Q4 2020

### DEFENSEWERX

#### CORPORATE NEWSLETTER

#### Contents

Mission Updates - p.2-3 ERDCWERX - p.4-5 Doolittle Institute - p.6 MGMWERX - p.7-9 SOFWERX - p.10-13

### **Mission Updates**

2020 has proven to be an unprecedented year with all companies adapting and learning a new way of conducting business and life. DEFENSEWERX (DWX) and the DEFENSEWERX Family of Innovation Hubs have continued serving our government partners and growing the vibrant ecosystems that breed innovation. This newsletter serves to update stakeholders on the valuable work that we are doing to further our mission and the missions of our government partners.

Despite limitations in place as a result of Covid 19, the Strategic Partnerships team has remained active. While Zoom has served as an invaluable tool, the team looks forward to the day when in-person meetings and engagements can resume.

A major highlight of the quarter involved a trip to Montgomery, Atlanta, and Augusta. On the trip, Brian Liesveld and Greg Britton met with community leaders. The primary objective of the gatherings was to identify how to put together a grant reinvestment opportunity to support the DWX ecosystem.

In Atlanta, the Partnerships team met with Cyber Fusion Innovation Center (CFIC) Director, Tony Carver. The group toured the Advanced Technology Development Center (ATDC) to learn how they have achieved an impressive success rate of 90% of businesses that start the accelerator remain in business after five years. After gaining useful insights, the team traveled to Athens, GA. The DWX team then attended a dinner with the pioneers of innovation and plank holders for the Georgia Cyber Center (GCC). The team had in depth conversations regarding Georgia's future innovation plans and how they can support CFIC.

The Partnerships team has also been working with the leaders in the State of Florida and nationally to enhance the DWX mission and ecosystem awareness. The team has met with Space Florida, the Florida Defense Support Task Force (FDSTF), Triumph Gulf Coast, FloridaMakes, Gener8tor, Okaloosa County EDC, Office of Economic Adjustment, Economic Development Association (EDA), the Small Business Administration, Department of Energy, members of the Florida Legislature, and other prominent leaders in the State of Florida for academia and business development opportunities.

DWX participated in a 'Reset the Florida Economy' task force led by the Associated Industries of Florida to bring recommendations to the legislature and the Governor. DWX was invited as a state leader to be on the Florida Chamber Board to help shape Florida's future.

If your community has a group of innovation leaders, DWX corporate would love to visit and meet to ensure that DWX is helping to build the innovation ecosystem across all communities.

DWX continues to collaborate with our partners in the Department of Defense (DOD) to promote transparency across the ecosystem. DWX corporate staff communicates with Innovation Hub Directors and their DOD government representatives to collate Technology Needs Statements, Tech Focus Areas, and Capability Gaps in their respective organizations. DWX continuously participates in Joint Technology Scouting activities and communicates the after-action reports and Technology and Innovation area discoveries to our partners in the DOD. DWX utilizes the Technology Needs Statements

### **Mission Updates**

from our DOD partners to inform industry, academia, and other government innovators areas of interest for our customers on a regular basis. These conversations and documented needs also allow the DWX ecosystem and Hubs to share similar efforts and focus areas more seamlessly between partners.

Most recently, DWX participated in the Kansas Small Business Development Center (SBDC) Encountering Innovation Event and Virtual Pitch Session. 56 small, non-traditional technology developers presented to a tech scouting panel, with many more businesses participating in the virtual collaboration forum with DOD and other government representatives in attendance. DWX was asked to be a keynote speaker; giving an overview of the ecosystem, presenting our customer's needs, and offering ways to engage in our ecosystem across our Hubs. Multiple follow on discussions and tech link-ups will be the after action from this SBDC event.

DWX also presented as a keynote speaker at the Naval Agility Summit, an event coordinated by the USN leadership and NavalX. DWX presented an overview of the DWX Hubs and ecosystem, and novel pathways and methodologies that we employ to assist in DOD innovation and technology discovery/engagement. Short overviews of our Hubs were also presented to Navy and USMC leadership and avenues of collaboration were offered to the group. Follow on actions will include more pointed discussions with hub directors and government counterparts, with the purpose of transparent collaboration across the DOD and government for current and future efforts enabled by DWX.

DWX also served as a keynote speaker and technology panel judge for the Catalyst Campus "Tech Collision Event" and Pitch Sessions. (Over 50 companies pitched to the joint scouting panel) DWX also gave a keynote and served as a tech scouting panelist for the Ohio Triad pitch session event. The Ohio Triad had 32 companies participate in the pitch sessions on topics ranging from medical technologies to space based ISR capabilities. Participants were given information on how to join the DWX ecosystems and the needs of our government customers. DWX corporate also negotiated a no-cost agreement with Ratio Exchange to have full use and access of a novel technology scouting and discovery tool. The Ratio Exchange database and toolset will enable DWX to rapidly discover and engage technologies and innovation partners across the academia, industry, and government sectors for the benefit of our customers. Informative and educational sessions on employing the Ratio Exchange tool will be offered to each of the DWX Hubs and government partners.

DWX also coordinated with the Department of Energy to strategize a plan for "Lab Tech Days" hosted by DWX. The purpose of "Lab Tech Days" will be to provide a venue and process for DOE subject matter experts and technology developers to coordinate with DOD customer sets, and also interact with the always growing DWX ecosystem of non-traditional innovators/developers. The goal will be to facilitate purposeful collisions between DOE, DOD, and participants in the DWX ecosystem to discover and energize novel IP and technology development possibilities. The first Lab Tech Day is in the plenary stages - and will be announced as a "One-Hub" event with accessibility to all the DWX locations and customer sets.

We hope you enjoy reading more about the impactful work that the DWX family of hubs is doing.



### **ERDCWERX Supports ERDC Military Engineering Prototyping**



Industry and academia now have more options to pursue collaboration and contracts with the federal government. ERDCWERX, a DWX Innovation Hub and government partner with the U.S. Army Engineer Research and Development Center (ERDC), is seeking white paper submissions in response to prototyping opportunities in Military Engineering. Non-traditional defense contractors, with or without SAM.gov registration, are encouraged to join the ERDCWERX ecosystems at no cost to submit.

The ERDC is a significant source of military and civil works innovation for the DOD. With seven laboratories in

Mississippi, Illinois, New Hampshire, and Virginia, the ERDC has expertise in coastal and hydraulics, construction engineering research, cold regions research and engineering, environmental, geospatial research, goetechnical and structures, and informational technology.

"Our partnership with the ERDC aims to reduce barriers to industry participation in defense research," said ERDCWERX Director Paul Sumrall. "The submission process is simplified and turn-around time reduced. Our projects create a flexible mechanism for public-private collaboration."

Businesses and nonprofit research institutions may submit white papers against ten Military Engineering focus areas including geophysical sensors and data fusion, protection and survivability, and global access engineering.

"Research conducted at the ERDC addresses some of the world's toughest Military Engineering challenges," said Lynn Zanow, Partnership Intermediary Liaison of the Office of Research and Technology Transfer at the ERDC. "The Military Engineering business area provides innovative technologies and capabilities to the warfighter."

Selected white papers may receive an invitation for a solution pitch, demonstration, or a Request for Prototype Proposal within 60-90 days of submission.

To learn more about prototype opportunities and how to submit, visit www.erdcwerx.org/prototypeopportunities.





### **ERDCWERX Strengthens Capabilities with New Team Members**

ERDCWERX is pleased to announce the addition of three new team members to further enhance its mission of identifying new partnerships for innovation and commercialization with the U.S. Army Engineer Research and Development Center (ERDC). The individuals bring over 30 years of marketing, sales and project management expertise to ERDCWERX, which continues to build diverse, experienced staff.

**Lori Burke** (Events Manager) brings over 25 years of event planning, sales, marketing, and public relations experience to ERDCWERX. Burke is responsible for planning, coordinating and implementing all events, including virtual pitch presentations and technology demonstrations. Burke is a member of the Vicksburg-Warren County Chamber of Commerce Board of Directors, Public Relations Association of Mississippi, and Vicksburg Association of Marketing Professionals. She has served as past president of the Vicksburg Convention and Visitors Bureau Board of Directors as well as the United Way Board of Directors.

**Jason Courtney** (Project Manager – Innovation) brings a wealth of knowledge in project development, implementation, evaluation, and management. Courtney will manage and work closely with ERDC laboratories to promote new research collaborations, support ongoing partnerships with industry and academic research institutions, and accelerate commercialization of ERDC technologies. He is a member of AUTM, an organization for advancing technology transfer worldwide.

**Elyce Curry** (Special Projects Coordinator) will manage all aspects of client and guest relations. In addition, she will oversee key special projects and initiatives, and coordinate front-of-house operations for ERDCWERX. Curry is a member of the Mississippi Society of Association Executives and the Good Shepherd Community Center Board of Directors. She has served as a campaign cabinet member of United Way of West Central Mississippi.

"I am excited to be able to continue our momentum with recruiting talented, knowledgeable individuals such as Lori, Jason, and Elyce," said Paul Sumrall, director of ERDCWERX. "Their passion to work in a fast-paced organization with many tech transfer projects will strengthen our capability to advance our mission and impact."





5





### Speed.innovation.solutions

### **Doolittle Institute Presents LEGEACY Jr. Apprentice Pitch Day**

The Air Force LEGACY program, run by the Doolittle Institute's STEM Outreach team, was created as an opportunity for underserved and underrepresented youth to gain exposure and hands-on experience toward potential Air Force STEM careers. Phase II of the program, LEGACY Jr. Apprentice, consists of an 8week apprenticeship alongside and Air Force or DOD professional.



issued to several units at Eglin Air Force Base. Because of last fall's highly successful collaboration to plan and execute the inaugural Air Force SBIR Hypersonics Pitch Day, the Doolittle Institute reached out to Maj Madeline Jensen to assist with finding mentors. In short, Maj Jensen and LtCol Justin Smith assembled an Air Force Life Cycle Management Center team to mentor all five of Eglin's Air Force LEGACY Jr. Apprentice students.

Then, in a first of its kind effort aligned with Air Force S&T Strategy Objective 1, LtCol Smith and Maj Jensen challenged the LEGACY Jr Apprentices to each conceptualize and present a transformational Air Force capability concept. On July 23, the students "pitched" their concepts to an AFLCMC expert panel at the Doolittle Institute. A group of fictitious companies, created by our high school Jr. Apprentices, presented pitches for contracts supporting technologies such as reusable missiles, UAS IED detection, 100% yield crystals, drop pod robotic systems, and camouflage swarm robotics to deliver supplies on the frontlines.



Skills and knowledge gained through the apprenticeship resulted in excellent pitches by all the students, making the final contract award decision especially difficult for the expert panel. In the end, the contract went to the ARMET Group for their reusable missile project, with "funding" issued in the form of an Amazon gift card. It is through collaborations and mentorships like these that DI STEM strives to connect our current and future workforce to create a force for stability and impact.



# MGMWERX and AFCEA Joined Forces at Education Day

On August 25th, MGMWERX and the Montgomery Armed Forces Communications and Electronics Association's (AFCEA) Chapter's Education Foundation cohosted "Education Day," a virtual STEM event for students interested in learning more from leaders in STEM fields. During the event, Eric Sloan, Director of AFCEA Montgomery Chapter Education Foundation, led a panel discussion with local STEM professionals. At the conclusion of the event, students were able to test their knowledge with an interactive trivia game where students from Wetumpka and Booker T. Washington high schools took the top prizes.



7

"It was an outstanding privilege to collaborate with the MGMWERX team in providing STEM education to students in the River Region," proclaimed Sloan. "The professionalism of the staff and the MGMWERX platform provides seamless integration and interaction with the students attending the AFCEA Montgomery Chapter's Virtual Education Day. We look forward to furthering the partnership with the MGMWERX team for STEM/STEAM related events for our community in the near future."

MGMWERX facilitated the event over Zoom and planned the "Education Day" with collaborative input from Sloan. Panelists included STEM professionals Kalonij Gilchrist, Boyd Stephens, Jackie McKinney, and Jan Johnson. The virtual trivia portion, led by MGMWERX, offered \$1,000 in cash prizes to the schools the winners presently attended. MGMWERX and AFCEA were able to provide the cash prize.

At MGMWERX, we always look for opportunities to engage with local schools on behalf of our military partner at Air University. This was a chance to provide a virtual field trip to students during this peculiar time," stated Joyce Vaughn, Marketing and Events Manager at MGMWERX. "Also, we were able to partner with the local AFCEA chapter. We relish in collaborations like this that allow us to connect with the community and provide valuable information."





### Winners Announced for MGMWERX Space Case Study Prize Challenge

On July 20th, the final case study was submitted for the MGMWERX Space Case Study Challenge. After twenty-eight days of sharing this opportunity with professionals in space-related fields, twenty-six case studies were presented to Air University for evaluation. The evaluation team made up of Air University leaders and instructors decided that twenty-two case studies met the threshold to receive the base award of \$1,000.

"I was impressed at the level of response from so many talented scholars and professionals in spacerelated fields," stated Andrea Harrington, Air University instructor and key Air University representative for the challenge. "Given the tight turnaround time for the case study, I did not expect the number and caliber of submissions that we received. It was great to see the level of enthusiasm for the project!"

In addition to the award for meeting the requirements, the evaluation team assigned first, second, and third rankings for select submissions that were exemplary. Case studies from Matthew Kepfer, member of the United States Marine Corp and Ekaterina Tsetsura, Associate Professor of Strategic Communications at the University of Oklahoma, received third place. Mariel Borowitz, Associate Professor at Georgia Institute of Technology, was awarded second place. Matthew Moraguez, a doctoral candidate in the Department of Aeronautics and Astronautics at MIT where he also works as a research assistant in the Engineering Systems Laboratory, earned first place. Each ranking came with an additional monetary award and opportunity to further engage with Air University and MGMWERX.

"It's quite an honor. This challenge presented a unique opportunity to contribute as a civilian to improving the education of US service members who influence the design and operation of our national space assets," shared Matthew Moraguez, first place winner for the MGMWERX challenge. "I cannot overstate how incredibly rewarding it feels to be able to contribute to such an endeavor, especially as spacecraft have increasingly become an integral part of everyday life, including for communications, weather forecasting, and GPS navigation."

All qualified submissions from the challenge will be included in a database with other case studies that have been developed internally at Air University through their efforts with the Space Education working group for use by instructors who are teaching space lessons at AU.

This challenge, hosted by MGMWERX, has utilized scholars and professionals in space-related fields of civilian and military status, to maintain top-notch resources for the Air University. Such challenges continue to fulfill the mission of MGMWERX to provide a direct connection between the military and the best ideas and innovations outside of the military.



## MGMMERX

### Employee Spotlight: Joyce Vaughn, Marketing and Events Manager

Joyce is a proud graduate of the University of Montevallo where she earned her Bachelor of Science in Fashion Merchandising. After working in fashion and design, she returned to her hometown and took on a marketing role at Auburn University in Montgomery (AUM). While working at AUM, Joyce earned a Master of Business Administration. Over her career she has practiced marketing in the nonprofit arena, higher education, and in the medical profession. Joyce is a military brat born in South Carolina, but claims Montgomery, Alabama as home.

During her tenure on the MGMWERX team, her favorite project has involved leading a challenge to solicit case studies for Air University from thought leaders in space-related fields. When asked why this project was her favorite, she responded, "This challenge allowed me to do what I do best and that is to identify a problem and find a solution. The Space Case study challenge took lots of planning, coordination, communication, and quality marketing. I enjoyed the process and the successful outcome we were able to provide for Air University."

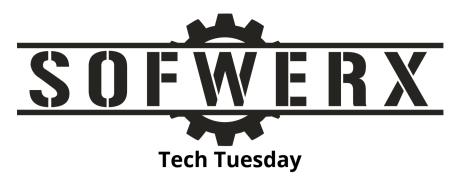
Joyce's leadership has been invaluable as MGMWERX has adapted to changes brought on by COVID-19. Joyce worked to provide digital alternatives for events and promotion. As VTC events picked up in popularity, Vaughn spearheaded a virtual trivia event, a virtual pitch event, and a web series spotlighting the network of thought leaders and innovators connected with MGMWERX. Joyce noted that all these initiatives took a concerted effort from the entire MGMWERX team to execute and that she enjoyed managing each project to ensure each product meets expectations.

Joyce's expertise and rainbows-and-unicorns outlook have been a tremendous asset to MGMWERX. However, what really sets her apart is her dedication to the community as whole.

Steve Werner, Director of MGMWERX, commented, "I've been very impressed with Joyce's work ethic and dedication to the MGMWERX mission. Just as impressive is her dedication to the local community. While maintaining an excellent caliber of work here at MGMWERX, Joyce serves as president of the

Family Sunshine Center Board of Directors, with oversight of the local nonprofit organization. She is also closely involved with downtown development as a member of the Montgomery Downtown Business Association and a board member for the Five Points Cultural Commission. Her extensive involvement in so many areas in the local community has brought connections and community support for the MGMWERX mission that we may not have had otherwise. We are very fortunate to have Joyce on the MGMWERX team!"





Long before innovation became a buzzword, the United States Special Operations Command (USSOCOM) was leading the charge for advanced technologies within the DOD. With increasing capability needs, it remains a constant priority to equip the Warfighter for tomorrow's battlefield. To assist in this endeavor, USSOCOM leverages SOFWERX to discover best-of-breed capabilities to keep the Operator safe, efficient, and highly optimized.

SOFWERX categorizes innovation into three fields:

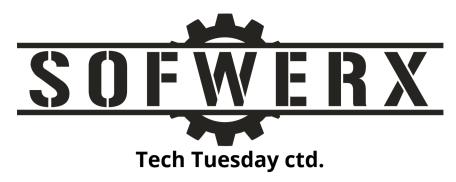
- 1. Incremental: Incremental innovation serves existing customers or markets that may involve new, improved, or refined products or services. This is usually tied closely to the core business' objectives.
- 2. Adjacent: Adjacent innovation involves expansion into different businesses or customer arrangements, leveraging the company's expertise in novel ways. For government, this often indicates the adoption of dual-use technologies.
- 3. Transformational: Transformational Innovation involves the creation of new businesses to serve unique markets and customers. Considered to be the most high-risk style of innovation, transformational innovation often requires revolutionary capabilities.

On 19 May 2020, SOFWERX established Tech Tuesday, an effort to identify and discover transformational levels of technology. This is an unclassified forum which connects traditional and non-traditional partners with cutting-edge capabilities to interested government representatives. The platform affords individuals the opportunity to pitch their unique solutions in a 30-minute session every Tuesday from 1500-1700 ET. SOFWERX has accumulated over 400 active members who have submitted to the forum, with a rapidly growing list of government attendees.

"Thank you for allowing us access to government decision makers to support our Warfighters in such a well-structured manner," said James Miller of Pivot Industrial Limited. "These platforms are especially helpful to non-traditional government contractors. On behalf of these types of companies, we are grateful to SOFWERX."

The streamlined process is simple. The first step is for interested offerors to submit their capabilities for review. Once the technology has been verified as transformational, SOFWERX provides selected offerors a date and time to demonstrate. During the allotted session, selectees have the opportunity to speak directly with organizations such as USSOCOM, DHS, DIA, CIA, FBI, DOE, DOJ, and more.





All presenters are considered equal in the process, regardless of history working with government. To date, SOFWERX has facilitated nearly 100 presentations, and all POCs have been contacted for follow-up conversations.

"Tech Tuesday is the easiest, fastest way to get your new technology in front of military decisionmakers," stated Rodger Goosen, CEO and founder of ROGOFire. "It was great to show military leaders the new lifesaving technologies we are working on."

The need for innovation in the military will only increase moving forward. SOFWERX and USSOCOM are making strides to



anticipate those needs ahead of time, ensuring Special Operations Forces Soldiers are always equipped for the battle ahead. To join the initiative, visit sofwerx.org/techtuesday and either submit a capability or sign up to participate in the scheduled presentations. Together, we can discover solutions believed to be outside the realm of the possible.





Countering Weapons of Mass Destruction (CWMD) has become a priority for multiple organizations within the Department of Defense. One aspect of this program is to develop the Next Generation Chemical, Biological, Radiological, and Nuclear (CBRN) Mask. On 26 May 2020, SOFWERX, in concert with USSOCOM, the Joint Program Executive Office for Chemical, Biological, Radiological, and Nuclear Defense (JPEO CBRND), the U.S. Army Combat Capabilities Development Command Chemical Biological Center (CCDC CBC), and the Defense Threat Reduction Agency (DTRA), conducted a virtual Government Only Collaboration Event (CE) to identify desirements for this technology. The initiative has since become known as AIM VIPER: A Joint, Accelerator for Innovative Minds (AIM) Versatile Integrated Protection with Encumbrance Reduction (VIPER) effort.

During the ideation session, government representatives determined trade space and translation lessons learned across all levels of protection of the mask. This included low, medium, and high levels of protection across unanticipated, combat support, tactical ops, and hazardous response threat levels.

Approximately 35 government representatives were divided into five separate working groups to discuss limiting factors and ways to overcome those limitations. By the end of the event, the working groups developed and prioritized over 30 desirements that were provided to industry, academia, and laboratories in preparation for future efforts.

The AIM VIPER initiative continued on 25 June 2020, when SOFWERX hosted a virtual CE with more than 110 government, industry, academia, and laboratory representatives. Government Subject Matter Experts (SMEs) briefed the participants on the focus areas, desirements, and operational needs for the capability.





**Challenges are opportunities** 



13

On 07 – 08 September 2020, SOFWERX hosted the AIM VIPER Assessment Event (AE). Out of 38 capabilities submitted, government stakeholders downselected 15 that focused on at least one of the following: reducing user burden, interoperability, tailored protection, or face seal. Represented companies for each technology were invited by government stakeholders to present and/or demonstrate their solutions in virtual one-on-one sessions.

Following the AIM VIPER AE, four companies were identified whose technologies met the identified requirements. The government stakeholders will continue working with the selected groups to enhance the CBRN Mask and better equip the Warfighter.

