

Project Profile: New York

Impact Statement

NYSTAR leveraged the Industry Resilience grant broadly to engage multiple components of the state's innovation ecosystem to enhance defense suppliers' support of the DoD mission. NYSTAR is fulfilling grant objectives through awareness sessions, consultations to aid defense suppliers diversify their production through new technologies and improved processes, and cybersecurity compliance initiatives. As a result, New York's defense suppliers are better able to increase the DoD's resiliency, lethality, readiness, and cybersecurity preparedness.

Key Project Takeaways

Through its Industry Resilience grant, the New York IR Team, led by Empire State Development's Division of Science, Technology and Innovation (NYSTAR), and its network of 70 centers providing direct assistance to New York State companies, gained tremendous understanding about the nature of the defense sector and its needs in New York. With funding from OEA, the IR Team learned about existing resources that can support defense suppliers and identify gaps in available assistance. The team conducted outreach to stakeholders and suppliers, enhancing awareness about the importance of the defense sector in the state. Through these efforts NYSTAR identified companies that supply critical components and is matching them with services that enhance defense companies' competitiveness in obtaining defense contracts by fostering innovative technologies with defense applications and ensuring compliance with cybersecurity best practices. The nascent implementation work will sustain and grow companies' ability to securely provide products with increased technological superiority through improved processes, while helping suppliers diversify into commercial markets to survive fluctuations in defense spending over time.

Rationale

DOD direct spending in New York amounted to \$6.35 billion in FY 2017, even with a decline of 33% from a peak of \$9.5 billion in 2010. While DoD contracts only accounted for 0.4% of New York's GDP, DoD contract dependence is as high as 4.8% of GDP in parts of the state. Over the years, the state has played a strong role in the development and application of aerospace and defense technologies. New York is home to a strong industry segment of equipment producers and related service organizations. In fact, 63% of DoD contracts in New York are for supplies and equipment, supporting the project's focus on manufacturers.

Between 2010 and 2017, the manufacturing sector accounted for 68% of all defense contracts in the state. Unfortunately, out of New York's nearly 700 defense contractors, the National Institute of Standards and Technology estimates roughly only 30% comply with DFARS cybersecurity requirements. With nearly 70% of small to medium sized businesses facing a cyber-attack in the past year, and each attack costing an average of \$2.99 million, cyber-attacks pose an existential threat to the small to mid-



sized businesses comprising New York's defense industrial base. In addition, New York is home to important defense and aerospace R&D. The state generally scores in the top 10 for DoD SBIR/STTR awards and hosts three Manufacturing USA Institutes (including one sponsored by DoD, the AIM Photonics Institute in Rochester, focusing on integrated photonics solutions for commercial and defense applications), with significant connections to numerous others.

This project leverages existing investments and ecosystem and increases the long-term capabilities of NYSTAR (including regional New York Manufacturing Extension Partnership, or MEP centers) and key partners to: reach defense suppliers; assist defense-related companies with market downturns; increase defense-related companies' compliance with NIST 800-171 cybersecurity control requirements; and support promising early stage companies initially focused on defense markets. This benefits DoD by making its contractors more resilient to spending fluctuations while ensuring access to the latest promising technologies and discoveries made by a secure network of defense suppliers.

Program Activities

To strengthen defense and aerospace suppliers and diversify their customer base, the grantees focused their IR efforts on three strategies: analysis and planning, market outreach, and implementation.

NYSTAR hired Chmura Economics & Analytics to complete a Market Study analysis on the Defense Industry in New York State. Chmura's analysis allowed ESD to map the Defense Industry Landscape, learn about projections of future defense spending across manufacturing industries, and gain insight into the industries meriting focus for diversification.

For the planning portion, ESD documented existing assets that already provide relevant services to defense suppliers, assets that are well-positioned to do so, and gaps in capacity and expertise. ESD continues to track challenges reported by defense suppliers for which solutions or resources are not currently accessible or available. ESD seeks to record such gaps, and then connect with resources to benefit current and/or future IR programs.

For outreach, the team conducted customer discovery meetings with companies and, through engagement with identified assets, determine the needs of defense companies. NYSTAR convened events (e.g., Solutions Forums, Defense Diversification Workshops) for the project team to inform DoD suppliers about this effort, better understand their needs, and arrange for matchmaking between companies and resource partners. NYSTAR will continue partnering with FuzeHub, New York's statewide MEP Center sub-recipient, using its portal to record information about companies and make connections to diversification services and service providers. NYSTAR also has enlisted the support of FuzeHub in their defense workshops, where FuzeHub's role as a statewide MEP center facilitated matching company needs with NYSTAR partner services. NYSTAR continues to engage with defense companies throughout the assistance process, engaging multiple components of the NYSTAR manufacturing services network.

¹ https://keepersecurity.com/assets/pdf/Keeper-2018-Ponemon-Report.pdf



As part of NYSTAR's defense diversification strategy, initial outreach and customer discovery helped NYSTAR determine the following services for defense suppliers in the implementation phase: new market strategies, Technology Driven Market Intelligence (TDMI), export services, Global NY, product development, worker training, coordination with New York MEP personnel "embedded" in the DoDfunded Manufacturing USA Institutes, and business/operational process improvements. NYSTAR currently offers two different grants to New York defense companies. The first, the Defense Industry Assistance Grant, helps manufacturers partnering with a non-profit organization that able to provide them assistance to accelerate their project diversify into a new commercial space. The second, the Defense Diversification Grant, consists of two-stages of financing: the first stage helps companies develop a diversification plan; and the second aids the implementation of a diversification plan resulting in a new technology or product. NYSTAR has granted sixteen awards to defense companies looking to expand the market for their products, with six pending applications being scored. NYSTAR will track the following economic impacts: jobs created; jobs retained; non-job impacts (increased company revenues, company cost savings, government funds acquired, non-government funds acquired); new markets accessed by companies through diversification assistance; and new markets identified by companies through diversification assistance.

Initial outreach and customer discovery also played a vital role in NYSTAR's cybersecurity preparedness strategy, allowing NYSTAR to target specific defense-dependent regions with cybersecurity assessment, attestation, and planning services. Overall, the program aims to assist 30 companies across the state meet DFARS/NIST requirements. As of writing, through NYSTAR's sub-grantee at Mohawk Valley Community College's Advanced Instituted for Manufacturing, twenty-two grantees have been approved to receive NIST 800-171 compliance services. Among companies receiving cybersecurity compliance assistance, NYSTAR will track the following economic impacts: new sales (increased company revenues); retained sales (by revenue); new jobs; and retained jobs.

Resiliency Impacts

Increasing Awareness of the Defense Industrial Base

Using the Asset Engagement & Market Outreach Plan, the Defense Diversification Liaisons perform substantial on-the-ground industry outreach and information collection through meetings with companies and engagement with identified assets. NYSTAR uses ongoing customer discovery to determine the needs of defense suppliers through regular meetings with companies, participating in cybersecurity workshops, solutions forums, emerging technologies showcases, and diversification workshops to engage, inform, and learn about their challenges.

Regional workshops played a key role in engaging defense industry partners, such as ADDAPT, a Long Island aerospace manufacturers association, that facilitate access to networks of defense suppliers. These points of engagement provide NYSTAR staff with the information needed to match companies to NYSTAR services, and those of their partners, with FuzeHub's online customer information portal facilitating cross-regional partnerships between MEP centers and companies. Consistent outreach through the FuzeHub portal allows all NYSTAR's resources and partners to coordinate outreach,



eliminating duplication and encouraging cooperation between centers. In addition to identifying defense companies seeking to diversify, NYSTAR has also proved successful engaging with companies seeking increased business with the DoD, coordinating with defense focused assets such as MD5, the Griffiss Institute and the Defense Innovation Lab to assist companies in the development of defense-focused products and technologies.

Enhancing Force Multipliers to Support the Defense Industrial Base

NYSTAR funds 28 university research centers, 30 incubators, 11 MEP centers, and many other innovation centers. This network has great potential to identify and match available and/or emerging technologies with companies that could use technology to develop new or enhanced products or improved processes to benefit the DoD. For example, this project connected RPI, a NYSTAR-funded Center for Advanced Technology focused on automation and a partner of the ARM institute, with Pvilion. Pvilion designs and manufactures flexible PV solar structures and products, including the "Hands-off Expeditionary Tent System," for the DoD using its Airbeam Technology. Ranging from solar powered charging stations to solar powered curtains, building facades and clothing, its expertise is in the integration of manufacturing processes. Nothing is manufactured without the process taken into consideration, and nothing is designed without mass-production, installation, and shipping in mind. The company enlisted RPI's Center for Automation and Technology Systems to assist with the redesign and redevelopment of an automated tent structure, originally a product for the DoD market, to meet the demands of the commercial market. RPI's engineering and design support helps minimize the time and effort needed to set up the automated tent structure, while simplifying the design in a manner that facilitates the manufacturing process. Commercial success benefits the DoD because it ensures a reliable supply chain during downturns. Success could also potentially reduce unit costs for the DoD through increased production volumes, improved manufacturing capabilities, and improved technology.

Commercial Diversification of Defense Companies to Sustain the Industrial Base

NYSTAR's IR Team is reaching DoD suppliers through: cold calls; emails; LinkedIn; workshops; events; and the division's funded centers and partners. Once identified, the team works with the company to determine the roadblocks hampering diversification and/or evolution of the technology and connect them to appropriate partners for assistance. Diversification benefits DoD in at least two ways: reducing the supplier's dependence on any single customer, increasing the likelihood of survival over time and across different economic situations, and exposing the supplier to different markets, processes, and technologies, which may spur creativity and applications to the defense sector. Examples include Inertia Switch Inc., Jay Moulding, and MPI.

Inertia Switch Inc. specializes in acceleration switches of all kinds, but also manufactures limit switches, prostheses, incandescent digital displays, and many other standardized and unique products. The company relies on DoD spending for 60% of their current revenue. They are replacing the current Quality Management System with a new Enterprise Resource Planning System to increase process capabilities and reach higher volume customers in the commercial aerospace industry. Commercial success will ensure a reliable supply chain during downturns and reduce unit costs by increasing production efficiency including shortening the manufacturing life cycle. Along with cost and time saving



benefits, Inertia Switch's success will allow more time for innovation and improvement of their products.

Jay Moulding started out as a plastics manufacturer and now specializes in thermoset compression and thermoplastic injection molding to manufacture lanterns in accordance with US military standards and specifications. At least 80% of the revenue Jay Moulding generates is from the DoD. The company seeks to redevelop their military grade emergency lantern for commercial use, so it is still rugged but produced at a lower cost and shorter cycle time. Commercial success will benefit the DoD because it will ensure a reliable supply chain during downturns. Success could also potentially reduce unit costs for the DoD through increased production volumes and improved manufacturing capabilities.

MPI is a worldwide leader in wax-room investment casting equipment. The company is working with their local MEP center to redesign and redevelop current investment casting machines with new modular and interchangeable assemblies that allow for increased automation. Commercial success will benefit the DoD because it will ensure a reliable supply chain during downturns. Success also means increased functionality of machines, ease of maintenance and upgrades, greater process control, lower cost of ownership, greater throughput (reduction in setup and processing time), and quicker time to market which all translate to time and cost savings for the DoD.

Cost Savings to DoD Through Business Diversification or New Products/Customers

NYSTAR's IR Team is participating in TDMI and Tech Scouting (TS) training, a service offered to companies as part of the grant as a result of training provided by the Research Triangle Institute (RTI). As part of the training, NYSTAR's IR Team is working through a TDMI real-life example with Mosaic Microsystems, a company that has developed a glass interposer to replace the current silicon interposers that dominate the industry. An interposer is an electrical interface routing between one socket or connection to another. The use of glass will improve conductive properties at a lower cost, making it an attractive product to bring to market.

Mosaic Microsystems is a small-scale systems integration and packaging company focused on heterogeneous packaging and the use of glass as a platform material. They are working with the TAP (Test, Assembly, and Packaging) Facility which is part of AIM Photonics (The American Institute for Manufacturing Integrated Photonics). Commercial success will help the DoD by offering a new materials solution and by potentially solving issues the DoD may already be experiencing with the use of silicon in their interposers. NYSTAR supplements their TDMI services through partnerships with RTI and the Syracuse Science and Technology Center. NYSTAR worked with RTI to develop a standard agreement to provide scaled down TDMI services to New York manufacturers, and is currently in the process of forging a collaboration between RTI and Syracuse to bring a TDMI specialist to its Science and Technology Center.

Finger Lakes Textiles (FLT) manufactures cold weather headwear. Over 90% of their revenue is from the United States Armed Forces. They are unique in that their workforce is composed of individuals with all levels of developmental and other disabilities. In addition, a portion of the sale of every cap, hat, balaclava and gaiter is used to support vital programs and services for individuals with developmental



and other disabilities. FLT, with the help of the Seneca Chamber of Commerce, is bringing their product line to the commercial market and increasing their capabilities to service other private label retailers in the contract manufacturing business. Commercial success will benefit the DoD because it will ensure a reliable supply chain during downturns. Success could also mean reduced unit costs for the DoD through increased production volumes and improved manufacturing capabilities, as well as the potential for an expanding product line.

Phoebus Optoelectronics custom designs and commercializes advanced light and radiation controlling and detecting materials and devices (i.e., Imaging, Sensing, Detecting, Filtering). They combine physical phenomena from the fields of metamaterials, metasurfaces, photonic crystals, and plasmonics to create next-generation devices that operate throughout the electromagnetic spectrum, from ultraviolet to microwave. Phoebus has extensive history working with the DoD, NASA, NSF, and defense contractors including Raytheon, Lockheed Martin, and Bell Aerospace. The company used SBIR grants from the DoD and DHHS to design biosensors to detect biological toxins, but required additional funding supplied by NYSTAR's IR Grant to adapt the technology to commercial markets. The company is redesigning a portable biosensor device in two ways: replacing the currently used glass substrate with a nanofabricated plasmonic metasurface and making the device suitable for commercial markets outside of the DoD applications. The company is expected to enter the growing market for healthcare and medical industries. Approximately 68% of that market share is biosensors, for which there is no dominant market leadership yet. Commercial success will benefit the DoD because it will ensure a reliable supply chain during downturns in an emerging technology area. Success could also mean reduced unit costs for the DoD through increased production volumes and improved manufacturing capabilities, as well as the potential for an expanded product line. Commercial success also means a new technology/material that could be used as a replacement/improvement across a variety of military applications.

Environmental Composites, Inc. (ECI) is a custom manufacturer of advanced textiles. The company is commercializing a new material technology for the composites industry and evaluating the scrap material generated during this process to be recycled into a filament for additive manufacturing. The new raw material is a consolidated thermoplastic sheet reinforced with carbon fiber, and while unique to the market it is compatible with the common thermoforming equipment. The material is ideal for high-volume applications such as automotive, transportation, and consumer goods due to high performance, lower-cost, and compatibility with high-speed manufacturing and already has garnered interest with OEMs and Tier One suppliers. TDMI services provided by NYSTAR's IR Team identified opportunities for ECI's textiles in the groundwater remediation and industrial conveyor belt markets, after finding the automotive industry was unlikely to partner with a small, unproven supplier. Commercial success would benefit the DoD because it would provide a new option in the supply chain for lower-cost materials in applicable products.

Vader Systems provides 3D metal printing solutions that enable partners to build their products faster than existing market solutions with safer handling and less waste. The company uses advanced 3D printing to eliminate many issues inherent in legacy 3D printing processes. Vader's patented Magnet-o-



Jet™ technology uses the control and precision of an electromagnetic field to propel liquefied metals to produce high integrity parts faster than traditional methods. Vader is now working on a redesign and redevelopment of their Magnet-o-Jet™ machine to increase the capabilities of processing even higher temperature metals and alloys, specifically 2000 and 6000 aluminum, copper, and bronze, that the DoD has in demand. Commercial success would provide DoD with a new option in the supply chain for these high temperature liquid metals for applicable military and aviation needs. This capability could enable field repairs of vehicles and equipment.

Lithoz America, a subsidiary of Austrian company Lithoz GmbH builds and sells additive manufacturing equipment to produce high-performance ceramic parts that are widely used in the electronics, aerospace, and biomedical industries. Lithoz America is working on expanding the capabilities and offering ceramics for additive manufacturing with properties that other manufacturers cannot yet produce through their advanced technology and processing in additive manufacturing. Commercial success would help the DoD because there would be a reduced cost due to a decrease in the cost and transportation of shelf life materials, new access to materials and processing in the US for organizations that cannot easily gain access to the Austrian market, and the potential to replace current materials to meet new challenges.

Precision Optical Transceivers' new product arm, Veluxsys, leverages expertise in photonic devices and radio frequency work to develop optical transceivers for data centers. Data centers generally opt to use transceivers to relay signals for internal networks instead of traditional fiber optic or ethernet cable susceptible to failure under high temperatures. TDMI services provided have helped Precision Optical identify how to compete with larger network-signal companies such as Cisco. Larger network-signal providers earn their largest profit margin on replacement parts. By charging companies relatively lower rates for network-signal replacement parts, Precision Optical Transceivers can capture a larger share of the commercial market. TDMI services are also providing the company research into potential DoD applications for its technologies.

Xallent develops hardware and software tools for imaging, testing, and analyzing semiconductors and film at the nanoscale. Xallent's semiconductor test adapter systems use nanomachine test probes that offer reduced capital investments, shorter set up and testing cycle times, and lower support costs. Xallent was awarded a grant by NYSTAR's IR Team for its partnership with the Cornell NanoScale Science and Technology Facility (CNF) and Sandia National Laboratory to develop a new type of Multiple Integrated Tips test probe for the semiconductor industry. Xallent's partnership with CNF and Sandia will improve Xallent's quality control procedures, throughput, and time to market for its nanomachine test probes, all resulting in time and cost savings for the DoD, and the ability to supply a commercial market during defense procurement downturns.

Lethality Impacts

Innovation through the Development of New Intellectual Property or New Technologies

NYSTAR's position as the statewide convener of innovation assets enables the IR Team to access a variety of organizational and partner resources to facilitate the development of new defense



technologies. Working with AIM Photonics, the IR Team developed a DoD track for the University of Rochester's Light and Sound Interactive Conference. The DoD track gave companies the opportunity to hear from DoD officials about key technologies of DoD interest, and pitch new technologies to DoD procurement officers. New York's Innovation Resource Center, responsible for aiding start-ups and entrepreneurship, connects inventors with the statewide entrepreneurial ecosystem to commercialize technologies developed in New York laboratories. These efforts expand opportunities for New York companies and inventors to develop and commercialize new technologies with defense applications.

Battle Sight Technologies is a veteran-owned company that has developed a visible light and infrared surface marking system using technology spun out from the Air Force Research Lab. The MARC DIA is a pressure-activated chemiluminescence writing instrument that enhances communication in low-light and no-light conditions with the capability to be invisible to the enemy. NYSTAR partners are working to align them with NYS research assets that can assist with their product's materials and chemistry needs and in providing manufacturing scale up research and support through FuzeHub. This has great potential for DoD to provide technological superiority at reduced cost and less waste compared to current solutions. Viable commercial opportunities with law enforcement agencies would diversify company customers and strengthen its competitive position.

Cybersecurity Preparedness

Many manufacturers expressed a need to evaluate their cybersecurity preparedness. Using a second IR grant from OEA, NYSTAR awarded the Advanced Institute for Manufacturing at Mohawk Valley Community College (AIM-MVCC) as its sub-recipient to administer compliance assessments, implementations, and final audits for 30+ defense-focused manufacturers. With an existing cybersecurity cluster around the Air Force Research Lab, AIM-MVCC already had experience providing cybersecurity assessment services based around DFARS requirements to manufacturers in the Mohawk Valley. AIM partnered with FuzeHub and the Manufacturing and Technologies Enterprise Center (MTEC) to ensure efficiency and success in the rollout of their proposed plan. FuzeHub is a statewide NY MEP and MTEC is the Hudson Valley MEP. With this partnership, AIM is providing cybersecurity assessment services to over thirty companies. Additionally, AIM provided a "Train the Trainer Workshop," where AIM staff provided education and step-by-step training in cybersecurity assessment to businesses and MEP center staff.

Cosmo Optics, founded in 1957, manufactures optical components and assemblies for photonic systems used in aerospace, defense, government, medical, imaging, telescopes and microscopy. Cosmo Optics' technologies are used in missile targeting, air and underwater sensors, LIDAR, and bio-identification. Currently, 45% of Cosmo Optic's annual revenue is derived from DoD contracts. The company received the Defense Diversification Assistance and Cybersecurity Assistance Grant from NYSTAR. Regarding the former, Cosmo Optics partnered with the Center for Economic Growth to use technology driven market intelligence services to develop a strategic business plan that monopolizes Cosmo's investment in MasterCam, an automation system for computer-numerically-controlled machining activities. Prior to this investment, Cosmo relied on entirely manual programming of its machining equipment. Using the Cybersecurity Assistance Grant, Cosmo Optics purchased cybersecurity assessment and compliance



services from MVCC-AIM. The OEA grants will not only secure Cosmo Optics' increasingly digital infrastructure, but also provide cost-savings to the DoD in the form of expanded commercial opportunities in terms of increased volume and improved quality control processes via automation.

Hydroacoustics, Inc. is a world leader in the design and manufacture of unique high power, broadband, low frequency underwater acoustic sources based on continuous wave and impulsive source technology. Hydroacoustics' Hydroacoustic Low Frequency technology plays a vital role in support of anti-submarine warfare, with the technology also being used in communications, seismic exploration, oceanographic data collection and ocean surveillance. Their line of products includes Hydroacoustic Low Frequency (HLF) sources, Diver Interdiction Systems (DIS), Aquaculture Predator Protection Systems (APPS) and the Proteus® Series underwater Remote Operated Vehicles (ROVs). As a company of ten employees primarily relying on contracts from the DoD, Hydroacoustics lacked the resources to implement the NIST 800-171 requirements and faced a critical threat to its business should it not become compliant. MVCC-AIM is currently providing Hydroacoustics a suite of cybersecurity compliance services consisting of an initial assessment, implementation, final assessment and a formal letter of compliance. By complying with NIST/DFARS requirements, Hydroacoustics secures its digital infrastructure and maintains its status as an eligible DoD contractor, resulting in a continued, secure supply of acoustic sources to the DoD.

Other Community Benefits

Industries Impacted and Communities Served

In addition to providing services to the defense industrial base of New York, AIM-MVCC's cybersecurity expertise positively benefits the students and staff at Mohawk Valley Community College through knowledge transfer. Through co-location, AIM-MVCC and MVCC staff can share cybersecurity best practices and provide development opportunities for students. AIM-MVCC's work impacts adult education and apprenticeship programs offered by the College by working with professors to adapt curriculum to reflect best practices and industry trends. Through its engagement with businesses as part of the IR Grant, AIM-MVCC has become a talent source for local businesses in cybersecurity. The Institute matches students to local businesses with work opportunities in cybersecurity, including hiring MVCC interns to AIM.

Lessons Learned

Greatest Challenge

Engaging with OEMs and Tier 1 defense suppliers as referral sources for their suppliers was the greatest challenge for NYSTAR's IR Team. Tier 1 suppliers generally lack the need to diversify commercially or improve their cybersecurity capabilities, making the services provided by NYSTAR of limited value. In cases where NYSTAR's IR Team conducted technology scouting and set up a recruitment event with a Tier 1 supplier, they were reluctant to provide lists of their suppliers. These Tier 1 suppliers could provide tremendous value to the IR Team through sharing a list of their partners, aiding NYSTAR's outreach and engagement.



Most Important Lessons Learned

The New York State IR Team found that by conducting outreach to businesses through multiple channels and formats, businesses were more likely to engage with their services. Fuzehub's capacity to act as a central "hub" for NYSTAR IR outreach and communications allowed the state to have multiple partners advertise IR related services to businesses along with a suite of specialized services directed at that business. Fuzehub's centralized engagement-tracking portal and statewide reach allowed the IR Team's various MEP partners to refer companies to specialized MEP and partner services offered in other regions of the state and track connections to the company made by all MEPs. Fuzehub limited duplication of efforts and helped match companies to the correct resources, including the state's IR grants, that individual MEPs might not be aware of on their own. NYSTAR fostered an atmosphere of cooperation among its various MEP centers and partners through continued collaboration and engagement across the centers via update calls and meetings, such as a Solutions Forum. This builds trust among the various service providers that encourages them to seek the best solution for the company, instead of being territorial.

The NYSTAR IR Team found that having an independent review panel for applications allowed the team to provide grant writing assistance to its applicants. Initially, applicant companies often submitted proposals for MEP services that failed to properly frame the desired project objectives. By requiring companies to partner with a non-profit center with the capability to accelerate their project and to help them complete the grant-writing process, companies articulated their technical needs more clearly. Better proposals led to selection of companies that were a good fit for the program, clearer program objectives and successful projects.

Changes to the Work Plan

Initially, the NYSTAR IR Team only provided one grants for Defense Diversification Assistance that was designed to help companies implement a diversification plan or marketing strategy developed around commercialization, product development or a new basic technology. However, after engaging with defense suppliers across the state, the IR Team found that some defense suppliers lacked a diversification plan or marketing strategy altogether. With this insight, the IR Team separated their Defense Diversification Assistance Grant into two stages, with Stage 1 offering funding to develop a diversification plan, and Stage 2 offering funding to implement a diversification plan.