17-funded RIF contract awards complete



# RIF: Project Examples

See also RIF AWARDS/PROJECT DESCRIPTIONS at  
<http://www.defenseinnovationmarketplace.mil/rif.html>



# RIF – Project Examples (1 of 2)

## Enabling Technology Insertion & Refresh in Acquisition



- **Ongoing Operational Needs:**

- Traumatic Brain Injury (Army & Brainscope): Fielded a pocket-side electroencephalogram used to provide forward-based medical diagnosis of neurological injury compatible with X-ray computed tomography



BrainScopeAhead  
200 Received FDA  
Clearance

- Checkpoint Explosive Detection System (DTRA & Alakai Defense Systems): Demonstrated a smaller, reduced-weight checkpoint detection system that increases stand-off range for detecting explosives, providing safer checkpoint operations



CPEDS-  
Lite  
System

- **U.S. Manufacturing:**

- Plasma Electrolytic Oxidation Nano-Ceramic Coating (Air Force & IBC Materials): Demonstrated an improved nano-ceramic coating based on additive manufacturing, increasing the life and wear of missile launcher rails for F-15, F-16, and F/A-18 aircraft, reducing maintenance and downtime costs



Improved coating on  
missile rail surfaces:  
10x improved wear



AMRAAM Missile  
Launcher Rail





# RIF – Project Examples (2 of 2)

## Enabling Technology Insertion & Refresh in Acquisition



- **Logistics Supportability:**

- **Integrally Bladed Rotor Repair (Air Force & Blade Diagnostics):** Production-ready machine that evaluates the vibratory response of integrally bladed rotors, enabling faster damage tolerance assessment and previously classified unserviceable parts to be returned to service for F-119 engine overhaul
- **Wireless Vibration Recorder (Navy & Mide Techology):** A handheld, compact wireless vibration diagnostic tool that records up to four hours of aircraft vibration data, enabling faster maintenance in diagnosing aircraft component failure, shortening downtime and reducing flight costs



Production system to be delivered to Tinker AFB

Out of tolerance damage



- Dimensions: 3 in. x 1.2 in. x 0.6 in.
- Mass: 40 grams

- **Commercial Technology for Defense Operations:**

- **Extended Frequency Range Wide Band RF Distribution System (Navy & Out of the Fog Research):** Uses on a shipboard mast-mounted communications component that filters, blanks interfering signals so that very low level power signals of interest can be received
  - Manufactured by a Silicon Valley company and fielded an on Ships Signal Exploitation Equipment (SSEE) antenna

SSEE High Gain Antenna



Radio Frequency Control Unit (RFCU)



# **RIF: Points of Contact & Additional References**



# Key DoD POCs

<http://defenseinnovationmarketplace.mil/RIF.html>

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# Additional Info / Resources

[www.DefenseInnovationMarketplace.mil](http://www.DefenseInnovationMarketplace.mil)



## Defense Innovation Marketplace

### Business Opportunities

- Small Business Resources
- Acquisition Resources
- Technology Interchange Meetings
- Army, Navy, Air Force & Other DoD S&T Information

### Rapid Innovation Fund (RIF) Program

- Current BAA / FBO Link
- Current Year Milestones
- RIF Component Leads / POCs
- Overview Brief (RIF 101)
- RIF Awards
- Transition Guidelines
- Congressional Statute



# **Additional Info / Resources**

## **DoD Office of Small Business Programs**



## ***Doing Business with the Department of Defense***

***<http://business.defense.gov/Small-Business/DoD-Small-Business-Offices/>***

- **“How-To” work with Defense**
- **Guides on Marketing to Defense**
- **Programs for Small Business**
  - **SBIR / STTR**
  - **Mentor Protégé**
  - **Indian Incentive Program**
- **Contracting with Defense**
- **Small Business Training**
- **Conferences & Workshops**
- **Frequently Asked Questions**
- **Links to Army, Navy, Air Force & Other Defense Agency Programs**