

Headquarters U.S. Air Force

Integrity - Service - Excellence

SBIR: Beyond Phase II and Mentor-Protégé Training Week (BPIIMPTW18)

Collaborate - Innovate - Transition

Rapid Innovation Fund (RIF) Program



Mr. Neville Thompson

USAF RIF Lead

Headquarters U. S. Air Force

Ms. Lori Miller

USAF RIF Program Manager

Air Force Life Cycle Management Center

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Rapid Innovation Fund (RIF) Program

■ Goal:

- Transition Small Business Technologies into Defense Acquisition Programs

(RIF is not limited to Small Business. Small Business is given preference)

■ Contract awards per year:

- Total ~120 contracts (Army/Navy/Air Force/OSD 4th Estate)
- Air Force: 25-30 contracts awarded annually

■ RIF scope:

- Technologies mature enough to transition
 - Based on Technology Readiness Levels (TRLs)
 - Program entry goal: TRL 5 or 6
 - Program exit goal: TRL 7, 8, or 9
- 24-month period of performance
- \$3M ceiling



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The RIF Process

■ Broad Agency Announcement (BAA):

- Published ~February annually

■ Two-stage submission process

1. White Paper submission (~March – May each year)
 - a) A three-page technical description
 - b) A single quad chart slide (with cost estimate)
 - c) A web-based form to fill out (called a “Cover Sheet”)
2. Full Proposal (~August – October each year)
 - a) Select White Paper submitters are invited to propose
 - a) Technical Proposal
 - b) Cost Proposal
 - c) Statement of Work
3. Contract awards (~January-July the following year)



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A range of solutions sought

■ The Air Force seeks a wide range of solutions annually

■ Samples from 2018

- **Fuel:** Ultra-Low Sulfur (ULS) fuel suitable for commercial-off-the-shelf EPA Tier IV diesel ground equipment and vehicles
- **Ink:** A high temperature cured resistive ink is used to make a resistive card (R-card) in periodic depot maintenance and for field maintenance.
- **Computer model:** A computer model for predicting structural damage to aircraft when exposed to an overpressure event of variable distance, altitude, direction and shrapnel effect
- **3D printing:** Large tooling and fixtures utilizing 3D printing of polymers from pellet form.
- **Battery charging:** A system to remotely charge sUAS.
- **Exoskeleton suit:** A lightweight exoskeleton suit (or alternative technology approach) to reduce workplace injuries and improve productivity, efficiency, and quality during operations
- **Software:** An identity management system
- **Communications:** A low SWaP, high data capacity RF modem/radio
- **Safety:** Locking Mechanism for C-130J Cargo Roller Conveyers



A range of solutions sought

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- **Power:** Wearable power needed to support Battlefield Airmen information and communications growing power requirements
- **Cameras:** MQ-9 Wide Lens Pilot Camera
- **Parts:** Flexible, Polyurethane Electrically Conductive Gasket
- **Protection:** Expendable Self Protection Jammer for Unmanned Aerial Systems
- **Design and Logistics:** Cost-Effective Design and Logistics to Support Lifecycle Enterprise Resilience
- **Software:** A software tool suite for designing FPGA to inherent levels of hardness against ionizing radiation, electromagnetic interference, and electromagnetic pulse
- **Microelectronics:** Technologies and Design Techniques to Produce Cost-Effective Hardened Microelectronics
- **Cost Model:** Cost Model for Small Low-Cost Turbine Engines
- **Manufacturing:** Examining the mechanical properties of cast AF96 steel
- **Lasers:** Miniaturized High-Power Targeting & Designator Laser
- **Engines:** Small engines in the 200lb-thrust class



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And a range of solutions awarded

- **Planning:** Multi-Domain Mission Planning Environment
- **Power:** Improved Replacement Backup Battery for the Minuteman III Silo Ground Power
- **Security:** SCADA (Supervisory Control And Data Acquisition) Management
- **Safety:** Nuclear Flash Blindness Eye Protection (NUFEP) Device
- **Manufacturing:** Transition of Durable, Lightweight Abrasion Resistant Composite Coatings
- **Video:** Condor - Airborne Target Recognition
- **Wireless:** Whisper Personal Area Network
- **Integration:** High-definition Data and Video Recorder for the A-10 (HDVR-10)
- **Communications:** COMSEC Monitoring in an AS-SIP Network



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Questions?

See Footnotes for additional information

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