

Rapid Innovation Fund (RIF)



Program Overview

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RIF Topics



- **Background / General RIF Information**
- **Participating in the RIF Broad Agency Announcement (BAA)**
- **Project Examples**
- **Industry & General Accountability Office (GAO) Feedback**
- **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
- **Reauthorized in the FY 2016 NDAA until Sep 30, 2023**
- **Re-designated as the Rapid Innovation Fund (RIF) within the Department of Defense (DoD)**

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
- Research & Engineering Defense Innovation Marketplace: <http://defenseinnovationmarketplace.mil/RIF.html>



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)
- 771 Proposals Submitted & Evaluated (FY11-15)
- 450 Contract Awards (FY11-14)

- *401 awards to Small Businesses*
 - *89% of all awards*
- *266 awards to current or prior Small Business Innovative Research (SBIR) participants*
 - *59% of all awards*

	FY11	FY12	FY13	FY14	FY15 (Act. or Est.)	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 *
Proposals	264	124	234	149	186	TBD
Awards	175	86	104	85	~ 95-105	
- Small Biz	93%	90%	85%	86%	TBD	TBD
- SBIR (Current / Prior)	54%	60%	63%	65%	TBD	
Avg. Award (\$M)	2.2	2.1	2.1	2.1	TBD	TBD

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



Participating in the RIF BAA



FY 2016 Broad Agency Announcement (BAA)



- Issued on Federal Business Opportunities (FedBizOpps)
 - <https://www.fbo.gov/spg/ODA/WHS/REF/HQ0034-16-BAA-RIF-0001A/listing.html>
 - Solicitation Number:
 - HQ0034-16-BAA-RIF-0001A - - NAICS Codes 541711 – R&D in Biotechnology
 - HQ0034-16-BAA-RIF-0001B - - NAICS Code 541712 – R&D in the Physical, Engineering & Life Sciences
- Opened March 1, 2016 / Closed May 3, 2016
- Contains:
 - Key dates / milestones for submission
 - Instructions for submission
 - Notification of 2-step process: White Papers & Full Proposals
 - Source Selection Criteria: White Papers & Full Proposals
 - Requirements for industry / offeror responses
 - 264 Requirements: Army (54), Navy (50), Air Force (98) & Defense Agencies (44)
 - Each requirement provides DoD Technical Point of Contact (PoC)

BAA is Closed: But .. Good Source Document / Reference for Industry Review



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



Elements of a Good Proposal (1 of 3)

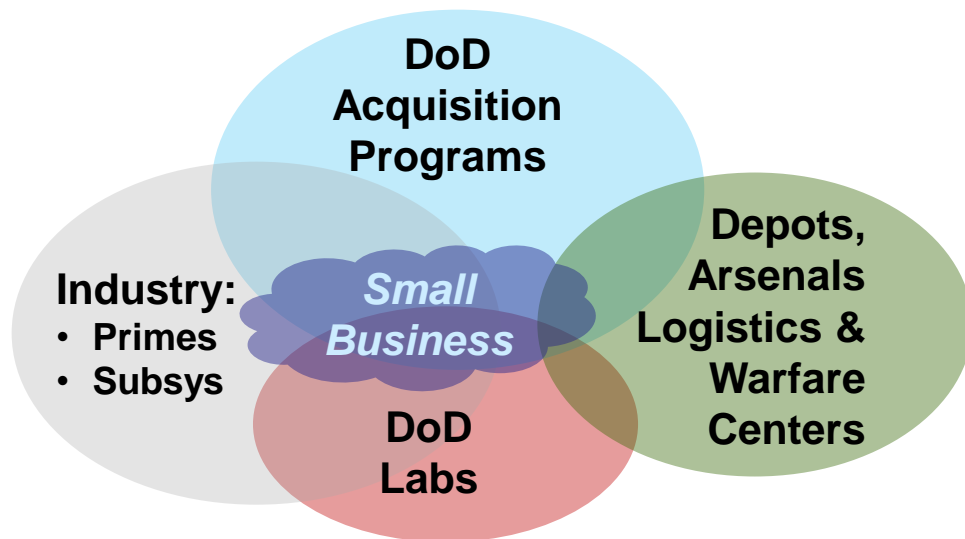


- Responds to a BAA requirement
- Relationship in place with key customers, or otherwise have an ability to reach-out and establish links -
 - DoD acquisition buyers / Program Executive Offices or Program Managers, depots, logistics or warfare centers
 - DoD prime or subsystem contractor who integrates RIF technology
 - DoD laboratory / technology provider

Selection Preference: Small Business Proposals

Source Selection Criteria:

1. Contribution to the Requirement
2. Technical Approach / Qualifications
3. Schedule
4. Cost





Elements of a Good Proposal (2 of 3)



Technology Readiness Level (TRL)

6 System/subsystem model or prototype demonstration in a relevant environment

7 System prototype demonstration in an operational environment

8 Actual system completed and qualified through test and demonstration

9 Actual system proven through successful mission operations

• Maturity Goal: TRL 6 – 9

• Low TRL accepted ONLY if:

- Breakthrough capability or operational game-changer
- Cost neutral to the acquisition program
- Accommodated within program schedule

4 Component and/or breadboard validation in a laboratory environment

5 Component and/or breadboard validation in a relevant environment

Award By Exception

Required for Majority of Awards: Facilitates Transition

Technology Readiness Assessment Guidance - - <http://www.acq.osd.mil/ddre/publications/docs/TRA2011.pdf>



Elements of a Good Proposal (3 of 3)



RIF White Paper (WP) Submission

WHAT TO INCLUDE:

- Your technology solution
 - How it addresses the RIF requirement
 - Clear, concise synopsis of approach
 - What's innovative – what sets your technology apart from competition
 - Enough technical specification to get tech evaluators 'comfortable'
- Some key data:
 - Pictures & diagrams
 - Key Government contacts that currently relate to this effort
 - Summary of teaming arrangements
 - Any prior testing & summary results

WHAT NOT TO INCLUDE:

- Technology looking for a solution (e.g., unrelated to the requirement)
- Generic company overview (org chart)
- History of the problem
- Testimonials from other industry or lab researchers
- Detailed diatribe of charts and formulas stating why your technology is the best

When BAA opens, read it, then input, ask questions & prepare a DRAFT WP soonest

- ***If missing data, update later. DO NOT WAIT UNTIL LAST MINUTE !***
- ***Follow directions / template as provided in the submission portal(s)***



Execution of FY16 Funds: \$250M Milestones (Update: July 2016)



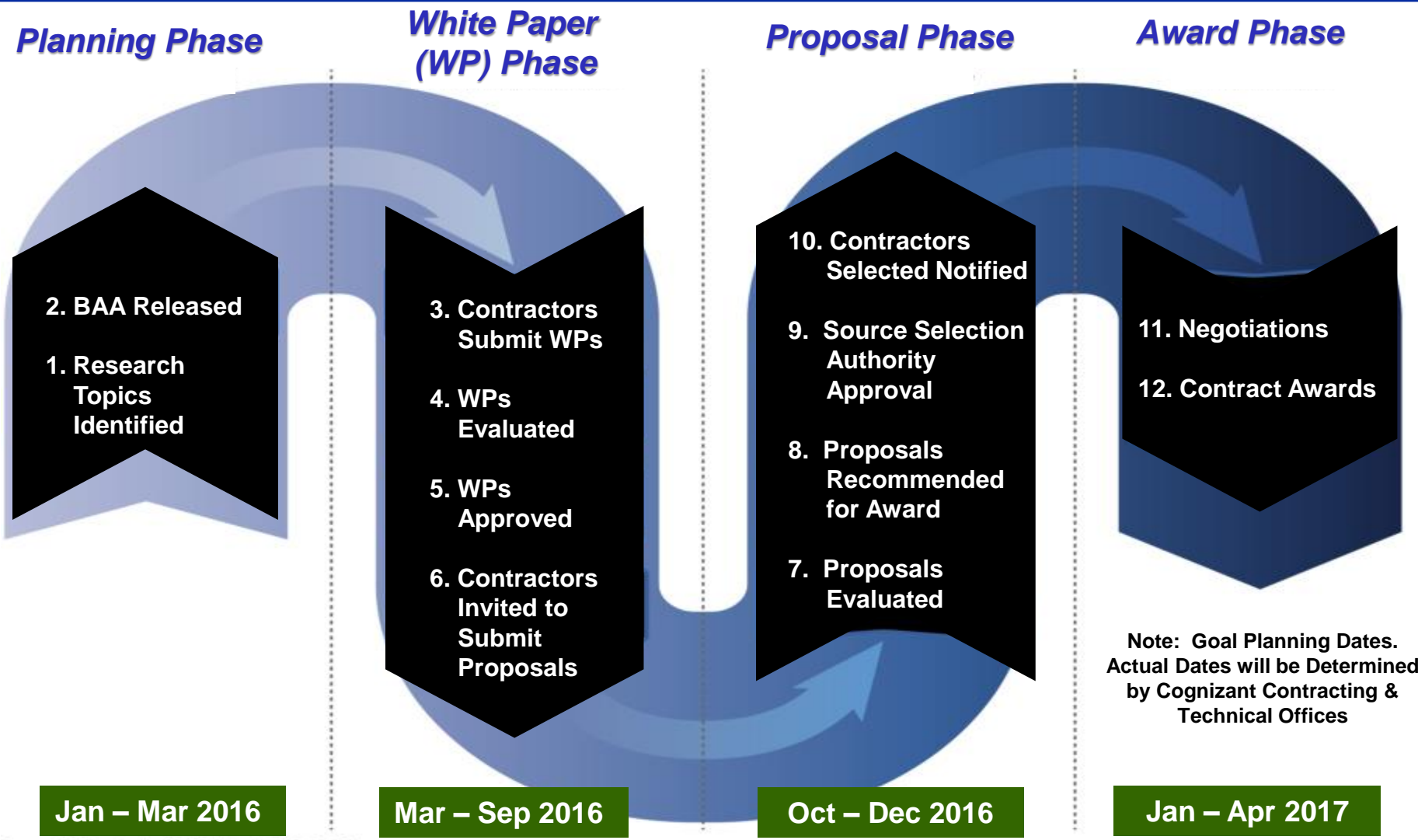
	Target Date	Event / Action	Status	
2016	February 12, 2016	Requirements from Components, prep DRAFT BAA	Complete	Step 1
	March 1, 2016	<i>BAA Released in FedBizOpps - Hot Link Posted at:</i> - https://dodrif.com/ - http://www.defenseinnovationmarketplace.mil/rif.html	Complete	
	May 3, 2016	<i>BAA Closes: White Papers (WPs) due from offerors</i>	Complete	
	NLT Sep 1, 2016 *	<ul style="list-style-type: none"> Components complete WP evaluations Initial priorities and ranking by Components 		Step 2
	NLT Sep 15, 2016 *	WP notifications, invite full proposals		
	NLT Oct 14, 2016 *	<ul style="list-style-type: none"> Full proposals due from offerors Components start full proposal evaluations 		
	NLT Dec 16, 2016 *	Components complete full proposal evaluations		
	NLT Jan 3, 2017 *	Negotiations, start contract awards		
2017	NLT May 1, 2017 *	FY16-funded RIF contract awards complete		

* DoD-Wide RIF Goals: Actual Dates will be Determined by Cognizant DoD Component Contracting & Technical Offices



FY16-17 Source Selection Process

Key Steps & Timeline



Note: Goal Planning Dates. Actual Dates will be Determined by Cognizant Contracting & Technical Offices

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



FY 2017 Broad Agency Announcement (BAA)



- Issuance is contingent on congressional funding
- Recommend offerors review FY16 RIF BAA to:
 - Understand issues associated with participation
 - Nature of technical requirements
 - Prepare for FY17 BAA
 - ✓ To be issued IF funds are appropriated
- Watch the DoD RIF website for additional information & milestones
 - <http://www.defenseinnovationmarketplace.mil/rif.html>
 - Contact RIF POCs if questions or issues



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
- 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



BrainScopeAhead 200 Received FDA Clearance



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

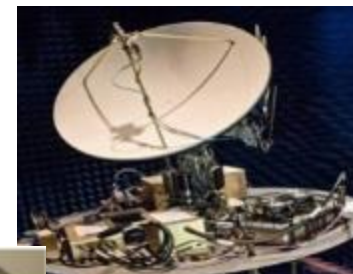


- Dimensions: 3 in. x 1.2 in. x 0.6 in.
- Mass: 40 grams

- **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: Industry & General Accountability Office (GAO) Feedback



RIF – Incentivize Productivity in Industry



- Identify what RIF performers are getting from RIF contracts
- Over 90% of RIF awardees indicate RIF helped their business base **
 - 62% had new employee hires
 - 57% said RIF helped transition their technology
 - 52% benefitted from RIF teaming opportunities
 - 38% saw an increase in market sales
- Over 80% note a program like RIF is vital to transition of small business technologies
- Examples:
 - Helped advanced Phase II SBIR-developed technologies, resulting in a finished product for commercial and government sales
 - Ability to get innovation to the DoD faster
 - Large business customers sometimes submit their smaller, supplier-based technologies to the government as an engineering change
 - Could result in additional cost and lead-time for program insertion

** Based on Surveys by Both the DoD & Small Business Technology Council



Government Accountability Office (GAO) Review



- Initiated by Defense Committees in FY 2014 Senate Bill
 - **Purpose:** Assess extent to which DoD --
 - Has established a competitive, merit-based process to award contracts
 - ✓ **Results:** Process is lengthy, but meets objective
 - Has established practices to manage project execution
 - ✓ **Results:** Services & Defense Agencies are successfully monitoring
 - Is meeting objective of inserting innovative technologies into defense acquisition programs
 - ✓ **Results:** GAO independently assessed 44 projects- 50% transition
 - **Recommendations:**
 - Establish overall RIF transition goal
 - ✓ OSD non-concurred with goal, but agreed we need to measure annually
 - Identify & apply factors that contribute to likelihood of technology transition success more consistently across the program
 - ✓ OSD concurred, 'transition practices' published
- GAO Report Available at <http://www.gao.gov/products/GAO-15-421> (May 2015)
- DoD RIF Transition Practices Available at <http://www.defenseinnovationmarketplace.mil/rif.html>, (Under 'Additional Resources Tab')



RIF: Points of Contact & Additional References

Key DoD POCs

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

Focal Point	Office	Phone	Email
Dan Cundiff	OSD (R&E) EC&P	571-372-6807	thomas.d.cundiff.civ@mail.mil
Alice Williams	OSD (OSBP)	571-372-6309	alice.m.williams101.civ@mail.mil
Rob Saunders	Army (ASA/ALT)	703- 617-0279	robert.m.saunders14.civ@mail.mil
Margaret Marafino	Navy (ONR)	703-696-9774	margaret.marafino@navy.mil
Bill McCluskey	AF (SAF)	571-256-0304	william.j.mccluskey.civ@mail.mil
Patrick Gould	AF (SAF)	571-256-4615	patrick.a.gould.civ@mail.mil



Additional Info / Resources (1 of 3)

www.DefenseInnovationMarketplace.mil



DEFENSE INNOVATION MARKETPLACE

HOME **BUSINESS OPPORTUNITIES** COMMUNITIES OF INTEREST NEWS / EVENTS FAQs

INVENTING THE ARMY OF THE FUTURE
Army releases new S&T video

Your Centralized Resource for IR&D Market Research

GOVERNMENT IR&D Searchers

INDUSTRY IR&D Providers

CONNECTING INDUSTRY AND DoD

The Defense Innovation Marketplace is a communications resource to provide Industry with improved insight into the Research and Engineering investment priorities of the Department of Defense (DoD). The Marketplace contains DoD R&E strategic documents, solicitations, and News/Events to better inform Independent Research and Development (IR&D) planning. The IR&D Secure Portal houses project summaries that provide DoD with visibility into the IR&D efforts submitted.

<p>NEW BUSINESS OPPORTUNITIES</p> <p>Have a solution to a DoD Technology need? Find links to:</p> <ul style="list-style-type: none"> RFIs RFPs Presolicitations 	<p>TECHNOLOGY INTERCHANGE MEETINGS</p> <p>Technology Interchange Meetings (TIMs) allow DoD and Industry/academia to come together around specific R&E technology challenges and focus areas.</p> <ul style="list-style-type: none"> Weapons Technology (Closed) Human Systems (June 22-26) 	<p>STRATEGIC DIRECTION</p> <p>Where is the Department of Defense headed? Gain insight by linking to key DoD and Services Information:</p> <ul style="list-style-type: none"> Strategic Documents
<p>LONG RANGE R&D PROGRAM PLAN</p> <p>Industry, academia, labs (both corporate and government), FFRDCs and the general public were encouraged to share ideas.</p> <ul style="list-style-type: none"> Learn More 	<p>SMALL BUSINESS RESOURCES</p> <p>Small Business Resources can help your growing enterprise:</p> <ul style="list-style-type: none"> Small Business Resources Small Business Innovation Research (SBIR) program Rapid Innovation Fund 	<p>NEWS & EVENTS</p> <p>What DoD news, events, or meetings do you need to know about?</p> <ul style="list-style-type: none"> News Events Weekly S&T Briefing

CONNECTING INDUSTRY AND DoD

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 (2 of 3)

Small Business Administration (SBA)



Doing Business Across the Federal Agencies

<http://www.sba.gov>

- **Starting & Managing a Business**
- **Loan Programs & Grants Assistance**
- **Contracting with the Federal Government**
 - **Contracting Resources for Small Businesses**
 - **Government Contract Field Activities**
 - **Partnership Agreements**
- **Learning Center**
 - **Understanding Your Customer**
 - **Marketing Research**
 - **Legal for Small Businesses**
 - **Patents, Trademarks, Copyrights**
 - **Finding & Attracting Investors**
- **Local Assistance**
 - **SBA Regional & District Offices**
 - **Small Business Development Centers**
 - **Export Assistance Centers**
 - **Procurement Technical Assistance Centers**



Additional Info / Resources (3 of 3)

DoD Small Business Innovative Research



Doing Business with the Department of Defense

<http://www.acq.osd.mil/osbp/sb/index.shtml>

- “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

Talk to an Small Business Program Expert

<http://www.acq.osd.mil/osbp/sbir/contacts/sbir-contacts.shtml>

- 14 Points of Contact Across the Department of Defense