

**Department of Defense**

**Small Business Innovation Research**

**&**

**Small Business Technology Transfer Programs**



**Fiscal Year 2015 Annual Report Submission**

**on**

**Commercialization Readiness Program (CRP)**

**March 2016**

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# Commercialization Readiness Program FY15 Report

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The Commercialization Readiness Program (CRP) is part of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Reauthorization Act of 2012 (P. L. 112-81, Section 5001) which extends the program through September 30, 2017. The purpose of the CRP is to accelerate the transition of SBIR and STTR funded technologies to Phase III, especially those that lead to programs of record and fielded systems. This can be done through activities that enhance the connectivity among SBIR and STTR firms, prime contractors, and Department of Defense (DoD) science & technology and acquisition communities. It can also be accomplished by improving a SBIR or STTR firm's capability to provide the identified technology to the Department, directly or as a subcontractor.

This report highlights the Air Force, Army, and Navy's FY15 CRP programs. It includes a layout of Admin Pilot CRP allocations, funding narrative, initiatives and activities. This report also includes achievements and results, and a listing of CRP accepted companies. The data is as reported by the Services and compiled by the DoD Office of Small Business Programs (OSBP).

## Air Force Commercialization Readiness Program (CRP)

### Air Force CRP Accounting of Funds

<b>Air Force Admin Pilot CRP Allocation</b>			
<b>SBIR FY14 Budget</b>	<b>FY14 CRP Budget (1% of Total SBIR Budget)</b>	<b>FY14 CRP Obligations</b>	<b>FY14 Obligations Made in FY15</b>
\$265.98M	\$2.66M	\$2.66M	\$0
<b>SBIR FY15 Budget</b>	<b>FY15 CRP Budget (1% of Total SBIR Budget)</b>	<b>FY15 CRP Obligations Made in FY15</b>	<b>FY15 CRP Commitment Planned in FY16</b>
\$28419M	\$2.84M	\$2.84M	\$0

### Air Force CRP Funding Narrative

Air Force (AF) Fiscal Year (FY) 15 CRP funds were obligated to continue the SBIR Transition Support Contract with BRTRC (\$2.83M). Some of the new SBIR Administration Pilot funds were dedicated directly to CRP activities and support (\$1.2M). Additional funds were expended on CRP activities through an SBIR Admin Contract with Peerless Technologies (\$372K). Government personnel travel to support CRP meetings and other transition activities was also funded (\$38K).

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### **Air Force CRP Program Initiatives and Activities**

The AF CRP brings together key stakeholders to identify and accelerate the maturation and transition of high potential SBIR and STTR projects to the warfighter or for commercialization. CRP Transition Agents (TAs) 1) help focus SBIR/STTR topics on high-priority technology needs, and 2) work with small businesses, system program offices (SPOs), SBIR Program Managers, Technical Points of Contact (TPOCs), and industry technology integrators to identify transition objectives, tasks, timing, responsibilities, and funding sources documented in non-binding SBIR Technology Transition Plans (STTPs). Maturation of high potential SBIR/STTR projects is documented in non-binding SBIR Technology Maturation Plans (STMPs) which accelerate SBIR/STTR technologies into Phase III applied research (6.2) or advanced development (6.3) projects.

The AF has fifteen TAs co-located at AF Centers/Program Executive Offices (PEOs) and AF Research Labs (AFRL) Technology Directorates. Three TAs support the AF Life Cycle Management Center (AFLCMC) located at Eglin AFB, FL; Hanscom AFB, MA; and Wright-Patterson AFB (WPAFB), OH. Three TAs support the AF Sustainment Center located at Hill AFB, UT; Tinker AFB, OK; and Robins AFB, GA. Two TAs support the Space and Missile Systems Center, one TA supports the AF Nuclear Weapons Center and the AF Test Center, one TA supports the Joint Strike Fighter program, and five TAs support AFRL's SBIR/STTR maturation efforts at its technology directorates two located at WPAFB, OH; one at Eglin AFB, FL; one at Kirtland AFB, NM; and one in Rome, NY. The collaborative effort amongst all the TAs is creating additional CRP successes across the AF.

As it has done in the past, the AF CRP continues to see benefit in building relationships with Major Defense Contractors (MDC) to bring solutions to AF warfighters. This relationship benefits all stakeholders, bringing small business capabilities to the larger defense industries, assisting small businesses with visibility into new markets, and increasing return on investment opportunities for the AF. In FY15, SBIR/STTR CRP Technology Interchange Meetings (TIMs) were conducted with Harris Corporation, L-3 Communications, Orbital ATK, The Boeing Company, Raytheon SAS, and Northrop Grumman which allowed for active engagement between 78 SBIR companies and these MDC partners. While all of these MDC partners have participated in prior years, all but two brought new business units to the table, confirming that these events are widely supported and regarded throughout the organizations.

After receiving such positive feedback from both the AF and small businesses, the AF CRP continued execution of it is one of a kind AF Small Business Industry Days (SBIDs). Based on the feedback and results of the previous year's Armament SBID, the AF CRP team refined the process and increased its efforts, completing two events hosted by the AF Test Center and the AF Sustainment Center. Combined, these events had over 540 attendees from small businesses, MDCs, and multiple government organizations, with about 25% of the small business represented having never before worked with the AF. Speakers for both events presented multiple briefings outlining upcoming small business opportunities. Over 160 total one-on-one meetings were conducted regarding upcoming solicitations, as well as potential SBIR projects

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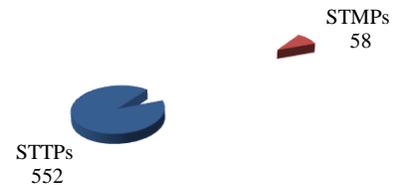
that could be transitioned into programs of record. There is currently one SBID scheduled for FY16 with the Space and Missile Center.

In addition, the TAs supported several outreach events that reached small businesses and underserved communities, such as service-disabled, veteran-owned businesses. As in prior years, the AF CRP team worked closely with the other services to keep up with the changing climate and assist the warfighter through a presence at the Navy Opportunity Forum in Arlington, VA; Beyond Phase II, in San Antonio, TX; and inviting the Navy and DARPA into the TIM process. The team also participated in the first DoD Lab Day at the Pentagon, in May 2015. In attendance were Deputy Defense Secretary, Bob Work, and Undersecretary of Defense for Acquisition, Technology and Logistics, Frank Kendall, as well as DoD employees, service members, members of Congress, and local science and technology high-school students. This event showcased all the great work and technologies from within DoD that are helping the warfighter. The AF CRP team researched and provided information on our successful small business partners to event organizers to encourage their participation, as well as attended the event to provide support and spread the AF CRP mission.

## Air Force CRP 2014 Achievements and Results

This year, 94 projects were approved for CRP (i.e. funded). Of the 94 approved projects, 63 were STTPs and 31 were STMPs (see Appendix A). Since inception of the pilot, 552 projects were initiated (see Fig. 1). The total SBIR/STTR funding on CRP projects since inception of pilot is \$566.3M and the total non-SBIR/STTR funding on CRP projects since inception is \$1,568.2M. SBIR/STTR funding includes Phase I, Phase II, and enhancements to CRP approved projects. Non-SBIR/STTR funding sources include industry's Independent Research and Development (IR&D), SBIR firm investment, AF Programs of Record, AFRL core budget, DoD transition funds, and state small business funds. Twenty-five major contractors participated in STTP/STMP projects.

Fig. 1 Number of STTPs and STMPs Since Inception of the Pilot



Eighty-eight Air Force SBIR CRP projects are considered transition successes and are providing significant benefit to the nation's Warfighters in improved performance, new capabilities, increased reliability, and cost savings well exceeding the investment (See Fig. 2). Each project meets the technology needs of at least one Air Force system with total cost savings estimated at over \$1 Billion. Sixty-four projects have been reported as successes through 2014 and these have continued to mature and yield benefits. During 2015, the following 24 were identified as successes using the DoD SBIR/STTR transition definition - the production and delivery of

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products, processes, technologies, or services for sale to or use by the Federal Government or commercial markets. Each transition success and its benefits are briefly described below:

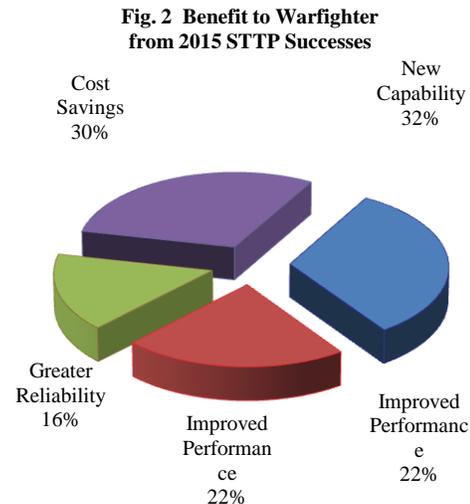
**STTP 2010-20, Advanced Global Services, Gun Barrel Erosion Coating (EPVD)** provides the 20mm gun tube with longer barrel life, better ammunition performance, fewer removals and replacements, increased weapon system availability, life cycle cost savings, and eliminates hexavalent chrome (Cr+6) in accordance with Presidential Executive Order 12856, while establishing a path to EPVD coatings for other gun tube calibers and many DoD weapon system components.

**STTP 2011-04, Voss Scientific, LLC, Automated Susceptibility Test Assembly (ASTA)** determines the optimum modulations and intensities to increase aircraft fleet reliability and provides rapid validation of mitigation methodologies.

**STTP, 2011-17, Variation Reduction Solutions, Inc., Fastener Insertion Live Link System (FILLS)** implemented across Lockheed Martin and Northrop Grumman work cells, increases fastener installation accuracy and reduces span times and assembly hours. Information required by the operator provided at the point of use ensures the correct fastener is installed. A calibrated ergonomic wireless grip gage guided by FILLS cuts in half the time to acquire fastener grip lengths. F-35 Affordability Team analysis shows FILLS will save over \$111M and increase as applications are added.

**STTP 2012-20, Active Signal Technologies, Inc., Pulse Width Modulated Servo Valve** controls and delivers pyrophoric fluid flow for the Towed Airborne Plume Simulator (TAPS) to replicate the plume of a wider range of threat missiles at AEDC. TAPS is a key component of the DoD-wide Central Test and Evaluation Investment Program (CTEIP) to enhance open air test range capabilities of advanced infrared countermeasures for improving aircraft survivability.

**STTP 2012-22, CFD Research Corporation, Accurate Insensitive Munitions Modeling Tool** simulates dynamic electro-optical signatures of small caliber weapons and both launch eject and boost phase ignition of rocket-propelled munitions. This tool meets the Hostile Fire Signature program requirements of the Center for Countermeasures and AEDC's Advanced Missile Signature Center; and improves hostile fire detection, identification, and response time to save warfighter lives and equipment.



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***STTP 2012-25, Applied University Research, Inc., Near-Field Velocity Measurement System for Wind Tunnel Testing*** provides real time monitoring and measurement of critical parameters in the 16-foot transonic (16T) Propulsion Wind Tunnel at AEDC for both directed energy applications and computational validation programs. Subminiature Three-Velocity Component Laser-Doppler Velocimetry instrumentation efficiency improvements cut the time for each directed energy test in half, saving \$160,000 per test.

***STTP 2012-27, MetroLaser, Inc., Non-Contact Temperature Sensor for Engine Hot Section Components*** maps and monitors the surface temperature and health of ceramic Thermal Barrier Coatings on first stage turbine blades during ground-based development testing. Accurate measurement of blade temperature will help AEDC prove ceramic coatings to prevent blade failure and increase performance of military engines and fighter planes, such as the F-35, through development and the component improvement program.

***STTP 2012-30, Optical Sciences Corporation, Cryogenic-Vacuum Compatible Infrared Projection System*** supports hardware-in-the-loop testing of space-based sensor systems including Earth observing, strategic, and interceptor sensor systems. It enhances test and evaluation by up to an order of magnitude for infrared surveillance satellite systems, ground-based missile defense, terminal high altitude area defense, overhead persistent infrared, and hypertemporal imaging and saves \$475,000 per application.

***STTP 2012-31, Radiation Monitoring Devices, Inc., Ultra Fast X-ray Imaging Detector*** enables high resolution X-ray imaging at desired high speeds to improve lethality performance and reduces missile systems testing and development costs through more accurate modeling. It supports impact analysis of new generation ballistic projectiles/ missiles being developed by the AF, Navy, Army, Missile Defense Agency, and DARPA with MDCs such as Raytheon and Lockheed Martin.

***STTP 2012-52, The Design Knowledge Company, Inc., Analysis of Resources with Visualization & Integrated Simulation Support (ARVISS)*** provides for aircraft repair and redeployment with at-a-glance assessment of ramp situation, easy-to-understand visualization of performance metrics, aircraft and station status, and simulation of forward operations. It integrates with legacy and future on-base systems to better manage requirements and resources to reduce flow days and response to unplanned work up to 50%.

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***STTP 2012-54, Voss Scientific, LLC, Assessment of Electronics Susceptibility to High Powered Microwave Radiation (AESHR)*** subjects electronic components to waveform variables and evaluates the impact to improve electronic attack performance.

***STMP 2012-C, TRACLabs, Autonomous Mission Management for Satellite Systems*** meets a key AF need in the 2010 Technology Horizons to decrease time for detecting and responding to natural or man-made on-orbit events and reduce ground operations cost. It was selected for implementation on-board the EAGLE to control the satellite's goal-oriented activities, respond to threats when out of communication with the ground or when time constraints require a response, and prioritize competing goals.

***STTP 2013-03, Sunrez Corporation, Advanced Composite 463L Pallet Development*** is more damage and corrosion resistant, weighs less, reduces environmental impact, and requires less maintenance with a longer useful life and lower total ownership cost. It minimizes use of chemicals needed to maintain aluminum pallets, while water and salt fog have no effect, it also has equivalent strength and stiffness is achieved at a lower weight and common failure modes such as delamination and premature core shear failure are eliminated.

***STTP 2013-09, General Nano, LLC, Manufacturing Next Generation Multifunctional Carbon Fiber Laminated Composites for Air Vehicles*** reduces parasitic weight, enables order of magnitude improvement in electrical and thermal conductivity, and reduces manufacturing cost. NanoPro<sup>TM</sup> carbon nanotube (CNT) technology increases air vehicle range, time on station, payload capacity, and product lifetimes with lower cost. The Boeing Company now projects \$12M per year in acquisition of NanoPro<sup>TM</sup> sheet material.

***STTP 2013-11, ReliaCoat Technologies, LLC, Real Time Measurement of Design Relevant Thermal Spray Coating Properties*** with an *in situ* coating properties (ICP) sensor in the booth, it ensures accurate real-time measurement and reporting for manufacturing and sustainment of aero-engines and structures. ICP optimizes the process to reduce powder usage, booth time, part qualification time, and improve quality for a large range of engine components. Tinker AFB projects a savings of \$5M over five years.

***STTP 2013-24, Numerica Corporation, Improved Covariance Realism for Advanced Space Situational Awareness*** more accurately computes the representation of uncertainty in a space object's orbital state. This is one of the key findings in the National Research Council's 2012 assessment of the AFSPC Astrodynamics Standards for improving space situational awareness functions such as tracking, cataloging, collision avoidance/conjunction analysis, and maneuver detection.

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***STTP 2013-31, Securboron, Inc., Collaborative Event Processing Environment (CEPE)*** seamlessly integrates knowledge model (KM) updates with operators' everyday tasks at USTRANSCOM's Fusion Center by automating the highly technical, manual effort. KMs convey priorities, user roles, and organizational responsibilities to improve collaboration, situational awareness, and mission execution for air, sea, and land transportation assets.

***STTP 2013-41, McQ, Inc., High-speed Test Track Integration*** precisely controls, monitors, and records events for rocket sled payload tests on the ten mile Holloman High Speed Test Track (HHSTT) using a wireless network. It provides unlimited wireless data collection/event recording locations on the track, improves reliability, and provides time-tagging accuracy on the order of 100 nsec compared to 1 msec by replacing the obsolete and failing infrastructure of the current wired system.

***STTP 2013-43, Materials Research & Design, Inc., Extended Life High Mach Throats for AEDC Wind Tunnels*** was developed as a new high temperature, advanced material design for AEDC Tunnel 9's existing Mach 14 throat to improve performance and service life, and provide a needed Mach 18 capability to support AF, Navy, Army, Missile Defense Agency, and NASA programs. Hypervelocity Wind Tunnel 9 provides aerodynamic simulations critical to develop hypersonic system and vehicle technologies.

***STTP 2013-45, ReliaCoat Technologies, LLC, Progressive Feedback Control Strategies for Thermal Spray Processes: Particle Injection, Process Maps, and In-situ Sensing Properties*** increases efficiency and coating reliability. Material cost savings alone are \$200,000/year and sensor measurement time is reduced by 80% from ten to two minutes. PlumeOpt increases production capacity by reducing downtime, booth and coating qualification time, and lab test failures; and speeds part qualification by improving stability and reducing variability for the 800 components now sustained at Tinker AFB.

***STTP 2014-07, Physical Optics Corporation, Micro Weather Station*** is unobtrusive, light weight, automated for remote unmanned weather reporting, and deployed by a soldier on routine patrol. It replaces a system requiring a helicopter and two men to set-up with improved performance at a fraction of the size, weight, and cost. There are savings of more than \$200K per system, which totals \$20M for 100 systems expected for operational use. This satisfies CENTCOM and SOCOM JUONs and an AF Weather Agency requirement.

***STTP 2014-12, Defense Research Associates, Inc., Sense and Avoid Technology Transition*** integrates electro-optical with multiple technologies to detect and track potential collision targets for transition into Engineering and Manufacturing Development and low rate initial production. It supports Airborne Sense and Avoid for unmanned aircraft systems to

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significantly improve safety in military airspace, access to domestic training areas, and use of DoD RPAs for Defense Support of Civil Authorities.

*STTP 2015-19, Composite Support & Solutions Inc. (CSSI), Advanced Composite Tower* at Hanscom AFB provides their C4ISR Enterprise Integration Facility with enhanced line-of-sight communication to remote sites and the AF with a prototype for assessing the non-corroding, low maintenance, and cost competitive technology. The periodic maintenance of steel lattice towers also impacts availability, safety, and the environment. CSSI's "snap-joint" technology has application beyond lattice structures.

### Appendix A: Air Force Small Business Innovation Research Commercialization Readiness Program FY15 Air Force Companies Approved for CRP

<b>Company Name<sup>1</sup></b>	<b>Project Title</b>	<b>Contract #</b>	<b>Topic #</b>	<b>PEO</b>	<b>Investor, Customer, or Fielded System<sup>2</sup></b>
ACTA, Inc.	Weapon Burial Model for	FA8651-13-C-0154	AF121-097	Weapons	AFLCMC/ENWC
Active Signal Technologies	High Power Density Transducer for Frequency Agile Extended Range Pyroboric Flow	N00014-98-C-0296	N97T003	AEDC	Center for Countermeasure s
Active Signal	Pulse Width Modulated	W31P4Q-05-C-	SB032-033	AEDC	AEDC/DTSY
Advanced Global Services	EPVD Coatings for Improvement of Small and Large Caliber Gun	Original (FA8201-07-C-0080)	AF06-350		409 SCMS/GUEAE
Aerobotix, Inc.	Automated Aircraft Inlet	FA8650-14-C-5017	AF131-114	Fighter Bomber	AFRL/RXME
Aerodyne Research, Inc.	Particle Sampling System Designed to Simulate Aging of Aircraft Exhaust	FA9101-08-C-0013	AF06-302	AEDC	AEDC/TSTB
Anatom, Inc.	Meta Data Mining of Aircraft Maintenance	FA8501-11-C-0010	AF083-243		C-130
Anautics, Inc.	Strategic Technology Management System	FA8117-10-C-0023	AF083-229		AFLCMC/LP
Applied Thin Films, Inc.	High Temperature Nanoscale Sealant for Advanced Materials in Air and Space Vehicles	N68335-08-C-0015	N06-032		U.S. Navy

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Architecture Technology Area I, Inc.	Spatio-Temporal Analysis in GIS Environments	N68936-12-C- 0023	N111-062		Joint Warfare Analysis Center
	Development of an Extended Endurance Air- Launched, Tube- Integrated, Unmanned	FA8650-13-C- 2302	AF112-170		AFRL's Tactical Off- board Sensing Advanced Technology
Arete Associates	AIRTRAC Laser	FA8651-13-C- 0012	MDA10- 016		AFSOC/A5
Ascendant	5 Inch Fully Functional	FA8651-13-C- 0022	AF112-097		SOCOM (PEO-FW)

**Notes:** <sup>1</sup> Order listing is alphabetical and does not convey any prioritization of CRP projects.

<sup>2</sup> Additional information about Investor, Customer, or Fielded System is available on request.<sup>3</sup>

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**Army Commercialization Readiness Program (CRP)**

**Army CRP Accounting of Funds**

<b>Army Admin Pilot CRP Allocation</b>			
<b>SBIR FY14 Budget</b>	<b>FY14 CRP Budget (1% of SBIR Budget)</b>	<b>FY14 CRP Obligations</b>	<b>FY14 Obligations Made in FY15</b>
\$160M	\$1.6M	\$117K	\$138K
<b>SBIR FY15 Budget</b>	<b>FY15 CRP Budget (1% of SBIR Budget)</b>	<b>FY15 CRP Obligations</b>	<b>FY15 Commitments Planned in FY15</b>
\$151,708,861	\$1.5M	\$0	\$175K

**Army CRP Funding Narrative**

At the conclusion of the Army’s CPP support contract, it was decided to combine CRP support into the overall SBIR support contract. In FY15, administration of CRP was managed within the provisions of the existing SBIR support effort.

**Army CRP Program Initiatives and Activities**

Under the Army’s CRP approach, technical points of contact for all Phase II efforts are encouraged to work with relevant PEOs and small businesses to identify opportunities where a promising technology has a strong transition potential if technical barriers to PEO adoption are met. Examples of such barriers are need for higher technical maturity, need for additional test articles, and minor specification changes to prototypes to meet PEO designs. These opportunities are vetted by the sponsoring organization and PM SBIR and must include: Technical Director concurrence, tangible investment from the transitioning PEO or other transition partner(s), and a Statement of Work and Cost Proposal. These requirements ensure that there is real transition opportunity, all stakeholders are in agreement with the approach and investments, and the opportunity can be addressed in a timely manner.

**Army CRP 2014 Achievements and Results**

In FY15, 22 companies were provided additional funding to address the technical barriers slowing adoption of their technologies by acquisition programs. They were provided a total of \$9.9M above the approximately \$25.7M provided under Phase I and Phase II funding for these

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efforts. An additional \$6.3M was provided from outside (i.e., non-SBIR) sources as initial investments in these CRP efforts. Since the initiation of the Army CRP approach, 93 companies have been provided additional funding. Overall the Army SBIR has provided \$58.9M toward CRP efforts with an additional outside investment of \$53.2M. While too early to provide specifics of success, Army SBIR expects at least a 5:1 return on investment (~\$250M) within the next five years.

### Appendix A: Army Small Business Innovation Research Commercialization Pilot Program FY 2015 Companies Approved for CRP

Company Name <sup>1</sup>	Project Title	Contract #	Topic #	PEO	Investor, Customer, or Fielded System <sup>2</sup>
Mide Technology Corp	Tactical Telehaptic Communication (HAPTAC)	W31P4Q-10-C-0237	SB082-025	Aviation	DARPA
Wizbe Innovations	Fabric with Variable Air Permeability for Use in Parachutes	W911QY-12-C-0173	A10-163		NSRDEC
Materials Sciences Corporation	Hybrid 4D Braided Textiles for High Pressure Layflat Hoseline (MSC P 4035)	W56HZV-12-C-0056	A09-185		TARDEC
Universal Global Products, LLC.	Innovative Coatings for Lightweight Alloys	W15QKN-10-C-0122	A09-039		ARDEC
Trex Enterprises Corporation	Increased 3D Virtual Image Opaqueness and Contrast Resolution in Optical See-Through Head Mounted Displays	W911QX-12-C-0009	A11-114	STRI	STTC
Resodyn Corporation	Resonant Acoustic Mixing of Solid Rocket Motor Propellant to Minimize Property Variations	FA9300-11-C-3011	AF083-114		ARDEC
Ashwin-Ushas Corporation, Inc.	Functionalized-Conducting-Polymer - Microporous-Membrane Based Voltammetric Sensor Skins With High Selectivity/Sensitivity, Multiple Analyte Sensing in Single Interrogation, Wide Operating Temperature, Low Power	W911QY-12-C-0032	A10-113		JPEO-CBD
General Sciences, Incorporated	Enhancement of Penetration Capability of Light Warheads Into Hardened Walls.	W31P4Q-11-C-0226	A09-130		AMRDEC (M)
Modus Operandi, Inc.	Clear Heart: Recognizing Adversarial Intent from Multi-INT Data	W15P7T-13-C-A206	A11-035		CERDEC
Applied Science	Improved Field of Regard for Strap	W31P4Q-	A08-041		AMRDEC (M)

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Innovations, Inc.	Down Semi Active Laser Seekers	10-C-0113			
Creative Resonance Inc.	Volume and Weight Reduction Method for Intermediate Moisture Ration Components and Snacks	W911QY-12-C-0158	A11-046		NSRDEC
Eclipse Energy Systems, Inc.	Flexible Transparent Conducting Films	W911QX-06-C-0070	A04-044		ARL
Pacific Advanced Technologies	Standoff hyperspectral-imaging sensor for chemical and biological early warning using lenslet arrays	W911SR-13-C-0020	A11-101		JPEO-CBD
Applied Signals Intelligence	Body Wearable Radio Direction Finding (DF) Antenna	W56KGU-15-C-0056	A11-121		CERDEC
Neya Systems	HCI and C2 for Autonomous Air Evacuation of Casualties	W81XWH-13-C-0118	A12-111		MRMC
Think-A-Move	Battlefield Medical Situational Awareness Goggles (Human Computer Interface)	W81XWH-12-C-0035	A11-111		MRMC
V-Squared Wind, LLC	Wind Energy Systems for Base Camp Applications	W911QY-13-C-0054	A12-051		NSRDEC
Gleason Research Associates Inc	Innovative Semi-Active Laser (SAL) Signal Processing Techniques in Noisy Environments	W31P4Q-14-C-0005	A12-084		AMRDEC (M)
Environetix Technologies Corporation	High-Temperature, Wireless, Passive, Multicode Sensor System for Rotorcraft Applications	W911W6-10-C-0069	A09-015		AMRDEC (A)
Yotta Navigation Corporation	Intelligent Human Motion Detection Sensor	W15P7T-13-C-A303	A10-093		CERDEC
Physical Sciences Inc.	Biomimetic Control of Flying Robots	W911QX-10-C-0086	A08-056		ARL
Quantum Signal LLC	VSS+: A NEXT-GENERATION PREDICTIVE VEHICLE STABILITY SYSTEM	W56HZV-14-C-0052	A12-073		TARDEC

**Notes:** <sup>1</sup> Order listing is alphabetical and does not convey any prioritization of CRP projects.  
<sup>2</sup> Additional information about Investor, Customer, or Fielded System is available on request.

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**Navy Commercialization Readiness Program (CRP)**

**Navy CRP Accounting of Funds**

<b>Navy Admin Pilot CRP Allocation</b>			
<b>SBIR FY14 Budget</b>	<b>FY14 CRP Budget</b>	<b>FY14 CRP Obligations</b>	<b>FY14 Obligations Made in FY15</b>
\$242.1M	\$2.42M	\$803K	\$1.78M
<b>SBIR FY15 Budget</b>	<b>FY15 CRP Budget (1% of SBIR Budget)</b>	<b>FY15 CRP Obligations</b>	<b>FY15 Commitments Planned in FY16</b>
\$269.5M	\$2.7M	\$1.6M	\$1.1M

**Navy CRP Funding Narrative**

Department of the Navy (DON) CRP funds were obligated in FY15 (\$2.7 Million) for CRP project management/execution including program office support, database management/reporting, contracting, acquisition office assistance, and outreach/prime contractor coordination. CRP funds also supported firm assistance including due diligence, transition planning, risk reduction assessments and planning, manufacturing/production readiness assessments, technical readiness assessments, and market analysis.

**Navy CRP Program Initiatives and Activities**

One of the primary initiatives of the DON CRP remains the set-aside and application of approximately twenty percent of overall SBIR funding to selected CRP projects. The projects must meet a high-priority DON need and demonstrate potential for rapid transition into an acquisition Program of Record, fielded system, or future naval capability.

DON has ongoing initiatives and activities that CRP participants can leverage. The Navy SBIR/STTR Transition Program (STP) is available for new Phase II projects and provides market analysis, business planning, and development of marketing materials for over 12 projects annually. Participation in STP culminates with a technology showcase and presentation at the Forum for SBIR/STTR Transition (FST). This event enables DON to hold one-on-one meetings with Phase II firms to discuss CRP requirements and transition potential of the technologies. In

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FY 2015, the FST showcased 143 projects represented by 125 Phase II companies. Additionally, CRP participants can leverage technical assistance services that include assessments in the areas of risk, manufacturing and production, technology transition, and engineering analysis. DON also offers an enhanced search capability to the public at [www.navysbirsearch.com](http://www.navysbirsearch.com) to provide access to information on thousands of SBIR/STTR-developed technologies for those looking to find proven technologies for solving existing problems as well as those looking to partner with firms whose expertise can assist in solving new problems.

### Navy CRP 2015 Achievements and Results

The DON approved a total of 12 CRP projects in FY 2015 (see Appendix A), increasing the number of CRP projects to 285 since the inception of the program. Cumulatively, the DON has invested over \$528 million in SBIR funding to CRP projects, which includes funding for the acceleration of transition efforts. The cumulative Return-on-Investment for all 285 projects is over \$328 million in direct government funding (Phase III) and an additional \$532 million in non-government funding as reported in Company Commercialization Reports. The ratio of SBIR funding to additional funding is 1:1.8.

### Appendix A: NAVY Small Business Innovation Research Commercialization Readiness Program FY 2015 Companies Approved for CRP

Company Name <sup>1</sup>	Project Title	Contract #	Topic #	PEO	Investor, Customer, or Fielded System <sup>2</sup>
Daniel H. Wagner, Associates, Incorporated	Coordinated ASW Mission Planner (CAMP)	N00024-12-C-4525	N111-044	NAVSEA	Littoral Combat Ship (LCS), ACAT ID (PEO LCS)
Hydroacoustics Inc.	Very Low Frequency (VLF) Transducer	N00024-12-C-4135	N103-223	NAVSEA	Undersea Defensive Warfare Systems, Acoustic Augmentation Support Project (PMS-415)
Hydronalix, Inc	AUV for Sustained Riverine and Littoral Assessments	N68335-15-C-0138	N102-182	NAVAIR	Remote Minehunting System (PMS-403)
Linden Photonics Inc.	Rugged and Durable Fiber Optic Replacement	N68335-14-C-0327	N08-115	NAVAIR	F-35 Joint Strike Fighter Program Office, ACAT ID
MaxPower, Inc.	Long Endurance, High Power Battery	N68335-14-C-0041	N08-143	NAVAIR	Air Anti-Submarine Warfare Systems (PMA-264)

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					Maritime Patrol & Reconnaissance Aircraft (PMA-290)
Progeny Systems Corporation	At-Sea Reliability with Predictive Modeling	N00024-15-C-4042	N093-214	NAVSEA	Submarine Combat System Program Office, ACAT III (PMS-425)
Progeny Systems Corporation	Guaranteed Data Integrity in the GIG-NCES Environment	N00024-11-C-4199	OSD05-NC3	NAVSEA	Littoral Combat Ship (LCS), ACAT ID (PEO LCS)
Quantum Engineering Design, Inc.	Advanced Breakwater and Causeway Ultramarine System (ABACUS) Development	N00014-15-C-0136	N092-156	ONR	Operational Logistics (OPLOG) Program (OPNAV N42)
RDA Inc.	Environmental Wideband Acoustic Receiver and Source (EWARS)	N68335-15-C-0105	N101-042	NAVAIR	Air Anti-Submarine Warfare Systems (PMA-264) Maritime Patrol & Reconnaissance Aircraft (PMA-290)
RDRTec Inc.	Detection and Tracking of Small Boats and Semi-Submersibles in the Littoral	N68335-15-C-0048	N111-020	NAVAIR	MQ-8 Fire Scout (PMA-266)
RDRTec Inc.	Collision Avoidance Decision Processing For The Common Radar Automatic Collision Avoidance System (C-RACAS)	N68335-14-C-0315	N111-025	NAVAIR	Persistent Maritime Unmanned Aircraft Systems (PMA-262) MQ-8 Fire Scout (PMA-266)
Signal Systems Corporation	Spread Spectrum Techniques for Sonar Ping Technology	N68335-14-C-0074	N101-005	NAVAIR	Air Anti-Submarine Warfare Systems (PMA-264) Maritime Patrol & Reconnaissance Aircraft (PMA-290)

**Notes:** <sup>1</sup> Order listing is alphabetical and does not convey any prioritization of CRP projects.

<sup>2</sup> Additional information about Investor, Customer, or Fielded System is available on request.