Rapid Innovation Fund (RIF)

Program Overview
December 2017
PE 0604775D8Z

Ellen Purdy

OSD Research & Engineering
Email: Ellen.m.purdy.civ@mail.mil
Phone: 571-372-7545

Ted Bujewski

Office of Small Business Programs (OSBP)
Email: theodore.j.bujewski.civ@mail.mil
Phone: 571-372-6256

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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

- **Re-designated as the Rapid Innovation Fund (RIF) within the Department of Defense (DoD)**

- **Made a Permanent Program in the FY 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**
  - o **Accelerate or enhance military capability**
  - o **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 <u>DOES NOT</u> 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

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RIF Demand
FY 2011 – 2017

Summary Data:

- Over $1.4B Invested (FY11-16)
- 16 Defense Component Participants (FY11-17 average)
- 16,580 White Papers Submitted & Evaluated (FY11-17)
- 1,113 Full Proposals Submitted & Evaluated (FY11-16)
- 685 Contract Awards (FY11-16)

- *603 awards to Small Businesses*
  - *88% of all awards*
- *380 awards to current or prior Small Business Innovative Research (SBIR) participants*
  - *55% of all awards*

	FY11 Actual	FY12 Actual	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Actual
Appropriated	$439M	$200M	$250M	$175M	$225M	$250M	$250M
Available	$432M	$187M	$225M	$175M	$225M	$250M	$250M
DoD Participants	7	10	16	19	17	22	19
BAAs Issued	4	4	4	1	1	1	1
White Papers	3,626	2,405	2,763	2,291	1,955	1,813	1,727
Proposals	264	124	234	149	186	156	TBD
Awards - Small Biz - SBIR	175 93% 54%	86 90% 60%	104 85% 63%	85 86% 65%	103 84% 52%	132 89% 54%	TBD
Avg. Award ($M)	2.2	2.1	2.1	2.1	2.2	1.9	TBD

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Participating in the RIF BAA

FY 2017 Broad Agency Announcement (BAA)

- **Issued on Federal Business Opportunities (FedBizOpps)**
  - **https://www.fbo.gov/spg/ODA/WHS/REF/HQ0034-17-BAA-RIF-0001A/listing.html**
  - **Solicitation Number:**
    - HQ0034-17-BAA-RIF-0001A - - NAICS Codes 541711 – R&D in Biotechnology
    - HQ0034-17-BAA-RIF-0001B - - NAICS Code 541712 – R&D in the Physical, Engineering & Life Sciences
- **Opened March 31, 2017 / Closed May 19, 2017**
- **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**
    - 223 Requirements: Army (43), Navy (44), Air Force (84) & Defense Agencies (52)
    - Each requirement provides DoD Technical Point of Contact (PoC)

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

FY 2017: BAA Participation
221 Requirements from 22 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 Intelligence Agency (DIA)
- Defense Threat Reduction Agency (DTRA)
- Missile Defense Agency (MDA)
- Defense Logistics Agency (DLA)
- National Reconnaissance Office (NRO) & National Geospatial Agency (NGA)
- Combating Terrorism Technical Support Office (CTTSO)
- Joint S&T Office for Chemical and Biological Defense (JSTO / CBD)
- U.S. Africa Command
- U.S. Central 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

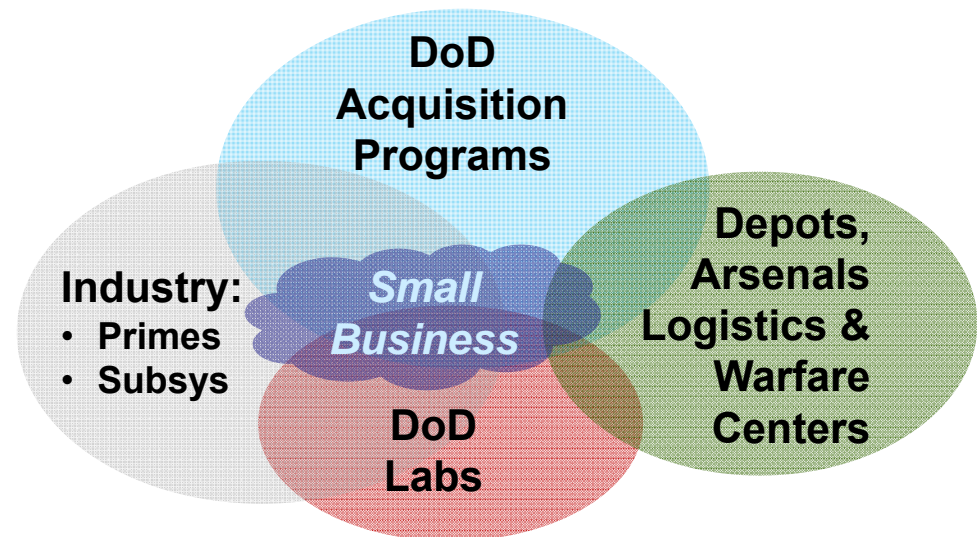**Distribution Statement A. Approved for public release**

- **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**

DoD Acquisition Programs

Industry:
- **Primes**
- **Subsys**

Small Business

DoD Labs

Depots, Arsenals Logistics & Warfare Centers

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

Required for Majority of Awards: Facilitates Transition

- **Maturity Goal: TRL 6 – 9**

- **Low TRL accepted ONLY if:**
  o Breakthrough capability or operational game-changer
  o Cost neutral to the acquisition program
  o 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

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

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., un-related 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 FY17 Funds: $250M
Milestones (Update: Dec 2017)

	Target Date	Event / Action	Status	
2017	*March 31, 2017*	*BAA Released in FedBizOpps - Hot Link Posted at:* *- https://dodrif.com/* *- http://www.defenseinnovationmarketplace.mil/rif.html*	*Complete*	**Step 1**
	May 19, 2017	*BAA Closes: White Papers (WPs) due from offerors*	*Complete*	
	NLT Sep 1, 2017	*Components complete WP evaluations* *Initial priorities and ranking by Components*	*Complete*	
	NLT Sep 15, 2017*	*WP notifications, invite full proposals*	*Complete*	**Step 2**
	NLT Oct 14, 2017*	*Full proposals due from offerors* *Components start full proposal evaluations*	*Complete*	
	NLT Dec 16, 2017 *	Components complete full proposal evaluations		
2018	NLT Jan 3, 2018 *	Negotiations, start contract awards		
	NLT May 1, 2018 *	FY17-funded RIF contract awards complete		

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

FY 2018 Broad Agency Announcement (BAA)

- **Issuance is contingent on congressional funding**

- **Recommend offerors review FY17 RIF BAA to:**
  - **Understand issues associated with participation**
  - **Nature of technical requirements**
  - **Prepare for FY18 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**

FY18 Source Selection Process
Key Steps & Timeline*

Planning Phase

White Paper (WP) Phase

Proposal Phase

Award Phase

2. BAA Released

1. Research Topics Identified

3. Contractors Submit WPs

4. WPs Evaluated

5. WPs Approved

6. Contractors Invited to Submit Proposals

10. Contractors Selected Notified

9. Source Selection Authority Approval

8. Proposals Recommended for Award

7. Proposals Evaluated

11. Negotiations
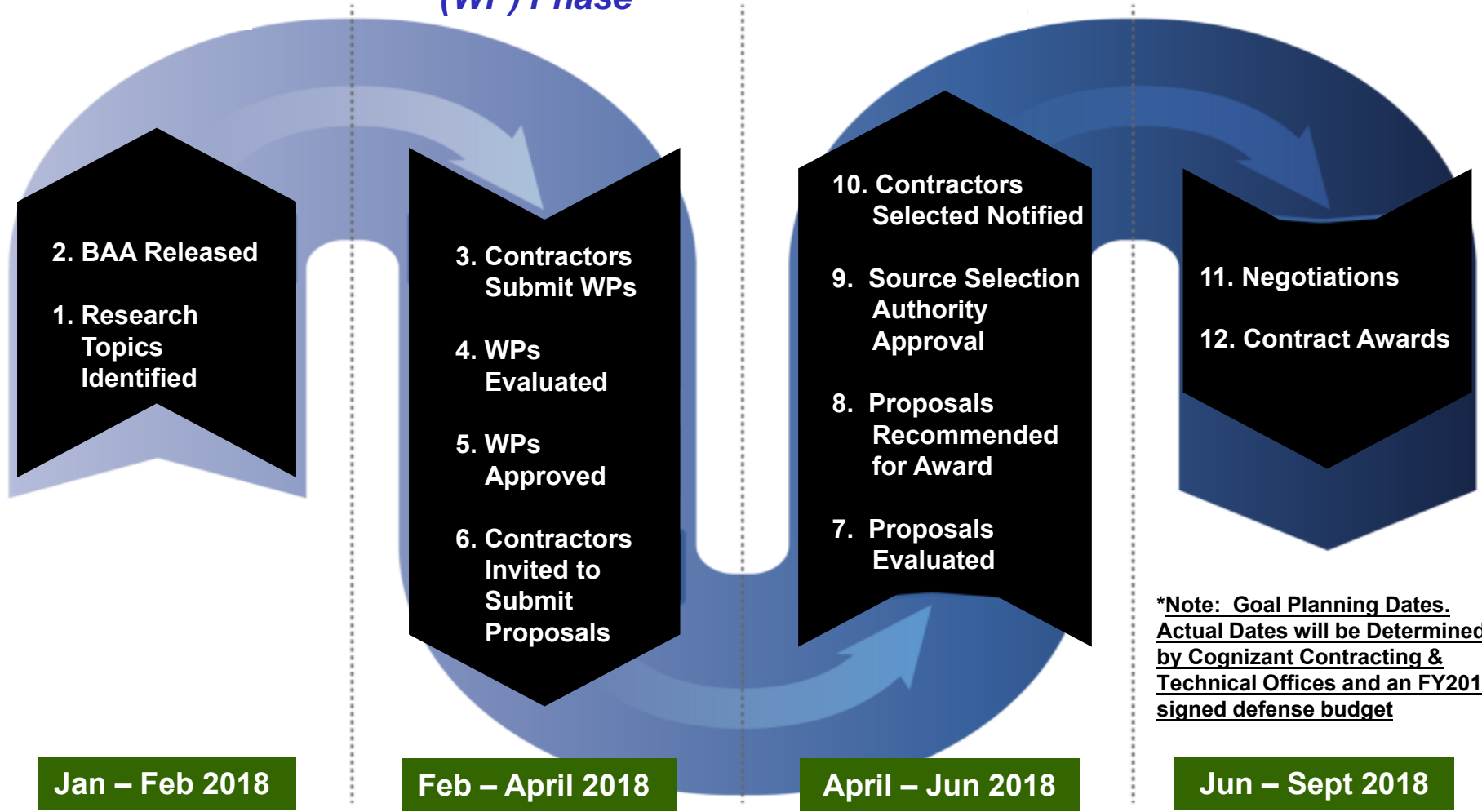
12. Contract Awards

*Note: Goal Planning Dates. Actual Dates will be Determined by Cognizant Contracting & Technical Offices and an FY2018 signed defense budget

Jan – Feb 2018

Feb – April 2018

April – Jun 2018

Jun – Sept 2018

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

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RIF: Project Examples

See also **RIF AWARDS/PROJECT DESCRIPTIONS at**

http://www.defenseinnovationmarketplace.mil/rif.html

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

  AMRAAM Missile Launcher Rail

  Improved coating on missile rail surfaces: 10x improved wear

- **Logistics Supportability:**

  - <u>Integrally Bladed Rotor Repair (Air Force & Blade Diagnostics)</u>: 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

  - <u>Wireless Vibration Recorder (Navy & Mide Techology)</u>: 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

- **Commercial Technology for Defense Operations:**

  - <u>Extended Frequency Range Wide Band RF Distribution System (Navy & Out of the Fog Research)</u>: 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

    o Manufactured by a Silicon Valley company and fielded an on Ships Signal Exploitation Equipment (SSEE) antenna

Out of tolerance damage

Production system to be delivered to Tinker AFB

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

SSEE High Gain Antenna

Radio Frequency Control Unit (RFCU)

RIF: Industry & General Accountability Office (GAO) Feedback

RIF – Incentivize Productivity in Industry

- **Identify <u>what RIF performers</u> 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 --**

  o **Has established a competitive, merit-based process to award contracts**

     ✓ <u>Results</u>: Process is lengthy, but meets objective

  o **Has established practices to manage project execution**

     ✓ <u>Results</u>: Services & Defense Agencies are successfully monitoring

  o **Is meeting objective of inserting innovative technologies into defense acquisition programs**

     ✓ <u>Results</u>: GAO independently assessed 44 projects- 50% transition

- **Recommendations:**

  o **Establish overall RIF transition goal**

     ✓ OSD non-concurred with goal, but agreed we need to measure annually

  o **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')**

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RIF: Points of Contact & Additional References

Key DoD POCs

http://defenseinnovation marketplace.mil/RIF.html

Focal Point	Office	Phone	Email
Ellen Purdy	OSD (R&E) EC&P	571-372-7545	ellen.m.purdy.civ@mail.mil
Ted Bujewski	OSD (OSBP)	571-372-6256	theodore.j.bujewski.civ@mail.mil
Rob Saunders	Army (ASA/ALT)	703- 617-0279	robert.m.saunders14.civ@mail.mil
Scott Bartlett	Navy (ONR)	301-227-2388	scott.bartlett@navy.mil
Bill McCluskey	AF (SAF)	571-256-0304	william.j.mccluskey.civ@mail.mil
Dan Jarrell	AF (SAF)	571-256-0316	daniel.k.jarrell.ctr@mail.mil

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**

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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**
  - o **Contracting Resources for Small Businesses**
  - o **Government Contract Field Activities**
  - o **Partnership Agreements**

- **Learning Center**
  - o **Understanding Your Customer**
  - o **Marketing Research**
  - o **Legal for Small Businesses**
  - o **Patents, Trademarks, Copyrights**
  - o **Finding & Attracting Investors**

- **Local Assistance**
  - o **SBA Regional & District Offices**
  - o **Small Business Development Centers**
  - o **Export Assistance Centers**
  - o **Procurement Technical Assistance Centers**

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Doing Business with the Department of Defense

http://business.defense.gov

- ➤ **Guides on Marketing to Defense**
- ➤ **Programs for Small Business**
  - ✓ SBIR / STTR
  - ✓ Mentor Protégé
  - ✓ Indian Incentive Program
  - ✓ RIF
  - ✓ Velociter
  - ✓ STEM

- ➤ **Contracting with Defense**
- ➤ **Small Business Training**
- ➤ **Conferences & Workshops**
- ➤ **Frequently Asked Questions**
- ➤ **"How-to" Guide, link below:**

https://www.acq.osd.mil/dpap/cpic/cp/doing_business _with_the_department_of_defense_dod_us.html

Talk to a Small Business Program Expert

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

- ➤ **Links to other DoD Small Business Offices**