



ARMY APPLIED SBIR PROGRAM
2021 YEAR IN REVIEW

SMALL BUSINESS
IGNITING BIG INNOVATION

FROM THE DIRECTOR



Dr. Matt Willis

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Office of the Assistant Secretary of
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and Technology

For nearly 40 years, the Army Small Business Innovation Research Program has strengthened the Army's mission by leveraging the innovation of small businesses. In that time, the threat has evolved; the Army's capabilities have evolved; yet, the Army SBIR program has not evolved in unison.

In October 2020, my office stood up the Army Applied SBIR Program with a new structure and renewed focus on injecting small-business innovation into Army programs — ultimately driving toward successful transition and

commercialization of small-business capabilities. Small businesses are wheelhouses for innovation and play a critical role in injecting cutting-edge technology into the government; therefore, we need to make it as easy as possible for them to work with the government, and the Army in particular. To do this, we must directly tap into the small-business ecosystem — to make investments that not only respond to Army modernization and sustainment needs, but also small business capabilities and needs. We need to speak their language and entice them to work with the Army by making processes easier, quicker and more responsive.

Simultaneously, we are posturing the Army Applied SBIR Program to be more supportive of our Army customers. While the SBIR program has historically operated under set guidelines and schedules, we want to be agile so our Army customers can determine how and when to inject small-business innovation into their program schedules.

The Army Applied SBIR program is focused on technology transition. We are scoping the tech landscape, concentrating on where market growth intersects with Army needs. In 2021, we initiated the Transition Broker Team construct — evolving from a passive, topic-driven approach to a construct that focuses on faster, more nimble ways for small businesses to enter the acquisition system — and shifted from the traditional, thrice-yearly topic releases to releasing topics on an ad hoc, rolling basis.

We established the Army SBIR Contracting Center of Excellence in summer 2021 to execute all Phase I and Phase II awards under one office, which will streamline processes and decrease contracting time, so companies receive their funding faster, and the Army can get capabilities faster.

We recognize this is a significant shift in the way things have been done before, and we realize change takes time. But through our continued partnerships across the Army — including with Army Headquarters, Army Futures Command, Army Contracting Command and 75th Innovation Command — and our small business partners, we've been able to build momentum and success, and position the program to focus on deliberate transition opportunities to support the broader Army research, development and acquisition enterprise.

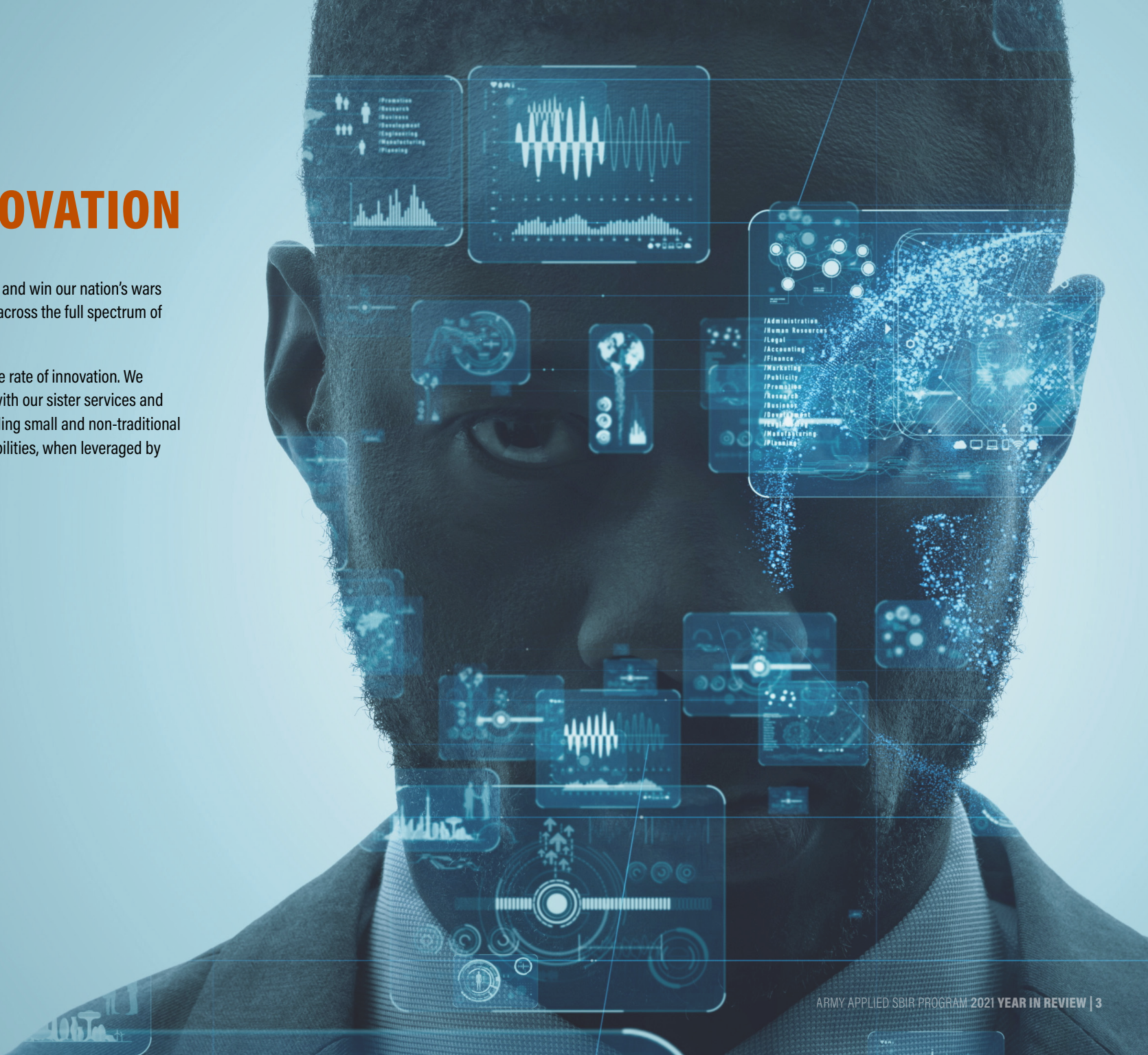
Last year was an exciting year. While we're doing things a little differently, our guiding purpose remains the same: to identify the top emerging technical solutions to meet critical Army priorities to modernize our world-class Army and transition state-of-the-art technology to our most critical customer — the Soldier.

I hope you share my enthusiasm for Army SBIR's future, and I offer my sincere thanks for your continued support and partnership as champions for our program as we continue to drive progress for the Army, U.S. small businesses and most importantly, our Soldiers.

SMALL BUSINESS IGNITING BIG INNOVATION

The U.S. Army's mission remains constant — to deploy, fight and win our nation's wars by providing ready, prompt and sustained land dominance across the full spectrum of conflict as part of the Joint Force.

To achieve this, the Army needs to develop technology at the rate of innovation. We cannot achieve this mission alone. It requires partnership with our sister services and federal agencies, our allies and our industrial base — including small and non-traditional businesses whose investments in new and emerging capabilities, when leveraged by the Army, will have a mission-critical impact.





TRANSFORMING HOW THE ARMY WORKS WITH SMALL BUSINESSES

The U.S. Army Small Business Innovation Research Program connects small businesses and their game-changing technologies with critical Army programs that sustain readiness and accelerate modernization — ensuring our Army remains the most lethal combat force in history, capable of dominating any adversary on any battlefield.

These programs are Congressionally authorized and award more than \$2 billion a year to small and non-traditional businesses to bring innovative solutions for military readiness and technological superiority — while stimulating economic competition, growth and productivity, and incentivizing small businesses to explore their capabilities and profit from their commercialization.

TAPPING INTO THE SMALL BUSINESS ECOSYSTEM

Established in October 2020 under the Assistant Secretary of the Army for Acquisition, Logistics and Technology, the Army Applied SBIR Program encompasses 80% of the Army's SBIR portfolio and is distinctly focused on the timely transition and sustainment of innovative technologies created by small businesses that are funded through frequent and flexible contract awards. Aspiring to innovate through collaboration, we aim to break down traditional barriers to working with the Army by targeting specific, of-the-moment technology areas combined with a simpler and more transparent contracting approach that will evolve with Army needs and partner feedback. Army SBIR also enables Army program managers to buy down risk and meet their cost, schedule and performance requirements — ultimately delivering innovative and timely capabilities to the Soldier.



ARMY APPLIED SBIR THE VALUE

The value of the Army Applied SBIR Program lies in our strategy to tap into the small-business ecosystem. Focusing on technology transition and sustainment, the Army Applied SBIR Program is committed to:

- ▶ Identifying the intersections between industry innovation and Army needs for emerging technology aligned with Army program acquisition, sustainment and modernization priorities and schedules.
- ▶ Investing in capabilities that align with critical Army priorities and key science and technology areas, with a laser focus on what is most likely to transition to actual Army use.
- ▶ Leveraging subject matter experts to identify critical Army capability gaps, evaluate the technology adoption landscape across Army programs, and provide valuable feedback to Army SBIR awardees throughout the technology maturation process.
- ▶ Brokering relationships with small and non-traditional businesses. We support businesses during every step of the technology maturation process — which may lead to larger, long-term contracts with the Army's research and acquisition enterprise, with the goal to commercialize the technology.
- ▶ Facilitating a centralized contracting and program administration experience using the best mechanisms the government has available to make it easy for small businesses to work with us.

DELIVERING GAME-CHANGING
SOLUTIONS TO OUR MOST
CRITICAL CUSTOMER

THE SOLDIER

\$265M

TOTAL ARMY INVESTMENT

80%

OF THE ARMY'S SBIR PORTFOLIO
IS ASA(ALT)-MANAGED AND
EXECUTED

506

PARTICIPATING
SMALL BUSINESSES

36

PHASE I TOPICS RELEASED

968

PHASE I PROPOSALS RECEIVED

9

PHASE II TOPICS RELEASED

274

PHASE II PROPOSALS RECEIVED

45

TOPICS RELEASED

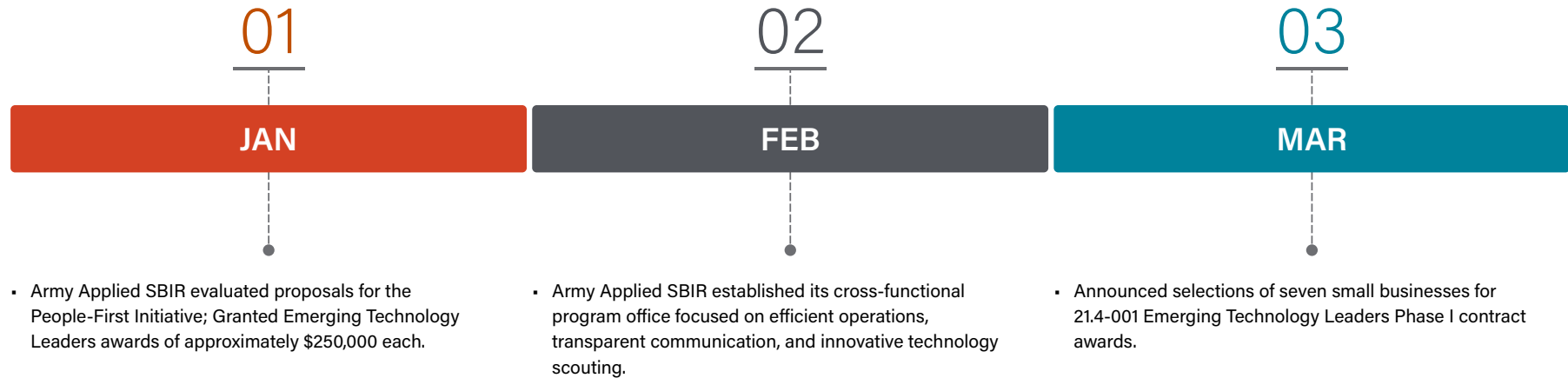
1,242

TOTAL PROPOSALS RECEIVED

OUR ACCOMPLISHMENTS

Beginning in October 2020 — and every day since — the Army Applied SBIR Program has worked diligently to identify high-impact technology domains where Army needs intersect with unrivaled private sector expertise. We apply a transition-focused acquisition approach in sync with Army program goals and priorities, so that the Army develops the right capabilities at the right time and cost, while maximizing the commercial benefits for our industry partners.

HERE'S WHAT WE ACCOMPLISHED IN 2021.



OUR ACCOMPLISHMENTS

04

APR

- Released first solicitation for 27 Phase I topics and one Direct to Phase II topic, covering Artificial Intelligence/Machine Learning, Advanced Manufacturing, Advanced Materials, Network, and Hypersonics to support customers at the Army Space and Missile Defense Command; Army Test Evaluation and Command; JPEO Armaments and Ammunition; PEO Aviation; PEO Command, Control, and Communications-Tactical; PEO Ground Combat Systems; PEO Intelligence, Electronic Warfare, & Sensors; PEO Missiles & Space; and PEO Soldier. This first release garnered 624 proposals from 415 small and non-traditional businesses.

05

MAY

06

JUN

- Piloted the Army Applied SBIR Transition Broker Team construct focused on two key technology areas: Artificial Intelligence and Machine Learning, and Autonomy.

The Army Applied SBIR Program's first topic release saw a 130% increase in submissions compared to previous cycles. Of the companies that submitted proposals, 39% were new to SBIR — indicating that the program's approach, mechanisms and outreach better reached and resonated with small-business innovators.

OUR ACCOMPLISHMENTS

07

JUL

- Released a Direct to Phase II contract opportunity for Holistic Wind Correction for Aviation Targeting in partnership with the Army Future Vertical Lift Cross-Functional Team.
- Selected 13 small businesses for 19.2 and 19.4 Phase II contract awards of \$1.7M each.
- Selected 90 small businesses for the 27 Phase I awards — up to \$256,000 each — and one Direct to Phase II topic — up to \$1.7 million each. Technology proposals spanned Artificial Intelligence and Machine Learning, Advanced Materials, Network, Hypersonics, and Advanced Manufacturing.
- Launched the revamped Army SBIR|STTR website as a central and informative place to promote the full breadth of technology topics and contract opportunities available to small businesses.
- Featured on National SBIR Week panel, “Moving the Phase II and Beyond,” along with the Department of Homeland Security and National Science Foundation.

08

AUG

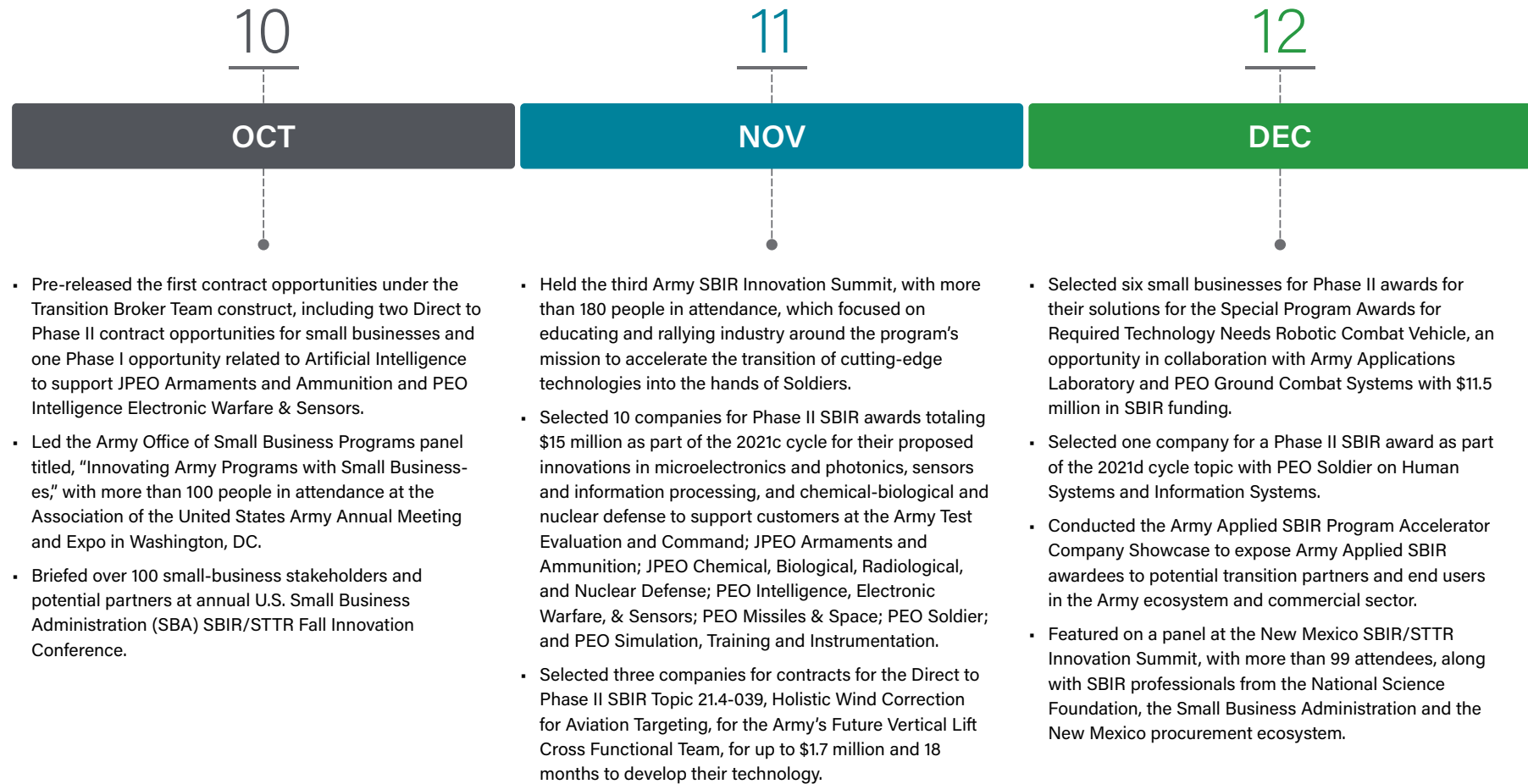
- Established the Army SBIR Contracting Center of Excellence to streamline contract and funding execution across the Army SBIR Program.
- Held the first Army SBIR Innovation Summit, which drew 245 attendees, and connected small businesses with Army acquisition programs and laboratories, research institutions, DOD agencies and other SBIR-awarding agencies.

09

SEP

- Conducted the Army Applied SBIR Contracting COE kick-off with senior Army leaders.
- Connected with more than 200 small businesses and non-traditional defense companies at Fed Supernova, hosted by the Capital Factory entrepreneurial center in Austin, Texas.
- Facilitated the first Army Applied SBIR Program Prime Contractor Roundtable to give large businesses information on the new program management approach and how primes play an important role in working with small business innovators.
- Held the second Army SBIR Innovation Summit, which informed more than 100 attendees from across the Army R&D and acquisition enterprise of recent changes in the Army SBIR portfolio management approach and how stakeholders across the Army can engage with SBIR programs at ASA(ALT) and Army Futures Command.

OUR ACCOMPLISHMENTS



LEVERAGING A MULTI-PRONGED APPROACH

- ▶ The Army Applied SBIR Program releases contract opportunities on key technology topics on an ad hoc, flexible schedule, based on Army needs, to capitalize on the latest small business innovations to drive the program's agility and impact to the Army. Contracts include Phase I (feasibility) awards for up to six months in development time and up to \$250,000; and Phase II (demonstration), Direct to Phase II and Phase II Enhancement awards for up to 18 months in development time and up to \$1.7 million.
- ▶ The Army xTech Prize Competitions target small businesses to uncover novel dual-use science and technology solutions through annual and semi-annual pitches and demonstrations, which issued nearly \$3.42 million in cash prizes and \$9.5 million in contract awards in FY21. Army Applied SBIR leverages the Army xTech Program to allow small business innovators to demonstrate their technology solutions, and through hybrid xTechSBIR challenges offers monetary prizes as well as opportunities for Phase I or Direct to Phase II SBIR contract awards.
- ▶ Transition Broker Teams shift SBIR engagement from a passive, topic-driven process to a strategic synchronization and integration of program activities led by Army program owners and centered around major technology markets evolving with the Army's keen interests.
- ▶ The Army SBIR Accelerator Program is a cohort opportunity designed to provide Army Applied SBIR awardees with guidance in understanding the Army ecosystem, empower businesses to become successful in dual-use ventures, work toward fully transitioning their technologies into the Army, and ultimately grow their capabilities and portfolio.
- ▶ The Army SBIR Contracting Center of Excellence awards, administers and closes out all Army Applied SBIR Phase I and Phase II contracting resources under one centralized office, with a goal of reducing time to contract from four to six months to as quickly as 45 days or less.

MOVING FORWARD

As our mission carries into 2022, the Army Applied SBIR Program will strengthen Army program acquisition, capability modernization and our industrial base.

PRIORITY TECHNOLOGY ECOSYSTEMS

We have worked with independent technology scouts to focus on five technology ecosystems with rapid innovation and market growth in the private sector. Honing our expertise in these key areas will maximize the likelihood of successful transition and integration with Army programs of record.



AI/ML

- Automatic Detection
- Biometrics
- Synthetic Data
- Training Algorithms



SMART SENSORS

- Targeting
- Detection
- Real-Time Data Fusion
- Data Distillation



AUTONOMY

- Robotic Platforms
- Unmanned & Optionally Manned Vehicles



CLEAN TECH

- Climate Technology
- Energy Resilience



IMMERSIVE & WEARABLES

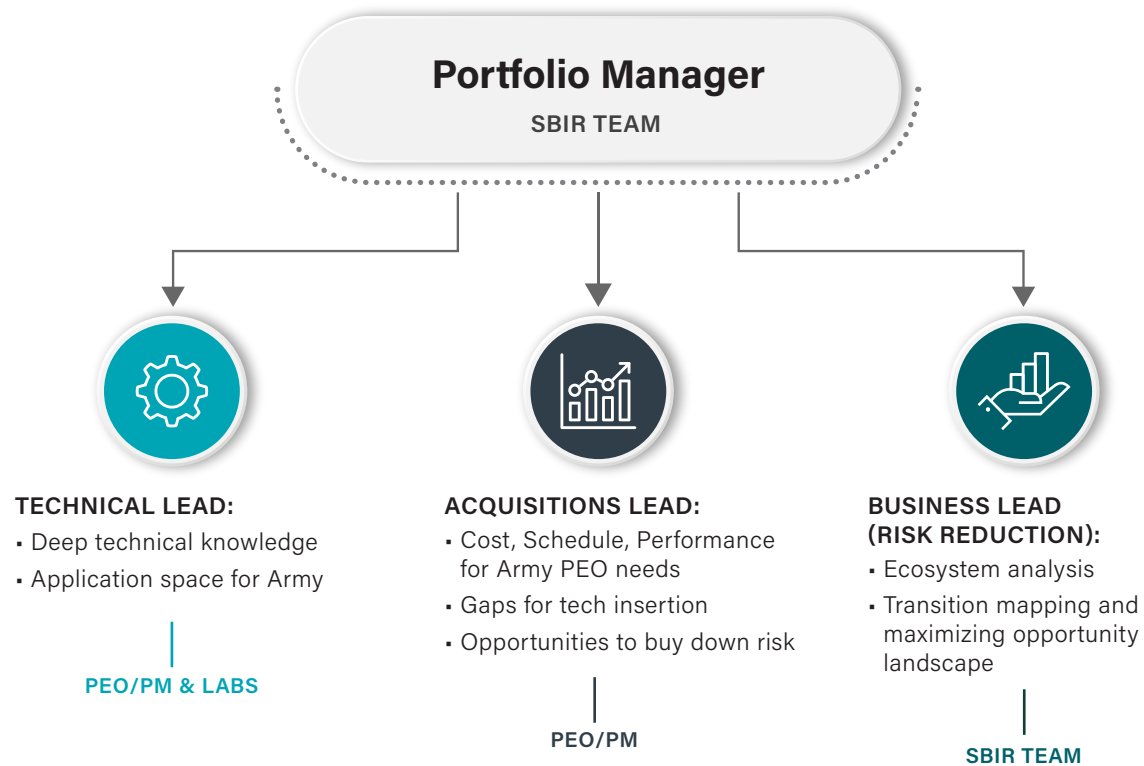
- Augmented Reality
- Virtual Reality
- Mixed Reality
- Wearable Technologies

Through the Army Applied SBIR Program, we structure that anchor and timeline to accomplish my objectives. And it's not my money; it's not in my budget line. It's coming from Army SBIR dollars. It's other people's contracting bandwidth, and I get the benefit of influencing technology up front and leverage potential innovations at that subsystems level. It's a win-win.

COL Jeff Jurand, Autonomy TBT Member
Project Manager, Maneuver Combat Systems, PEO Ground Combat Systems

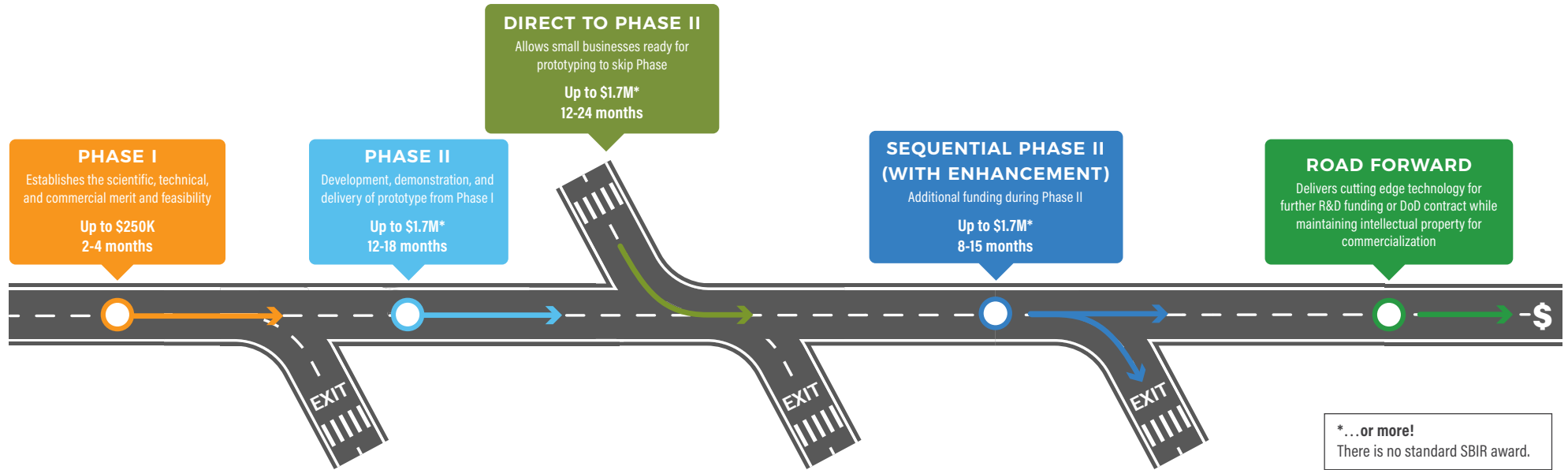
NEW TRANSITION BROKER TEAMS

Our Transition Broker Teams — including new teams for Clean Tech, Immersive and Wearable Technology, and System Monitoring and Radar Targeting (SMART) Sensors — will continue to serve as a catalyst for economic growth, engaging the innovation ecosystem, identifying critical needs, injecting dual-use technologies and transitioning them to Army programs.



FULLY OPERATING ARMY SBIR CONTRACTING COE

The Army Applied SBIR Contracting Center of Excellence was established to streamline the execution of contracts and funding in service to both Army programs and small businesses. Fully operational as of March 2022, the COE aims to decrease time to award by 75% compared to the previous timeline. This rapid response supports the Army Applied SBIR Program's approach to releasing contract opportunities on a rolling basis, enabling Army programs to seek timely, innovative solutions for their most critical modernization priorities.



THE ARMY DRIVES OUR FOCUS

By 2028, the Army must be ready to deploy, fight and win decisively against any adversary, anytime and anywhere. To meet this goal, the Army needs to develop technology at the rate of innovation, which can only happen with the support of industry, whose investments in research and development are one of the key drivers for bringing new ideas and capabilities into the Army.

The Army Applied SBIR Program has a renewed focus on putting funding towards the Army's 2028 vision by prioritizing technology development in areas such as Artificial Intelligence and Machine Learning, Autonomy, Sensors, Climate Change and Energy Resiliency, and Immersive and Wearable Technology. We have evolved the program to be more efficient and relevant to small businesses by streamlining the proposal requirements, reducing time to capital, and incentivizing rapid contracting after the initial contract phases, so that commercial success and technology partnership with the Army are not mutually exclusive.

We remain committed to furthering the Army's modernization and sustainment priorities that will equip our Soldiers for the future multi-domain operating environment. We will work with Army stakeholders to invest in topics and technologies that directly align with critical needs, focusing on what is most likely to transition to actual Army use so that our ultimate customer — the Soldier — can fight, win and survive.

Visit www.armysbir.army.mil to learn more about:

- ▶ The Army SBIR|STTR Programs
- ▶ Contact us with questions

Visit SAM.gov to learn more about:

- ▶ Current Army SBIR|STTR opportunities

Email us:

- ▶ usarmy.pentagon.hqda-asa-alt.mbx.army-applied-sbir-program@army.mil

