

# Emergent Defense

**TOP U.S.  
DEFENSE CITIES**

**MISSION CRITICAL  
MINERALS**

**IMPACT  
100**

**THE MOST IMPACTFUL  
ORGANIZATIONS  
WITHIN THE DEFENSE  
INDUSTRY ECOSYSTEM**

**OPTRONICS MARKET  
RAPIDLY EXPANDING**





# OPPRESSORS BEWARE. WE HUNT PREDATORS.

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# Bringing the Defense Industry Together

If you grew up in Cleveland, Ohio, as both Tim Crane, our editor-at-large, and I did, you would probably know that Don King, one of the most famous boxing promoters of all time, grew up there as well.

Many can remember the fights he promoted, or better yet, the boxers, including Muhammad Ali, Mike Tyson, George Foreman, Evander Holyfield, Larry Holmes and Roberto Duran. His abilities to create exposure for these bouts were legendary. He once said, "I don't promote boxing, I promote people. Boxing is a catalyst to bring people together."

Connecting with many individuals within the defense community since our magazine launch last fall has been exhilarating. We can say that there are so many stories to share that it has made us truly appreciate the task before us. You, our readers, are making headways that not only look cool in the photos you see here in the magazine but enable us all to live in the safety you provide.

When looking at ways that we could share stories about new technology and the inner workings within the defense ecosystem,

we, like Don King, figured the best way to do this was to share more about you and your organizations. Thus, the launch of the inaugural Emergent Defense Impact 100 awards.

This program called for nominations from our audiences both in print and digital, and we couldn't be happier with the number of responses. All nominations for the program have been reviewed and winners were selected by our Global Editorial Board.

We can admit that we are just scratching the surface at the vastness of the entire defense ecosystem. Tim and our team, however, have done a diligent effort in sorting the awardee list for your review and benefit. As always, we welcome your feedback. What organizations and whom did we leave out? Please let us know. Just like the Thrilla in Manila, what could be better than to see another round?



*Eriq Sussman*



**Paul Wilson** is a former combat Marine and the inventor of a proven U.S Patented Firearms Management System. His extensive experience encompasses a broad background in weapons, tactical operations, software engineering, cyber security, cloud architecture, AI and Big Data.



**David Holthaus** is an award-winning, independent journalist based in Cincinnati, Ohio, with more than 25 years experience covering business, urban affairs, government, health care and commentary. He is a graduate of Kenyon College and the Indiana University Graduate School of Journalism.



With a professional journalism career spanning more than 40 years, **Terry Troy's** work has appeared in publications as varied as *Ohio Business Magazine* and *Scientific American*.

## Top 5 Online Stories

- 1** *What to Expect When You're Expecting DoD Business, Part 1* by the Editors
- 2** *Flying Across Borders* by Terry Troy
- 3** *What to Expect When You're Expecting DoD Business, Part 2* by the Editors
- 4** *Innovation Center Takes Off* by Bryn Dippold
- 5** *Tiger Traps* by Colonel J.P. Clark

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*Emergent Defense*.



## SOUTHWEST



Raytheon's NGJ

**Raytheon** of Tucson, Arizona, has been awarded a \$84,166,532 fixed-price-incentive-fee modification to a previously awarded contract to increase quantity of all up rounds with containers, guided test vehicles and weapon load crew trainers. The modification brings the total cumulative face value of the contract to \$366,510,523 from \$282,343,991. Work will be performed in Tucson, Arizona, and is expected to be completed by July 31, 2028. The Air Force Life Cycle Management Center, Eglin Air Force Base, Florida, is the contracting activity.

## MIDWEST

**General Electric Co.** in Cincinnati, Ohio, was awarded a ceiling \$3.5 billion indefinite-delivery/indefinite-quantity modification to a previously awarded contract for technology maturation and risk reduction services for the execution of the prototype phase of the Next Generation Adaptive Propulsion program. Work will be performed in Cincinnati, Ohio, and is expected to be completed by July 11, 2032. The Air Force Lifecycle Management Center, Wright-Patterson Air Force Base, Ohio, is the contracting activity.



The GE90

## MOUNTAIN-PLAINS



Rockwell Collins's Training Program

**Rockwell Collins Inc.** in Cedar Rapids, Iowa, was awarded a \$23,992,398 fixed-price-incentive-fee, firm-fixed-price modification to a previously awarded cost-plus-incentive-fee contract. This modification exercises options to procure 68 airborne subsystem pods, three fixed ground subsystems, nine remote range units and three portable support equipment subsystems, and delivery of contract data requirements lists in support of full rate production for the Navy's Tactical Combat Training System (TCTS) II program. Additionally, this modification exercises an option to provide on-site training requirements via one training iteration for the TCTS II program. Naval Air Warfare Center Training Systems Division, Orlando, Florida, is the contracting activity.

## WEST

**Northrop Grumman Systems Corp.** of Redondo Beach, California, has been awarded a \$27,580,082 cost-plus-fixed-fee modification to a previously awarded contract for the Evolved Strategic Satellite Communications Rapid Prototyping Special Study #6 effort. The contract modification provides for a special study for Technical Maturation and Risk Reduction performing trade space analysis with continued systems engineering support to evaluate and inform feasibility and function for Space Segment design. The modification brings the total cumulative face value of the contract to \$408,909,620. Work will be performed in Redondo Beach, California, and is expected to be complete by June 15, 2025. The Space Systems Command, Los Angeles Air Force Base, California, is the contracting activity.

## MIDATLANTIC

**Teledyne FLIR Defense Inc.** in Elkridge, Maryland, was awarded a \$74,226,486 hybrid contract to integrate sensors onto the M1135 Flat Bottom Hull Stryker. Work will be performed in Elkridge, Maryland, with an estimated completion date of Feb. 2, 2029. Army Contracting Command, Aberdeen Proving Ground, Maryland, is the contracting activity.

## SOUTHEAST

The Department of Defense announced Jan. 23 an award to **Hillsborough County Public Schools** from the Office of Local Defense Community Cooperation. This includes a \$86,374,326 grant as the Federal share of a larger \$107,967,908 project to replace Tinker Elementary/Middle School at MacDill Air Force Base in Tampa, Florida.

This project will address facility capacity and condition deficiencies that placed Tinker Elementary/Middle School as the 60th school on the 2019 Deputy Secretary of Defense “Public Schools on Military Installations Priority List.” Upon completion, 927 pre-kindergarten-through-eighth-grade students will be supported through the project.

In correcting the identified facility condition and capacity issues at Tinker Elementary/Middle School, this grant keeps faith with service members, improves the quality of education for defense-connected students, aids in the recruitment and retention of vital skills at MacDill Air Force Base, and enhances partnerships between the communities and the installation.

## NORTHEAST

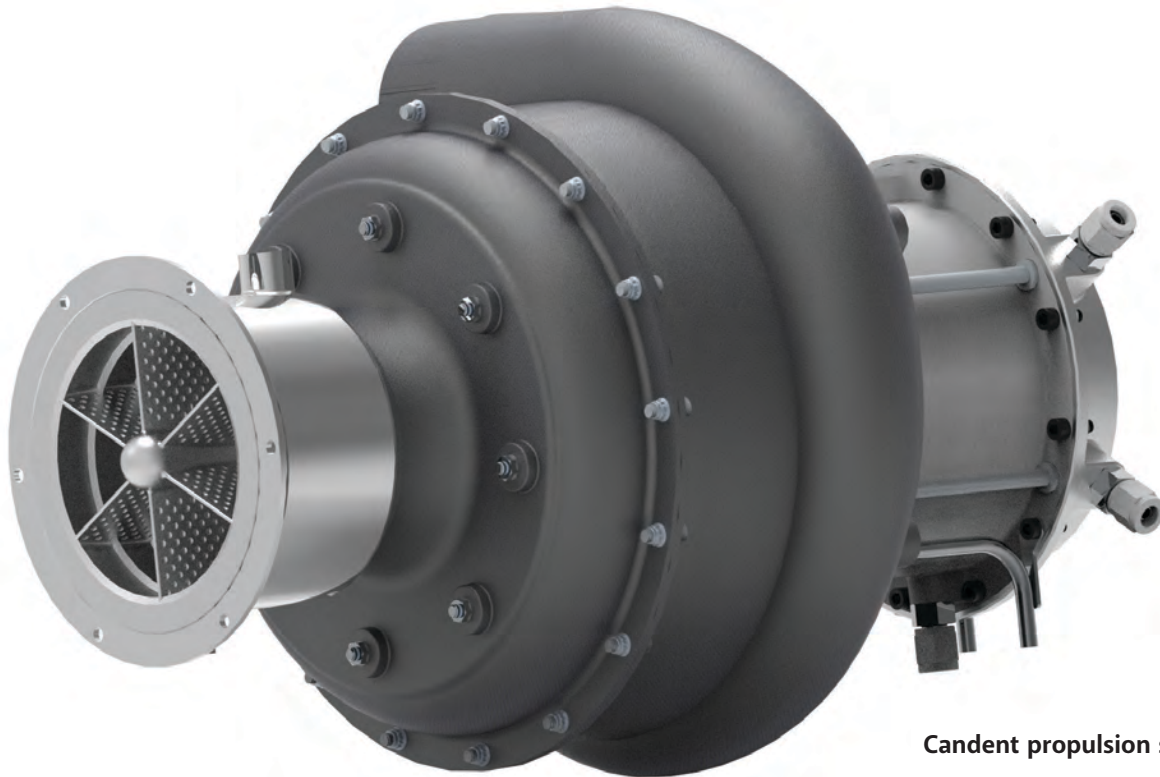
**General Dynamics Electric Boat Corp.** of Groton, Connecticut, was awarded a \$35,544,057 cost plus fixed fee modification to a previously awarded contract for planning and execution of USS Hyman G. Rickover Post Delivery Work Period on Feb. 6, 2025. Work will be performed in Groton, Connecticut, and is expected to be completed by Feb. 22, 2026. The Supervisor of Shipbuilding Conversion and Repair, Groton, Connecticut, is the contracting activity.



**General Dynamics Electric Boat Corp.**

# Bascom Hunter Acquires Candent Technologies

THE A&D IS ADDING CANDENT'S ADVANCED SYSTEMS TO ITS OFFERINGS



Candent propulsion system

**B**ascom Hunter, an aerospace and defense (A&D) company headquartered in Baton Rouge, Louisiana, recently announced that it has acquired **Candent Technologies**, a provider of propulsion and power systems.

Candent specializes in advanced turbomachinery, small heavy-fuel engines, quiet propulsors for marine vessels, electric-driven thrusters, electrical power generation, air compressors, 3D-printed heat exchangers and energy recovery systems. These systems are designed to provide reliable, high-density power and propulsion solutions in compact packages for various sectors, including military, commercial and government entities.

"Candent has a long history of designing and developing state-of-the-art power systems for challenging applications. The company has deep domain expertise and a strong focus on the customer mission," says Andrew McCandless, Bascom Hunter's CEO. "Candent is a great company that shares Bascom Hunter's

commitment to technical excellence, quality and customer satisfaction. I'm excited about the expertise that their employees will bring to Bascom Hunter for power systems."

This acquisition broadens Bascom Hunter's portfolio by adding power systems to its product offerings. Candent's legacy of engineering excellence and technological innovation aligns with Bascom Hunter's commitment to delivering best-in-class solutions to its customers.

Candent will be joining Bascom Hunter's Xcelaero division. Xcelaero is a leader in providing environmental control systems (ECS) and components for harsh operating conditions within the A&D market. The business has a large catalog of components and systems, and provides bespoke solutions. Xcelaero designs equipment to provide high performance while also being low weight, low noise and highly reliable. In addition, its hardware is designed to meet the challenging requirements, certifications and qualification for the A&D market. ■



# A Tactical Edge

HOW FATHOM5 IS ENGINEERING THE FUTURE OF DEFENSE READINESS



**T**he nature of maritime advantage is shifting. Success depends less on steel alone and more on the intelligent, resilient software connecting sensors, systems and sailors.

Recognizing this, the Navy is moving towards data-driven operations to maximize fleet readiness. Delivering these capabilities requires overcoming traditional acquisition hurdles and building trust in new technology.

**Fathom5**, an Austin-based technology portfolio company, delivers capability at the intersection of AI and operational technology—the “grease” that keeps critical systems running. By partnering with the Department of Defense to advance secure infrastructure development, it is advancing its mission to build machines that utilize and share data to provide real-time analysis and control at a level of granularity it says has never before been possible. Its work is grounded in deep engineering expertise, reflected in 17 patents spanning actuator technology and cybersecurity.

Its ongoing collaboration with the Navy recently yielded the first deployment of an Artificial Intelligence platform aboard a U.S. Navy warship, the USS Fitzgerald (DDG-62). Fathom5 wrote the software for the eRM v4 system, which remains installed and operational today. Processing over 5,000 sensor readings per second from critical hull, mechanical and electrical systems, eRM

v4 provides real-time insights into equipment health. This allows crews to identify potential failures proactively, moving away from a “run-to-failure” model and ensuring ships stay mission-capable.

This pioneering success underscores the critical need for a robust, underlying software foundation, a tactical Platform as a Service (PaaS). To effectively integrate diverse capabilities like autonomous systems, novel sensors and adaptive strike tools, the fleet needs a common, secure software platform. Acquiring advanced components without this integrated ecosystem limits their potential.

This lack of a consistent ecosystem poses a significant challenge in defense innovation. Specifically, the small, agile and many platforms envisioned as the future of warfighting are not cybersecure, have inconsistent AI hosting environments and do not natively integrate with military communications.

TempestOS solves this with a platform offering that is cybersecure and has a proven record of AI success at the tactical edge. It’s the digital backbone for software-defined warfare, designed with cybersecurity and operational technology resilience woven into its core. This ensures secure and efficient operations even in contested environments, protecting critical systems for the U.S. Department of Defense. Fathom5 is setting new standards, providing the essential framework for a more agile, intelligent and ready force. ■

# A Critical Need

AARON DOWD, CEO OF RARE EARTH SALTS, DISCUSSES  
THE IMPORTANCE OF RARE EARTH ELEMENTS



Aaron Dowd



BY TERRY TROY

**W** Rare earth elements have been known to the scientific community for years, but they are grabbing more headlines than ever. But what are rare earth elements, and why are they so important? *Emergent Defense* asked Aaron Dowd, CEO of Rare Earth Salts, a Nebraska-based company in rare earth element separation and purification, to tell us about these critical materials and the increasing importance they will play in future manufacturing.

## WHAT ARE RARE EARTH ELEMENTS?

Rare earth elements are a set of 17 elements in the periodic table that play a critical role in our national security, energy independence, environmental future and economic prosperity.

The predominant end user of rare earth elements is the permanent magnet industry, which is essential to batteries, electric vehicles, medical equipment, military applications, smartphones and wind turbines due to their unique physical and chemical properties.

## WHAT ROLE DOES YOUR COMPANY PLAY IN THE GLOBAL SUPPLY CHAIN?

We are a rare earth element separation company. The whole supply chain for the critical mineral industry including rare earth elements is referred to as mine to magnet. Rare earth elements generally come from one of three sources: mineral deposits, ionic clays or recycled material. Rare earths must then be extracted and concentrated from their original source material. Rare Earth Salts then takes those concentrates and separates and purifies the individual rare earth elements.

The founder of Rare Earth Salts, Dr. Joseph Brewer, has developed unique, patented technologies for the extraction, concentrating, separation and refinement of rare earth elements. Rare Earth Salts has developed innovative commercial processes

to produce three of the Big Four most critical rare earths: Neodymium, Praseodymium and Terbium.

The U.S. Department of Defense recently announced an award to Rare Earth Salts for developing and expanding production of Terbium and other heavy rare earth elements.

Terbium's unique properties are essential for use in numerous military and defense applications, including in the alloys and permanent magnets used in precision-guided munitions, advanced radar systems and other electronic warfare technologies; phosphors crucial for night-vision equipment and other display systems used in military operations; sensors and actuators (magnetostrictive devices) used in sonar systems, vibration dampening and other applications that require precise control and detection capabilities; and critical solid-state devices integral to advanced military electronics, including lasers and other optical systems used for targeting and communication.

## WHY ARE RARE EARTH ELEMENTS BECOMING SO IMPORTANT?

This age of technology is also the age of critical minerals, with vast geopolitical implications. It is vital that we secure domestically sourced rare earth elements and build domestic processing infrastructure of rare earth elements.

China controls 90% or more of the downstream market for rare earths, which threatens the rest of the global supply chain for rare earths.

## HOW FAST IS THE MARKET FOR RARE EARTHS EXPECTED TO GROW?

The global magnet rare earth oxide consumption is estimated to grow from \$15.1 billion to more than \$46.2 billion by 2035. The growth is fueled by rising investments in critical materials and energy security from governments. ■



# Michigan Defense Expo 2025 (MDEX)

**T**he Michigan Defense Expo 2025 (MDEX), hosted by the Michigan Chapter of the National Defense Industrial Association, was held April 8-10 at the Macomb Sports and Expo Center in Warren, Michigan. This event was designed to foster connections among Department of Defense (DoD) leaders, contractors and small businesses across the country. For over 15 years, MDEX has been a platform for exploring the latest advancements in defense technology, networking with top industry professionals and discovering new opportunities in the defense supply chain.

**1** Day 1's Army Leadership Panel **2** The event included several panels featuring experts in various fields. **3** FROM LEFT: Maj. Gen. Michael B. Lator; Valde Garcia, NDIA-MI president; Karen Kiewski, Women in Defense (WID)-MI president; and Chuck Cogger, Association of the United States Army (AUSA) Arsenal of Democracy president **4** The event's show floor **5** GM Defense's Infantry Squad Vehicle (ISV) was on display. **6** FROM LEFT: Retired Lt. Col. Misty Martin, moderator; Col. Kevin D. Bradley; Mike Cadieux, Ground Vehicle Systems Center; and Lt. Col. Michael Keathley **7** The event had a reception for networking. **8** FROM LEFT: Michael Devlin, Waséyabek Development Company; Michigan Governor Gretchen Whitmer; Wyatt Hughes, Baker Engineering; and Phil Wills, VES LLC



# IMPACT 100

BY THE EDITORS

**T**he U.S. Department of Defense may be the face of the defense industry in the United States, but those who work in and alongside it know that hundreds of companies, nonprofits and educational institutions have helped it find success. The public may not know the names of these organizations, but we feel their impact all the same.

In *Emergent Defense Magazine's* inaugural Impact 100 list, we name 100 of the most impactful organizations within the defense industry ecosystem. The 100 organizations were selected based on their demonstrated ability to bring creative solutions, affect constructive change, collaborate successfully and assist in combat readiness. The organizations on this list include Emerging Tech, Facilitators, Investors, Traditional Defense Companies, Universities and Venture-Backed, Dual-Use Companies, each of which has its own unique impact and is an important part of the defense economic ecosystem.

This list honors 100 companies, but there are many more companies making an impact as well. Interested in nominating your organization next year? Visit [emergentdefense.com](http://emergentdefense.com) to sign up for our free newsletter so you'll be the first to know when nominations go live.

## 8VC

### Sector

Investors

### Mission

Partners with leading entrepreneurs and innovators to build technology platforms that create lasting economic and societal value.

### U.S. Headquarters

Austin, TX

### Website

[8vc.com](http://8vc.com)

## Anduril Industries, Inc.

### Sector

Venture-Backed, Dual-Use Companies

### Mission

American defense technology company that specializes in advanced autonomous systems.

### U.S. Headquarters

Orange County, CA

### Website

[anduril.com](http://anduril.com)

## Amentum Services, Inc.

### Sector

Traditional Defense Companies

### Mission

Global leader in advanced engineering and innovative technology solutions.

### U.S. Headquarters

Chantilly, VA

### Website

[amentum.com](http://amentum.com)

### Anduril Industries, Inc.



## American Dynamism of Andreessen Horowitz

### Sector

Investors

### Mission

Invests in founders and companies that support the national interest.

### U.S. Headquarters

Menlo Park, CA

### Website

[a16z.com/american-dynamism/](http://a16z.com/american-dynamism/)

## Association of the United States Army (AUSA)

### Sector

Facilitators

### Mission

Nonprofit educational and professional development association serving America's Army and supporters of a strong national defense.

### U.S. Headquarters

Arlington, VA

### Website

[ausa.org](http://ausa.org)



## Axiom Space, Inc.

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Supports expanded utilization of the ISS today while creating the first international commercial space station.

### U.S. Headquarters

Houston, TX

### Website

axiomspace.com

## BAE Systems

### Sector

Traditional Defense Companies

### Mission

Develop, engineer, manufacture, and support products and systems to deliver military capability, protect national security and people, and keep critical information and infrastructure secure.

### U.S. Headquarters

Falls Church, VA

### Website

baesystems.com



BAE Systems



## Baker Industries, a Lincoln Electric Company

### Sector

Emerging Tech

### Mission

Engineering and manufacturing partner committed to serving the aerospace, defense and space industries.

### U.S. Headquarters

Macomb, MI

### Website

bakerindustriesinc.com

## Battelle Memorial Institute

### Sector

Emerging Tech

### Mission

Conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers.

### U.S. Headquarters

Columbus, OH

### Website

battelle.org

## Black Cape, Inc.

### Sector

Emerging Tech

### Mission

Delivers cutting-edge software engineering, data analysis and AI/ML solutions.

### U.S. Headquarters

Arlington, VA, & Austin, TX

### Website

blackcape.io

## BMNT Inc.

### Sector

Facilitators

### Mission

Helps governments and their partners solve complex problems through a combination of innovation methods and a network of experts.

### U.S. Headquarters

Palo Alto, CA, & Arlington, VA

### Website

bmnt.com

## Booz Allen Hamilton, Inc.

### Sector

Traditional Defense Companies

### Mission

Builds technology solutions using AI, cyber and other cutting-edge technologies to advance and protect the nation and its citizens.

### U.S. Headquarters

McLean, VA

### Website

boozallen.com

## Brelyon

### Sector

Emerging Tech

### Mission

Developed the first-ever, headset-free virtual display for multiple applications.

### U.S. Headquarters

San Mateo, CA

### Website

brelyon.com

## C3 AI

### Sector

Emerging Tech

### Mission

Enterprise AI software provider for the defense industry, with a focus on improving readiness, decision making and intelligence analysis.

### U.S. Headquarters

Redwood City, CA

### Website

c3.ai

## CACI International, Inc.

### Sector

Traditional Defense Companies

### Mission

Delivers expertise and differentiated technology to U.S. government customers in support of critical national security missions.

### U.S. Headquarters

Reston, VA

### Website

caci.com

## CAE, Inc.

### Sector

Traditional Defense Companies

### Mission

Provides modeling and simulation technologies, integrated training solutions and training system support services for various defense and government agencies.

### U.S. Headquarters

Chantilly, VA

### Website

cae.com

CAE, Inc.



## Capella Space

### Sector

Venture-Backed, Dual-Use Companies

### Mission

First U.S. company to launch a Synthetic Aperture Radar (SAR) constellation.

### U.S. Headquarters

San Francisco, CA

### Website

capellaspace.com

## Capital Factory

### Sector

Facilitators

### Mission

Statewide network to link entrepreneurs in Texas with investors, customers and talent from all over the world.

### U.S. Headquarters

Austin, TX

### Website

capitalfactory.com

## Cenith Innovations LLC

### Sector

Emerging Tech

### Mission

Delivers data-driven, tailored solutions for complex defense and commercial needs.

### U.S. Headquarters

Sacramento, CA

### Website

cenithinnovations.com

## Chainalysis

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Offers cryptocurrency investigation and compliance solutions to global law enforcement agencies, regulators and businesses.

### U.S. Headquarters

New York, NY

### Website

chainalysis.com

## Cummins, Inc.

### Sector

Emerging Tech

### Mission

Specializes in diesel and alternative fuel engines and generators, and related components and technology.

### U.S. Headquarters

Columbus, IN

### Website

cummins.com



## Databricks

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	San Francisco, CA
<b>Mission</b>	<b>Website</b>
Data and AI company.	databricks.com

## Dataiku

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	New York, NY
<b>Mission</b>	<b>Website</b>
Platform for Everyday AI, enabling data experts and domain experts to work together to build AI into their daily operations.	dataiku.com

## Dcode

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Washington, DC
<b>Mission</b>	<b>Website</b>
Organization and accelerator program that helps connect emerging tech companies with government.	dcode.co

## Decisive Point Group

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	New York, NY
<b>Mission</b>	<b>Website</b>
Venture capital firm investing in critical technologies for defense, energy and infrastructure.	decisivepoint.com

## Defense Entrepreneurs Forum

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	St. Petersburg, FL
<b>Mission</b>	<b>Website</b>
Connects people by convening events, forging partnerships and amplifying initiatives to inspire and foster a culture of disruptive innovation in the U.S. national security community.	def.org

## EnerSys

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Reading, PA
<b>Mission</b>	<b>Website</b>
Global leader in stored energy solutions for industrial applications	enersys.com

## Epirus Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Torrance, CA
<b>Mission</b>	<b>Website</b>
High-growth technology company that created Leonidas, a sophisticated high-power microwave system.	epirusinc.com

## Fathom5

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Austin, TX
<b>Mission</b>	<b>Website</b>
Builds the operating system for the next generation of industrial technologies.	fathom5.com

## FedTech

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Arlington, VA
<b>Mission</b>	<b>Website</b>
Venture studio and accelerator that specializes in transforming lab-created research and development into market-ready solutions.	fedtech.io

## Founders Fund

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	San Francisco, CA
<b>Mission</b>	<b>Website</b>
Invests in smart people solving difficult problems, often difficult scientific or engineering problems.	foundersfund.com

## General Dynamics Corporation

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Reston, VA
<b>Mission</b>	<b>Website</b>
Global aerospace and defense company.	gd.com



General Dynamics Corporation

## Global SOF Foundation (GSOF)

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Tampa, FL
<b>Mission</b>	<b>Website</b>
Nonprofit that brings together military, government, industry and intellectual leaders for the purpose of advancing the capability and efficacy of SOF.	gsof.org

## GM Defense

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Washington, DC
<b>Mission</b>	<b>Website</b>
Delivers integrated vehicles, power and propulsion, and autonomy and connectivity solutions to global defense, security and government markets.	gmdefensellc.com



GM Defense

## Greater Tampa Bay Chapter of the National Defense Industry Association (NDIA)

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Tampa, FL
<b>Mission</b>	<b>Website</b>
Promotes a responsive government and industry national security team through productive interactions with Defense activities in the Tampa Bay region.	ndiatampabay.org

## Harpoon Ventures

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	San Diego, CA
<b>Mission</b>	<b>Website</b>
Invests in founders and companies that support the national interest.	harpoon.vc

## HawkEye 360

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Herndon, VA
<b>Mission</b>	<b>Website</b>
Leader of spectrum-based geoanalytics.	he360.com

## Honeywell, Ltd.

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Charlotte, NC
<b>Mission</b>	<b>Website</b>
Helps organizations tackle automation, aviation, and energy transition challenges.	honeywell.com

## Hyperkelp, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	San Clemente, CA
<b>Mission</b>	<b>Website</b>
Provides access to any type of ocean data from any point on the ocean's surface with hardware and software platforms.	hyperkelp.com



## ICON Technologies, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Alpharetta, GA
<b>Mission</b>	<b>Website</b>
Engaged in the business of providing information technology solutions and software development services to businesses worldwide.	iconbuild.com

## In-Q-Tel, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Arlington, VA
<b>Mission</b>	<b>Website</b>
Identifies, evaluates and leverages emerging commercial technologies for the U.S. national security community and America's allies.	iqt.org

## Indiana Defense Network (NCCO) of the Sagamore Institute

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Indianapolis, IN
<b>Mission</b>	<b>Website</b>
Connects state, federal and private interests with services, programs, and training and testing capabilities.	sagamoreinstitute.org/ncco/

## Intel Labs of the Intel Corporation

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Hillsboro, OR
<b>Mission</b>	<b>Website</b>
Global research organization that delivers solutions in AI, computing, security and privacy.	intel.com

## International Business Machines (IBM)

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Armonk, NY
<b>Mission</b>	<b>Website</b>
Develops AI, automation and cloud computing for advanced mission readiness.	ibm.com

## Israel Aerospace Industries North America

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Herndon, VA
<b>Mission</b>	<b>Website</b>
Technology and innovation leader specializing in developing and manufacturing advanced, state-of-the-art systems for air, space, sea, land, cyber and homeland security.	iaionorthamerica.com

## JobsOhio

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Columbus, OH
<b>Mission</b>	<b>Website</b>
Ohio's private economic development organization.	jobsohio.com

## Johns Hopkins University

<b>Sector</b>	<b>U.S. Headquarters</b>
Universities	Baltimore, MD
<b>Mission</b>	<b>Website</b>
America's first research university.	jhu.edu

## Kinedyne, LLC

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Prattville, AL
<b>Mission</b>	<b>Website</b>
Provides high-quality products made in mind for some of the toughest military applications.	kinedyne.com

## L3Harris Technologies, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Melbourne, FL
<b>Mission</b>	<b>Website</b>
Delivers end-to-end technology solutions connecting the space, air, land, sea and cyber domains in the interest of national security.	l3harris.com

## Leidos

### Sector

Traditional Defense Companies

### Mission

Industry and technology leader serving government and commercial customers with digital and mission innovations.

### U.S. Headquarters

Reston, VA

### Website

leidos.com

## Leonardo DRS

### Sector

Traditional Defense Companies

### Mission

Leading provider of defense technologies.

### U.S. Headquarters

Arlington, VA

### Website

leonardodrs.com

## Lockheed Martin Corporation

### Sector

Traditional Defense Companies

### Mission

Specializes in defense tech, solving complex challenges, advancing scientific discovery and delivering innovative solutions for aerospace and defense.

### U.S. Headquarters

Bethesda, MD

### Website

lockheedmartin.com

## Lux Capital

### Sector

Investors

### Mission

Partners with companies and founders tackling issues related to aerospace, efficiency and more.

### U.S. Headquarters

New York, NY, & Menlo Park, CA

### Website

luxcapital.com

## Lyten, Inc.

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Supermaterial applications company.

### U.S. Headquarters

San Jose, CA

### Website

lyten.com

## Massachusetts Institute of Technology

### Sector

Universities

### Mission

Convenes experts across disciplines to explore new intellectual frontiers and solve important societal problems.

### U.S. Headquarters

Cambridge, MA

### Website

mit.edu

## Mercury Systems, Inc.

### Sector

Traditional Defense Companies

### Mission

Leader in making trusted, secure mission-critical technologies more accessible to aerospace and defense.

### U.S. Headquarters

Andover, MA

### Website

mrchy.com

## Mesodyne

### Sector

Emerging Tech

### Mission

Developed the LightCell, which provides long-lasting, odorless, reliable power generation.

### U.S. Headquarters

Somerville, MA

### Website

mesodyne.com

## Microsoft Corporation

### Sector

Emerging Tech

### Mission

Developed Azure Quantum, which provides access to quantum computing hardware, software and solutions.

### U.S. Headquarters

Redmond, WA

### Website

microsoft.com

## Moonshots Capital

### Sector

Investors

### Mission

Seed-stage venture capital firm.

### U.S. Headquarters

Austin, TX

### Website

moonshotscapital.com

## National Advanced Mobility Consortium (NAMC)

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Ann Arbor, MI
<b>Mission</b>	<b>Website</b>
Nonprofit, member-led consortium made up of an expert team and approximately 500 member organizations	<a href="http://namconsortium.org">namconsortium.org</a>

## New North Ventures

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Manchester, NH
<b>Mission</b>	<b>Website</b>
Supports founders and companies with bold ideas and democratic values.	<a href="http://newnorthvc.com">newnorthvc.com</a>

## North Carolina Technology Transition (DEFTECH)

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Durham, NC
<b>Mission</b>	<b>Website</b>
Assist companies to become aware of and submit applications for federal and Department of Defense funding opportunities.	<a href="http://deftech.nc.gov">deftech.nc.gov</a>

## Northrop Grumman

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Falls Church, VA
<b>Mission</b>	<b>Website</b>
Brings next-level technology solutions to life in autonomous systems, cyber, C4ISR, strike, space, and logistics and modernization.	<a href="http://northropgrumman.com">northropgrumman.com</a>



Northrop Grumman

## Northwestern University

<b>Sector</b>	<b>U.S. Headquarters</b>
Universities	Evanston, IL
<b>Mission</b>	<b>Website</b>
Supports Northwestern research through strategic and operational partnerships.	<a href="http://northwestern.edu">northwestern.edu</a>

## Nvidia

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Santa Clara, CA
<b>Mission</b>	<b>Website</b>
Pioneer in accelerated computing.	<a href="http://nvidia.com">nvidia.com</a>

## Overmatch Ventures

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Austin, TX
<b>Mission</b>	<b>Website</b>
Early-stage venture investments in critical technologies, defense and space.	<a href="http://overmatch.vc">overmatch.vc</a>

## Palantir Technologies

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Denver, CO
<b>Mission</b>	<b>Website</b>
Develops software to allow customers to integrate and analyze all of their data.	<a href="http://palantir.com">palantir.com</a>

## Pallas Advisors

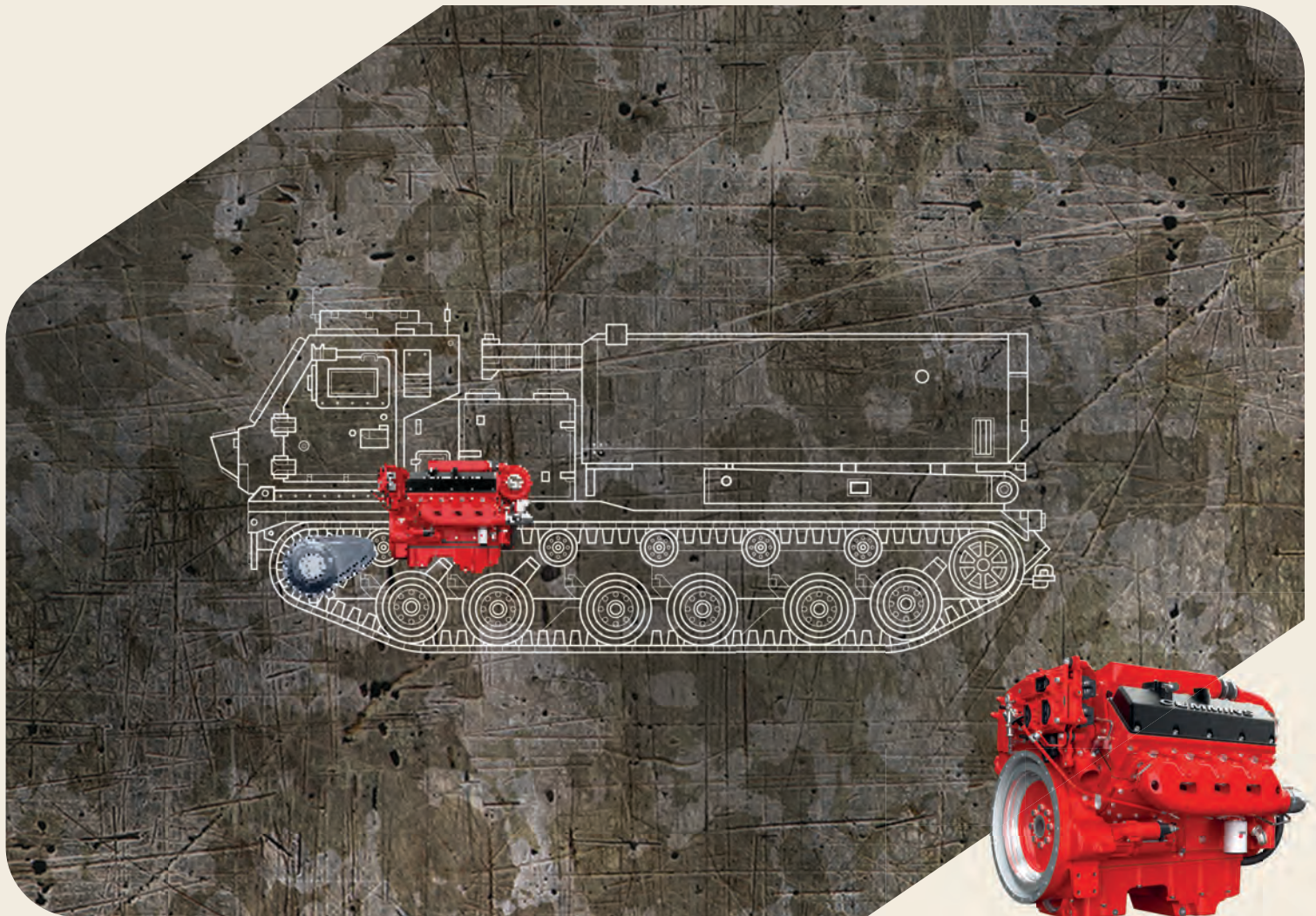
<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Washington, DC
<b>Mission</b>	<b>Website</b>
Strategic advisory firm specializing in national security, defense and innovation.	<a href="http://pallasadvisors.com">pallasadvisors.com</a>

## Parallax Advanced Research

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Beavercreek, OH
<b>Mission</b>	<b>Website</b>
Nonprofit solving global issues through innovation and collaboration.	<a href="http://parallaxresearch.org">parallaxresearch.org</a>



**Power Onward™**



# Proven Partners in Defense

The Cummins V903 is the trusted standard powering U.S. medium tracked fleets – delivering best-in-class durability and total cost of ownership (TCO). Reliable and battle-tested, the V903 is built for the mission.

Engineered to enhance combat readiness and redefine performance standards, it's a proven solution for today – and ready for what's next.





# Cummins: Proven Partners in Defense

**C**ummins is more than a power solutions provider—they are a trusted force in global military capability. With nearly a century of military experience and a commitment to hiring veterans, Cummins brings unmatched insight into defense needs. Its proven track record in powering operations in the harshest conditions makes it a dependable partner for defense agencies worldwide.

## **TAILOR-MADE POWER**

Cummins delivers the precise power solutions military operations demand. Whether repowering vehicles, designing new platforms or creating mobile generation systems, it engineers custom systems to exact specifications. By leveraging both commercial and military-proven technologies, Cummins ensures adaptable, reliable power systems that reduce development time and are ready for mission deployment.

## **READY FOR ANYTHING**

Ranging from 74 to over 1,000 horsepower, Cummins engines power everything from combat vehicles and tactical trucks to naval craft and mobile command centers. Its B Series engines alone are featured in over 30,000 military machines globally. Designed for rugged environments, Cummins engines provide the performance and reliability essential to a wide array of military assets including AFVs, APCs, UGVs, missile launchers and more.

## **CUTTING-EDGE TECH**

Cummins leads in innovation with technology that boosts performance and efficiency. Its Advanced Combat Engine (ACE) uses an opposed-piston design for superior power density and fuel efficiency. Integrated electronic controls enhance powertrain performance, and its engines operate on multiple military fuels, including NATO F-34/F-54, JP-8 and JET A-1, providing exceptional versatility.

## **TESTED AND TRUSTED**

Its V903 is the trusted standard powering U.S. medium tracked fleets—delivering best-in-class durability and total cost of ownership (TCO). Engineered to enhance combat readiness and redefine performance standards, it's a capable, hybrid-ready, reliable, battle-tested, and proven solution—built for today and ready for what's next.

That same commitment to performance extends across the entire Cummins defense portfolio. All products undergo rigorous lab and field testing to ensure they meet the extreme demands of military operations—delivering unmatched reliability and durability, even in the harshest environments.

## **24/7 SUPPORT**

Cummins Care offers global, round-the-clock support. With a worldwide network of service and parts, and direct access to technical experts, Cummins ensures military equipment remains operational and mission-ready at all times.

## **A LEGACY OF EXCELLENCE**

From WWII to modern peacekeeping missions, Cummins has earned a reputation for performance, durability and dependability. With hundreds of thousands of Cummins-powered units in service, it remains a vital supplier for defense forces across the globe.

## **WHY CUMMINS?**

Cummins delivers more than engines—it provides power, innovation and reliability. With tailored solutions, advanced technology and global support, Cummins is the trusted choice for powering defense operations around the world.



## Purdue University

### Sector

Universities

### Mission

Leverages the university's technological and computational environment and tackles complex challenges at the intersection of human, animal and plant health.

### U.S. Headquarters

West Lafayette, IN

### Website

[purdue.edu](http://purdue.edu)

## Qbranch

### Sector

Facilitators

### Mission

A global integrator that fuses advanced technology with strategic insight to drive solutions.

### U.S. Headquarters

Austin, TX

### Website

[q-branch.dev](http://q-branch.dev)

## Qualcomm

### Sector

Emerging Tech

### Mission

Creates semiconductors, software and services related to wireless technology.

### U.S. Headquarters

San Diego, CA

### Website

[qualcomm.com](http://qualcomm.com)

## RAFAEL Advanced Defense Systems Ltd.

### Sector

Traditional Defense Companies

### Mission

Pioneer in defense solutions for air, land, sea, space and cyber.

### U.S. Headquarters

North Bethesda, MD

### Website

[rafael-usa.com](http://rafael-usa.com)

## Rebellion Defense, Inc.

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Technology company developing advanced software to ensure mission-critical organizations stay ahead of emerging threats.

### U.S. Headquarters

Washington, DC

### Website

[rebelliondefense.com](http://rebelliondefense.com)

## Red Six Aerospace, Inc.

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Veteran-founded business that has developed an augmented reality technology that works outdoors.

### U.S. Headquarters

Orlando, FL

### Website

[red6ar.com](http://red6ar.com)

## Relativity Space

### Sector

Venture-Backed, Dual-Use Companies

### Mission

Designs and manufactures cost-effective, high-performance and reusable rockets.

### U.S. Headquarters

Long Beach, CA

### Website

[relativityspace.com](http://relativityspace.com)



Relativity Space

## Rolls-Royce

### Sector

Traditional Defense Companies

### Mission

Innovates efficient and sustainable power solutions to meet customers' operational requirements.

### U.S. Headquarters

Reston, VA

### Website

[rolls-royce.com](http://rolls-royce.com)

## RTX Corporation

### Sector

Traditional Defense Companies

### Mission

Includes Collins Aerospace, Pratt & Whitney, and Raytheon, solving key aerospace and defense challenges.

### U.S. Headquarters

Arlington, VA

### Website

[rtx.com](http://rtx.com)



## Safran Defense & Space, Inc. (Safran DSI)

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Arlington, VA
<b>Mission</b>	<b>Website</b>
Builds tools to help civilians and military observe, decide and guide.	safran-group.com

## SAIC

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Reston, VA
<b>Mission</b>	<b>Website</b>
Integrates emerging technology into mission critical operations that modernize and enable critical national imperatives.	saic.com

## SandboxAQ

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Palo Alto, CA
<b>Mission</b>	<b>Website</b>
Delivers AI solutions that address challenges in life sciences, financial services, navigation, cyber and other sectors.	sandboxaq.com

## Scale AI, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	San Francisco, CA
<b>Mission</b>	<b>Website</b>
Creator of the Scale Data Engine, a toolkit for collecting, curating, and annotating high-quality data.	scale.com

## Scout Ventures

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Austin, TX
<b>Mission</b>	<b>Website</b>
Seed-stage VC firm investing in cutting-edge, early-stage technology for outsized returns.	scout.vc

## Second Front Systems, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Wilmington, DE
<b>Mission</b>	<b>Website</b>
Helps organizations streamline and accelerate software delivery to government and regulated networks.	secondfront.com

## Shield AI, Inc.

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Frisco, TX
<b>Mission</b>	<b>Website</b>
Takes state-of-the-art technologies to production quality and into the field so service members have the best situational awareness in complex, contested environments.	shield.ai

## Shield Capital

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	San Francisco, CA
<b>Mission</b>	<b>Website</b>
Venture capital firm investing in early-stage companies building technologies in artificial intelligence, autonomy, cybersecurity and space.	shieldcap.com

## Sierra Space Corporation

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Louisville, CO
<b>Mission</b>	<b>Website</b>
Commercial space company building an end-to-end business and technology platform in space to benefit life on Earth.	sierraspace.com

## Silicon Valley Defense Group (SVDG)

<b>Sector</b>	<b>U.S. Headquarters</b>
Facilitators	Washington, DC
<b>Mission</b>	<b>Website</b>
Nonprofit seeking to align and connect people, capital and ideas to ensure allied democracies retain a durable technology security advantage.	<a href="http://siliconvalleydefense.org">siliconvalleydefense.org</a>

## Sivers Semiconductors AB

<b>Sector</b>	<b>U.S. Headquarters</b>
Emerging Tech	Chatham, MA
<b>Mission</b>	<b>Website</b>
Developer of energy-efficient photonics and wireless solutions.	<a href="http://sivers-semiconductors.com">sivers-semiconductors.com</a>

## Skydio

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	San Mateo, CA
<b>Mission</b>	<b>Website</b>
U.S. drone manufacturer and world leader in autonomous flight.	<a href="http://skydio.com">skydio.com</a>

## Space Exploration Technologies Corp. (SpaceX)

<b>Sector</b>	<b>U.S. Headquarters</b>
Venture-Backed, Dual-Use Companies	Hawthorne, CA
<b>Mission</b>	<b>Website</b>
Designs, manufactures and launches the world's most advanced rockets and spacecraft.	<a href="http://spacex.com">spacex.com</a>

## Squadra Ventures

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Baltimore, MD
<b>Mission</b>	<b>Website</b>
Venture capital firm led by founder-operators that invests in early stage cyber and national security companies.	<a href="http://squadra.vc">squadra.vc</a>

## Stanford University

<b>Sector</b>	<b>U.S. Headquarters</b>
Universities	Stanford, CA
<b>Mission</b>	<b>Website</b>
Fifteen independent labs, centers and institutes that engage faculty and students from across the university.	<a href="http://stanford.edu">stanford.edu</a>

## Syracuse University

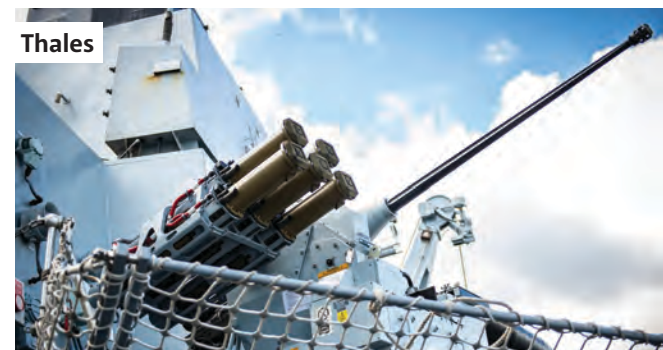
<b>Sector</b>	<b>U.S. Headquarters</b>
Universities	Syracuse, NY
<b>Mission</b>	<b>Website</b>
Faculty and students collaborate to produce research, scholarship and creative work.	<a href="http://syracuse.edu">syracuse.edu</a>

## TFX Capital

<b>Sector</b>	<b>U.S. Headquarters</b>
Investors	Fort Mill, SC
<b>Mission</b>	<b>Website</b>
Small venture firm exclusively focused on supporting a particular founder type of company (ex-military, ex-national security).	<a href="http://tfxcap.com">tfxcap.com</a>

## Thales

<b>Sector</b>	<b>U.S. Headquarters</b>
Traditional Defense Companies	Arlington, VA
<b>Mission</b>	<b>Website</b>
Global leader in advanced technologies specialized in three business domains: Defence and Security, Aeronautics and Space, and Cybersecurity and Digital identity.	<a href="http://thalesgroup.com">thalesgroup.com</a>



## Tulane University

### Sector

Universities

### Mission

Harnesses innovation, expertise and a spirit of enterprise to tackle some of the most pressing challenges facing society.

### U.S. Headquarters

New Orleans, LA

### Website

tulane.edu

## United States Military Academy (West Point)

### Sector

Universities

### Mission

World's preeminent leader development institution.

### U.S. Headquarters

West Point, NY

### Website

westpoint.edu

## University of Dayton Research Institute (UDRI)

### Sector

Universities

### Mission

Performs sponsored research to meet customer needs with innovative, high-tech solutions.

### U.S. Headquarters

Dayton, OH

### Website

udayton.edu/udri/



## University of Texas at Austin

### Sector

Universities

### Mission

Helps UT researchers make discoveries and mobilize knowledge.

### U.S. Headquarters

Austin, TX

### Website

utexas.edu




**Elevate your research potential with us as your trusted partners**

At Parallax Advanced Research and the Ohio Aerospace Institute, we lead the way in solving critical challenges to enhance national security and prosperity.

We do this through advanced research, development, science, and technology innovation that enables our clients in industry, academia, and government to innovate solutions and speed them to market.

We also engage with our partners and serve our clients through education and workforce development programs and technology transfer. Join our national network of innovators to elevate your research potential.

**Connect with us today to shape the future of our nation's security and prosperity in aerospace and defense.**






[parallaxresearch.org](http://parallaxresearch.org) | [oai.org](http://oai.org)

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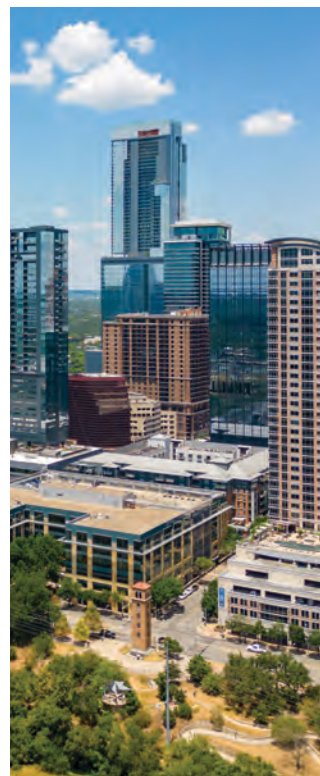


**LINCOLN  
ELECTRIC**  
AUTOMATION



# Investing in Defense

MEET ONE OF THE TOP DEFENSE INDUSTRY CITIES IN THE COUNTRY,  
PLUS THREE ON THE RISE



BY TERRY TROY

**W**ith all the recent calls for a reduction of government in terms of both spending and personnel, it's easy to become a little nervous these days, especially if you are a business planning to sell to the Department of Defense (DoD). But there is absolutely no need to walk away from a business that is estimated to be well north of \$800 billion.

Even by its own projections in its Future Years Defense Program (FYDP), DoD's proposed budget for 2025 totals \$850 billion, which is expected to climb to \$866 billion by 2029, even when adjusted for inflation. By 2039, it is expected to grow to \$965 billion (in 2025 dollars), according to the Congressional Budget Office (CBO).

Businesses, cities and states throughout the country are continuing to find value in investing in the defense industry. In fact, many cities see the defense industry as a cornerstone of their region's economy. We spoke with one of the top defense cities in the country (and three up-and-coming ones) to learn more about why they're not shying away from defense and how it's helping them grow.

## Washington D.C./Arlington



This selection may seem obvious, but we have to give credit where credit is due. Being located at the center of government, as well as the Pentagon and DoD, Washington/Arlington is one of the top areas in the country to build a defense business.

"But it's not just the Pentagon," says Michael Stiefvater, III, director of the Business Investment Group at **Arlington Economic Development**. "We are also home to the Air Force Office of Scientific Research, Defense Advanced Research Projects Agency (DARPA) and the Office of Naval Research."

The Washington/Arlington area is also home to the Department of Homeland Security (DHS), Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA).

“Our proximity to the federal government also draws an incredible amount of tech talent to our region—talent that is both here today as well as what is coming through our pipeline,” says Stiefvater. “We are always rated among the top five tech talent locations in the nation.”

There are plenty of highly educated people living in the region. It’s estimated that 78% of households include someone with a bachelor’s degree, while 40% own some sort of advanced degree, according to Arlington Economic Development. Across Washington/Arlington, there are many people working in the science and engineering sector, not to mention the thousands of military veterans and active service members who are transitioning to civilian life with security clearances. The region was ranked the fourth best for tech talent in North America by CBRE (Coldwell Banker Richard Ellis) in 2023.

“We have a very high proportion of veterans in our workforce, as well,” adds Stiefvater. “And eight of the top 10 defense industry contractors have major facilities or are headquartered here.”

Last year, companies in the area were awarded over \$100 billion in federal contracts, exceeding both California and Texas combined.

Indeed, many major defense businesses have relocated away from high tech areas to the Washington/Arlington area.

“One such company is **AeroVironment**, which relocated from California several years back, but has expanded to have a very large presence in Arlington today,” says Stiefvater.

Last year, the company had a particularly successful year, bypassing milestones, establishing benchmarks and introducing new products and systems. In May of 2024, AeroVironment’s Switchblade 600 loitering munition system was selected for Tranche 1 of the DoD’s Replicator Initiative. By June, these systems were already deployed and in the hands of American troops.

Fast-forward to October of last year, and AeroVironment introduced its latest UAV at the Association of the United States Army’s annual meeting—the P550.

Nawabi says the company worked for two years on designing the P550. According to the company, the UAV is aimed at delivering a platform based on the Army’s force structure and mission requirements

One key aspect of the P550’s design is its compliance with the Modular Open Systems Approach (MOSA). MOSA is a strategy for designing affordable and adaptable systems.

“We’re partnered with Parry Labs that helps with their model-based systems engineering approach, and really this MOSA approach that allows us to really incorporate all these different technologies into the platform to keep it relevant, not only today and tomorrow, but I see for decades to come,” Trace Stevenson, senior vice president and general manager for uncrewed systems at AeroVironment says.

AeroVironment’s success story is one of many in the Washington/Arlington area.

“With its focus on new technologies, the DoD is creating lots of opportunities for companies,” says Stiefvater.

## Huntsville, Alabama



With the military focused on weapons in space and aerospace industries, it should come as no surprise that a city that carries the moniker “Rocket City” is on our list. It’s home to the Redstone Arsenal, a U.S. Army Post that has served for 50 years plus as the Army’s Center for missile and rocket programs. For more than six decades, NASA and our nation also have relied on Marshall Space Flight Center to deliver the most vital propulsion systems and hardware, flagship launch vehicles, world-class space systems, state-of-the-art engineering technologies and cutting-edge science and research projects and solutions.

And there’s plenty of local talent.

Huntsville ranks No. 1 on CBRE’s annual list of up and coming North American tech talent markets in its annual scoring, which ranks 75 U.S. and Canadian markets according to their ability to attract and grow tech talent.

With a total tech employment of almost 26,000, local tech employment has grown by 17.9% in the last five years while wages in the sector have increased by 19.6%. In addition, Huntsville made the Top Ten in *U.S. News & World Report*’s 2024-2025 Best Places to Live rankings.

“Federal spending represents approximately half of the local economy,” says Mike Ward, senior vice president of Government and Public Affairs for the **Huntsville/Madison County Chamber**. “Redstone supports 108,000 jobs across the Tennessee Valley and has an economic impact of \$27 billion, which represents over 10% of the total state GDP.

“Huntsville/Madison County has grown to become one of the Nation’s premier centers for research and development based largely on the 65-plus federal sector enterprises that are located here. Redstone tenants include DoD, the U.S. Army, Department of Justice, NASA, ATF, which together employ over 46,000 people on-site on its 38,000 acres,” adds Ward. “These federal agencies have combined budgets of over \$50 billion, making this an attractive market for aerospace and defense companies who often want to locate offices near these commands and agencies to gain better access to these support contracts. Over half of the Army’s weapons procurement budget is managed on Redstone. This region consistently ranks in the top 10 communities nationally for defense contract spending.”

And it’s not just major players that call Huntsville/Madison County home.

“The Small Business Administration’s UAH (University of Alabama Huntsville) Small Business Development Center is co-located at the chamber,” says Lucia Cape, senior vice president of Economic Development and Workforce at the Huntsville/Madison Chamber. “This is an excellent resource for businesses who are trying to secure federal contracts.

“For technology companies that want to work with defense



customers, the **Cummings Research Park DefenseTech Accelerator** was launched in 2024 to help small companies secure government contracts,” adds Cape. “Our first cohort will wrap this spring. Applications will open soon for the second cohort, which will launch this fall.”

The Huntsville/Madison County area is also home to more than 400 aerospace, defense and technology companies.

“Our Cummings Research Park is the second-largest research park in the U.S. and fourth largest in the world. It was founded

to support Redstone Arsenal more than 60 years ago,” says Cape.

## Dayton, Ohio



With Wright-Patterson Air Force Base just minutes away and GE Aerospace just down the road in Cincinnati, Dayton, Ohio, has



Washington, D.C./Arlington, VA



Huntsville, AL



Dayton, OH



Austin, TX





grown to become one of the foremost areas in terms of engineering, technology and innovation for the aviation and aerospace industries.

According to the **Dayton Development Coalition (DDC)**, military and federal installations in the region generate \$40 billion in economic impact, creating 380,000 jobs, which account for 6% of the state's total economy. In terms of defense related activities, the industry supports approximately 103,200 jobs, generating \$11.6 billion in regional economic "value-added" impact with a total of \$19.4 billion in total activity.

"We know defense contracting obligations and military missions in the Dayton region continue to grow, providing excellent career opportunities for our residents and acting as a catalyst for the creation of many successful local businesses," says Jeff Hoagland, president and CEO of the DDC. "The impact makes up 17% of our economy, extending beyond defense contractors to businesses that support the installations, their employees and their families."

"Start with Wright-Patterson Air Force Base, one of the largest, most diverse and organizationally complex Air Force installations in the world, then add in the Springfield Air National Guard Base, which is focused on intelligence, surveillance and reconnaissance for the federal and state governments," says Shannon Joyce Neal, vice president of Strategic Communications for DDC. "Amplifying these assets is the Air Force's commitment to define the region as the national center of excellence in aerospace research, medicine, intelligence, education, acquisition and tech commercialization."

There is still ample space to expand both inside and outside the installation fence, which, combined with the low cost of living, makes the region an ideal location for defense business, says Joyce Neal.

The DoD approved a grant to help build the **National Advanced Air Mobility Center of Excellence (NAAMCE)** at the Springfield-Beckley Municipal Airport. NAAMCE includes a two-story, 30,000-square-foot office building that houses administrative, laboratory and meeting space, with 25,000 square feet of aircraft hangar space for the Air Force and private industry.

The center supports the expanding work of manufacturers and operators of electric vertical takeoff and landing vehicles, known as eVTOL, a type of aircraft that uses electric power to hover, take off and land vertically, and other vehicles used for Advanced Air Mobility (AAM).

The city of Springfield, DDC and JobsOhio have worked closely with the Air Force Research Laboratory (AFRL) to support the growing AAM industry in the region and its Agility Prime efforts. Industry leaders **BETA Technologies**, **Joby Aviation** and **LIFT Aircraft** have begun operations at the airport, creating demand for additional space.

Just last fall, **SNC** marked a milestone in its significant and steadfast growth at the **SNC Aviation Innovation and Technology Center (AITC)**, formally opening its second all-aircraft modernization, missionization, modification and maintenance facility. The company also broke ground on two additional facilities as part of

its ongoing growth in the Dayton region and **SNC's** strong commitment to supporting the country's national security projects.

"We are thrilled to continue expansion of our state-of-the-art Aviation Innovation and Technology Center in Dayton and the Miami Valley," says Mark Williams, **SNC** senior vice president of strategy. "Our continued growth in the region allows **SNC** to harness the significant existing infrastructure and skilled talent pool that are necessary to deliver the transformative solutions our customers demand. Furthermore, these state-of-the-art facilities are dedicated to ensuring our military aviation community has the capability and resources to meet the growing demands for many years to come."

## Austin, Texas



According to **Opportunity Austin**, the defense industry is a vital and growing sector. The Aerospace & Defense cluster alone contributes significantly to the regional economy, with 12,000 employees in aerospace-related roles and a broader STEM workforce of 176,000 professionals.

"The Austin region is an ideal location for defense businesses due to its rapidly expanding Aerospace & Defense cluster, established tech ecosystem and strategic military presence," says Ed Latson, CEO of Opportunity Austin. "With a strong foundation in advanced manufacturing, AI, cybersecurity and robotics, Austin fosters innovation that directly aligns with the defense sector's evolving needs."

"Additionally, Austin is home to Army Futures Command, AFWERX and the Army Applications Laboratory—key entities driving defense innovation," he adds. "The region also benefits from a highly skilled workforce, supported by University of Texas (UT) Austin's top-tier research programs and the steady pipeline of talent transitioning from Fort Cavazos and Joint Base San Antonio."

Austin's defense sector has seen significant growth through major company expansions and high-profile government contracts," says Latson.

**Acutronic** relocated its global headquarters to Austin and expanded its manufacturing footprint in Bastrop. **BAE Systems & Collins Aerospace** continues to grow its Austin operations, developing next-generation defense technologies. **SpaceX** and **Starlink** continue to grow their presence in the region. And **Saronic** recently raised \$600 million to grow its operations and product lines in unmanned vehicles

Additionally, Austin hosts numerous defense-focused events and partnerships, particularly through Army Futures Command and AFWERX, which engage industry leaders in developing solutions for national security. The **Fed Supernova**, held Aug. 19-21 this year, connects entrepreneurs, government and industry together to collaborate on dual-use solutions that put commercial technology in the hands of the DoD. ■

# A Coming Revolution

NEUROMORPHIC COMPUTING IS KEY TO AI IMPLEMENTATION



BY TERRY TROY

**W**ith computational demands of state-of-the-art AI algorithms today requiring as much as 190,000 kWh, it's easy to see that the primary problem with the new technology is its high energy consumption. AI power use alone is already starting to strain the available supplies of energy in many parts of the world.

But what if there were a device that could achieve over 240 trillion operations per second using only 10 to 20 watts of power? What if that same device contained over 86 billion neurons connected by over 100 trillion of synaptic connections? What if that same device offered no thermal or size restrictions for its use, and only weighed between 3 and 4 pounds? Surely, it would be

the most advanced and most efficient computing device in all the known universe.

Turns out we all have one and it's located just a few feet above our bellybuttons. Neuromorphic computing is a revolutionary field inspired by the human brain's structure and function.

Using neural networks and synaptic-like elements in silicon circuits, it delivers the kind of fast, efficient and adaptable computations necessary for applications like electronic warfare, ISR (intelligence, surveillance and reconnaissance) sensor processing, autonomous navigation, satellites and advanced sensor fusion. And because it mimics human thought and decision-making processes, it is also key to the further unmanned exploration of our solar system.





The AI Hardware Research Center of Excellence at **Parallax Advanced Research** in Beavercreek, Ohio, is a leader in the development of many of those aforementioned cutting-edge applications as well as others. Steven D. Harbour, Ph.D., director of the Center of Excellence, offered his insights as to how the technology evolved.

“Dr. Carver Mead at Caltech was developing a neuromorphic processor when the rest of the community was developing a digital processor, which eventually won out and is what we have been using for the last 30 to 40 years,” says Harbour. “In the ‘90s some development was done with very large circuits simulating neuro behaviors. It wasn’t until 2009 and 2010 that advances in seamless technology enabled digital implementations of a neuromorphic system and research in neuro networks. I started getting into it myself around 2014.”

Today, neuromorphic hardware and software, such as Spiking Neural Networks (SNNs), mimic the nonlinear dynamics of mammalian brains, transforming information into higher-dimensional states to derive outcomes. These systems excel in energy efficiency, high parallelism, robustness and low latency processing, making them ideal for real-time applications in resource-constrained environments, like battlefield environments or overcoming the long distances and communication problems involved in inter-planetary travel.



“It is rather revolutionary,” adds Harbour. “And it is a growing field. I think that by 2030, it will be an industry that will be somewhere between \$8 billion to \$10 billion.”

And perhaps even more.

The military has a great interest in autonomous systems and robotics, which neuromorphic processing facilitates. It will also eventually become a key element in the further development of cognitive electronic warfare (CEW), which uses machine learning and cognitive systems that can sense, learn, reason and interact with people in stressful environments.

Neuromorphic processing will also be key to advances in human machine learning itself, a field of study in AI concerned with the development and study of statistical algorithms that learn from data and generalize unseen data, and thus can perform complex tasks without explicit instructions. Basically, human machine learning is a collaborative approach that combines human expertise with machine learning to improve the accuracy and reliability of machine learning.

“When it comes to human machine learning and AI, neuromorphic computing makes the matchup between humans and computers not only easier, but more intuitive.”  
—Steven D. Harbour, Ph.D.,  
AI Hardware Research Center  
of Excellence at Parallax  
Advanced Research

“When it comes to human machine learning and AI, neuromorphic computing makes the matchup between humans and computers not only easier, but more intuitive,” says Harbour. “Our autonomy team has capabilities in cognitive and metacognitive AI that really try to understand and supplement human decision making. We also have teams that work on human psychology and human cognition to understand how that works.

“So, when we talk about human machine learning, we are really talking about AI and all of the interfaces that have been designed to not only provide information to the human user, but to do so in a way that does not increase the cognitive or task load during some very stressful situations.”

Naturally, none of this work is being done in a vacuum. In addition to its collaborative affiliation with the **Ohio Aerospace Institute** in Cleveland, Ohio, Parallax’s work with neuromorphic computing aligns with the goals of leading space and aerospace stakeholders. It includes a collaborative effort with the **Ohio**

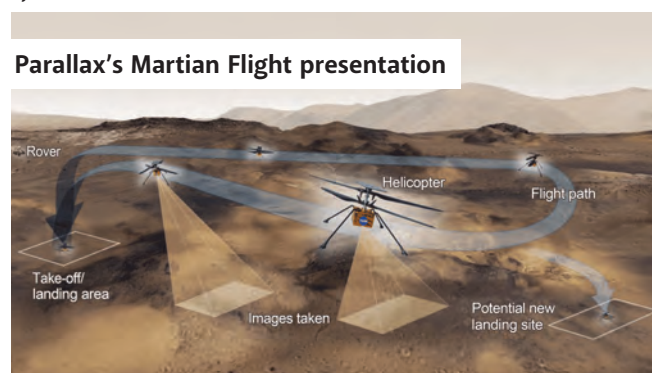


Space Grant Consortium as well as partnerships with academic institutions such as the University of Dayton's Sensor Lab, the University of Cincinnati's Digital Futures Lab, Sinclair College and Brno University of Defense in Czechia.

As a mission-driven nonprofit, Parallax also partners with the government, other academic institutions and private industry to address pressing technological challenges, catalyzing solutions that enhance national capabilities.

At the most recent Digital Avionics Systems Conference (DASC) in San Diego, Parallax demonstrated a significant leap forward for neuromorphic computing. The title of Parallax's presentation was "Martian Flight: Enabling Motion Estimation of NASA's Next-Generation Flying Drone."

The initiative, done in collaboration with NASA as well as Ohio-based universities, demonstrated the use of neuromorphic systems in extreme environments.



By utilizing a neuromorphic event camera that offers advantages in speed, energy efficiency and visual processing, paired with spiking neural networks (SNNs), Parallax's proposal would enable autonomous navigation for NASA's Mars helicopter drone. The technology optimizes energy use and data processing efficiency, which is essential for sustaining operations on Mars.

"Even the very best static camera cannot perform as well as a neuromorphic camera," says Harbour. "There's low energy use coupled with neuromorphic spiking within a system, and you do not have to come all the way back to earth to perform any high latency operations."

Additionally, a standard camera will blur when you use LiDAR (light detection and ranging) and look straight down at the ground. Even the best high-speed cameras will blur, while a neuromorphic camera will not—it behaves more like a human eye coupled with your brain."

Parallax's research also employs widely recognized datasets, such as MNIST (Modified National Institute of Standards and Technology) database, to further refine capabilities such as motion estimation, a key component in autonomous navigation.

In future interplanetary missions, these capabilities reduce the need for Earth-based monitoring and present an innovative solution to longstanding limitations in interplanetary space exploration.



Stephen Schlager and David Harbour

However, space exploration is but one example. The promise of neuromorphic computing will eventually expand into virtually all fields of scientific endeavor, making AI useful without its present SWaP limitations, putting Parallax Advanced Research on the cutting edge of the coming neuromorphic computing revolution. ■



Steve Harbour and Stephen Schlager

# A Matter of Safety

NEW TECH NEEDS TO KEEP PEOPLE SAFE WHILE PROTECTING GUN RIGHTS

BY PAUL WILSON, CHAIRMAN & CEO OF SFXTACTICAL

S FxTactical's disruption within the weapons industry all started with a few tours within the Marines—some non-lethal and others quite lethal. Ideally, these operations did bring good merit operationally, but there was a need for better engagement and sustainable efforts on the battlefield with crucial efficiency.

For instance, there was one incident where I was asked to do a weapons transport of over 200 miles and move across hot active pressure points for delivery. The common thread was that my weapon was my primary tool and source for vitality.

After beginning to execute this short mission, there were a few things that jumped out at me. What clear modes of communication would I have for location and tracking that could detect if we, my team, were in a clear threat? We've all faced the challenges of the PRC-77 back then, but for more guidance, what if we, the warfighters, could have a continuous prescriptive interaction system?

During this transport, we encountered a potential overthrow/hijacking of our weapons container in which counter measures were at the ready and understandably executed. Imagine if the climate of activity could have been predicted or the duress of the situation could have been signaled back to command in real time. A QRF or nearby rally team could have been there to assist.

Years later, while transitioning into civilian chaos, I befriended a young lady who was a single mother of two young kids. I encouraged her to take up firearm lessons for personal protection. We practiced and re-emphasized the notion of safety as paramount. Unfortunately, a few months later, her oldest child found her weapon and accidentally shot and killed the youngest child. In panic, from what we deduced, the oldest accidentally shot himself and succumbed to his injuries two days later.

I knew that there was something that needed to be done and done fast. I immediately educated myself about gun violence and discharge statistics. I kept asking myself, why hasn't there been anything done to help safeguard weapons for the benefit of the gun owner? Being a strong Second Amendment advocate, I wanted to come up with a solution that would not infringe or hinder law-abiding gun owner citizens. What if I could come up with a helmet to a motorcycle, or a seatbelt to a car for a common-sense solution?

I decided to build a team of highly skilled, weapon diversified experts from a wide range of Second Amendment backgrounds to help drive a strategy that would build, disrupt and enhance control for the gun owner while reducing deaths and increasing safety with weapons.

Our team, led by veterans with years of experience in the military, is delivering a patented technology solution that provides tracking, data analytics and pro-gun control measures for firearms. With this tech, we hope to decrease the lack of gun safety controls to protect civilians against gun-related deaths, lack of gun traceability, lack of gun-analytics around law enforcement and litigation expenditures.

SFxTactical aims to revolutionize firearm safety through Artificial Intelligence (AI)-driven data analytics. Our overall strategic plan is to use an AI-enabled Internet of Things (IoT) gun sensor that provides real-time tracking, analytics and controls to preventatively reduce deaths.

By incorporating AI analytics, tons of stored data and real-time data from various disparate structures, our teams will be able to adequately reduce accidental and malice harm/death from firearms nationwide.

This is real time tracking and monitoring for firearm owners. SFX's technology will safeguard against unauthorized firearm access and theft. SFX enables home security companies to monitor unauthorized firearm access. Now, shipping companies can prevent in-transit firearm theft, a key element in crime prevention. Law enforcement agencies can reduce liability by monitoring and tracking the use of their firearms in real-time.

Illegal and unauthorized access to firearms is a significant issue in the United States. Ninety percent of guns used in crimes such as homicide and assault are stolen. The majority of firearm theft targets firearms being shipped and stored in vehicles. With our exclusive rights to provide real-time monitoring of firearms, our device will prevent gun thefts and reduce the number of guns in the hands of criminals.

We believe that as long as we stay focused on saving lives and preventing unnecessary injuries within the firearm industry, our impact will be exponential. ■



Paul Wilson is a former combat Marine and the inventor of a proven U.S Patented Firearms Management System (FMS). His extensive experience encompasses a broad background in weapons, tactical operations, software engineering, cyber security, cloud architecture, Artificial Intelligence and Big Data.

# Detect, Track & Target

THE MARKET FOR MILITARY OPTRONICS SURVEILLANCE  
AND SIGHTING SYSTEMS IS RAPIDLY EXPANDING



Safran's PASEO is a very long-range observation and attack sight.

BY DAVID HOLTHAUS

**T**he ability to detect, track and target enemies with accuracy on land, in the air and at sea are among the most critical skills in battle and in defensive security. With technology advancing rapidly and the United States and other nations seeking to improve their security, the global market for military systems that can improve surveillance, reconnaissance and targeting is expected to grow significantly over the next decade.

The worldwide market for military optronics surveillance and sighting systems is anticipated to expand from \$15.2 billion in 2024 to \$28.4 billion by 2034, growing at a compound annual growth rate of approximately 6.5%, according to a September 2024 report from Global Insight Services, a Lewes, Delaware-based market research firm.

The Insight Partners, a research firm based in India, forecasts even faster growth in its analysis of the electronic warfare market. In a February 2025 report, the firm predicts the market to reach \$34.9 billion by 2031, growing from \$20.7 billion in 2023, a CAGR of 7.2% over that period.

"The military optronics surveillance and sighting systems market is witnessing robust growth, primarily driven by advancements in technology and increasing defense budgets," the Global Insight report says.

The market includes advanced optical technologies including

night vision devices, thermal imaging, laser rangefinders and integrated sighting solutions. It also includes surveillance tools with high-resolution cameras and infrared sensors that can improve visibility, targeting and remote monitoring for soldiers and weapons operators.

Advancements in unmanned aerial vehicle, or drone, technologies are helping to drive the market. There's also a trend toward miniaturization and lightweight systems that improve mobility and can be integrated into other platforms, the Global Insight report says.

For example, **Teledyne FLIR Defense**, part of Oregon-based **Teledyne Technologies Inc.**, in February announced an order from the German Army to provide its lightweight nano-drones, called Black Hornet 4, to German armed forces. The product weighs just 70 grams and can fly for more than 30 minutes, over more than two kilometers, and function in 25-knot winds and rain, the company said. "We are seeing increased adoption of the Black Hornet unmanned aircraft system throughout Europe as regional and global tensions remain high," said Ketil Vanebo, vice president of UAS Norway operations at Teledyne FLIR Defense.

Key players are investing in research and development and developing strategic partnerships in order to stay on the leading edge of a rapidly progressing field. **Lockheed Martin** in October 2024 announced a contract to deliver a next-generation radar





**The Black Hornet unmanned aerial system is currently deployed in more than 45 countries.**

warning receiver for the U.S. Army's Apache helicopter fleet. The system has been improved over the previous generation and made lighter with advanced microelectronics in collaboration with chip maker Intel, the company said.

"This accomplishment aligns with Lockheed Martin's electronic warfare strategy to partner with commercial microelectronics companies and use our subject matter expertise to deliver our customers game changing solutions that maximize capability, while minimizing size, weight, power, cost and development time," said Deon Viergutz, a vice president at Lockheed Martin.

**SRC Inc.**, an independent, not-for-profit, research and development corporation based in Syracuse, New York, has developed a weapon-locating radar that can scan 360 degrees. Traditional radar systems could only scan 90 degrees, leaving soldiers blind to much of the area around them. SRC's system scans electronically with no moving parts, can be set up by two people in less than 20 minutes, and can provide an early warning of an incoming rocket, artillery or mortar attack, the location of impact and then track back the origin of the indirect fire for a counterfire response.

The original system was deployed by the Army in 2004 during the Iraq War when mortar attacks were a leading cause of casualties to U.S. soldiers. More than 1,000 systems have been procured by defense forces since that time, the company said.

**Safran** is another big player in the market and its Bedford, New Hampshire-based optronics unit was selected to provide an integrated targeting sight for the Army's new mobile protected firepower vehicle. The MPF is a lightweight combat vehicle, resembling a small tank. The Safran Commander's Independent

Tactical Viewer (CITV) is a long-range panoramic targeting sight that is mounted above the armor and can provide day and night visibility for targeting, the company said.

Thermal imaging is critical, not only for night operations, but in difficult climatic conditions such as fog, smoke and snow. **NightRide Thermal** is a New York City-based, women-owned small business that provides vehicle-mounted thermal cameras for the public safety, emergency management, utilities and defense markets, among others. It has partnered with the nonprofit Economists for Ukraine to provide thermal cameras for ambulances in Ukraine to allow them to transport the wounded under cover of darkness without using their lights. Ukrainian medical workers needed a camera that could be easily moved from vehicle to vehicle, displays images on a phone or tablet and provides high resolution pictures of the battle-scarred roads.

While the growing market for these systems presents opportunities for expansion and market share gains, the market also comes with significant challenges. One is the high cost of advanced optronics technologies, which can stall investment and limit their adoption by defense agencies facing budget constraints, the Global Insight report says.

Also, rapid technological developments mean upgrades are often needed, which can be costly and pose logistical challenges to integrating complex systems with existing military equipment and infrastructure, the report says. Cybersecurity threats are another challenge, as optronics systems are increasingly integrated with digital networks, requiring strong protection measures to prevent breaches. ■

### 2025 Department of the Air Force Modeling & Simulation Summit

May 6-8, 2025

Rosen Centre Hotel, Orlando, FL  
dafmss.org

The summit gathers Air Force and Space Force M&S experts to learn about new M&S initiatives and techniques, network across military services and with industry experts, and hear technological leaders' perspectives on how M&S can transition more training from the real world to digital.

### LANPAC Symposium & Exposition

May 13-15, 2025

Sheraton Waikiki, Honolulu, HI  
ausa.org

International event highlighting the role of land forces in the Indo-Pacific theater and their contributions to the Joint Force in peace and war.

### Border Security & Intelligence Summit

May 14-15, 2025

National Housing Center, Washington, D.C.  
dsigroup.org

Convenes key experts, decision-makers and innovators from across DHS, IC, federal agencies and industry for in-depth discussion on the latest advancements in border security technology and integration of new policies.



MDEX 2025

### Hypersonic Innovation Conference

May 20-22, 2025

Knoxville Convention Center, Knoxville, TN  
hypersonicinnovation.com

Highlights hypersonic technology research, development and innovations across the United States that will enable strategic and operational superiority for the Joint Force.

### Future Soldier Technology USA

June 10-12, 2025

Hilton Arlington, Arlington, VA  
smgconferences.com

The conference will discuss in detail soldier lethality, power management systems, mobility, sustainability and survivability

### DLA Supply Chain Alliance Conference & Exhibition

June 11-12, 2025

Greater Richmond Convention Center, Richmond, VA  
ndia.org

This two-day event will bring together government and industry leaders to discuss current and future challenges. There will also be Small Business Matchmaking, breakout sessions for a variety of topics, and creating networking opportunities.



### MILASATCOM USA

June 16-18, 2025

Hilton Arlington, Arlington, VA  
smgconferences.com

The premier event dedicated to exploring the future of military satellite communications. This conference brings together over 150 attendees, including a 50/50 mix of industry leaders and government officials.

### Training & Simulation Industry Symposium (TSIS) 2025

June 17-18, 2025

Rosen Centre Hotel, Orlando, FL  
ntsa.org

TSIS provides an opportunity to network and interact with procurement officials for training and simulation products and services from the Army, Navy, Marine Corps, Air Force and Space Force.

### Military Robotics & Autonomous Systems USA

July 7-9, 2025

Hilton Arlington, Arlington, VA  
smgconferences.com

Opportunity to network and collaborate with dynamic international militaries, offering unique perspectives on the latest advancements in robotic capabilities.





### **EANGUS Annual Conference 2025**

Aug. 11-14, 2025

Grand Sierra Resort, Reno, NV

[ausa.org](http://ausa.org)

Unique opportunity to showcase your products and services to National Guard Members.

### **MODISM World 2025**

Aug. 18-20, 2025

Hilton Norfolk The Main, Norfolk, VA

[ntsa.org](http://ntsa.org)

Features three core presentation tracks: Industry, Defense and Training & Education. Each track will spotlight cutting-edge advancements and approaches in areas such as Engineering, Medical Simulation, Data Analytics, Artificial Intelligence, Machine Learning, Extended Reality, Gamification and Visualizations.

### **Unmanned Maritime Systems Technology USA**

Sept. 15-17, 2025

Hilton Arlington, Arlington, VA

[smgconferences.com](http://smgconferences.com)

Key topics to be discussed include Unmanned Surface Vessels, Unmanned Aerial Vehicles, Unmanned Underwater Vehicles and more.

### **AUSA 2025 Annual Meeting & Exhibition**

Oct. 13-15, 2025

Walter E. Washington Convention Center, Washington, D.C.

[ausa.org](http://ausa.org)

Informative and relevant presentations on the State-of-the-Army, panel discussions and seminars on pertinent military and national security subjects, and a variety of valuable networking events available to all that attend.

### **CBRNe Summit USA 2025**

Oct. 7-9, 2025

Sheraton Universal Hotel, Los Angeles, CA

[intelligence-sec.com](http://intelligence-sec.com)

This event brings together leading officials from the military, civil and scientific agencies to provide you will a full perspective on all CBRNe threats and challenges.

### **I/ITSEC 2025**

Dec. 1-5, 2025

Orange County Convention Center,

Orlando, FL

[iitsec.org](http://iitsec.org)

The Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) is the world's largest modeling, simulation and training event.



# A Process of Reflection

*“We don’t need to be smarter than the rest.  
We need to be more disciplined than the rest.”*

– WARREN BUFFETT

**F**eedback is critical to improve a product. Whether through self-reflection or solicited end-user responses, a process of examination and assessment is essential to provide and improve value. Oliver Wendell Holmes said, “Detached reflection cannot be demanded in the presence of an uplifted knife.” We can either plan for detached reflection or face the knife. On today’s battlefield, a disciplined business process is critical to maintaining an overmatch advantage.

The pace of iterative technology improvement in Ukraine is facing a dramatic increase. Reports suggest current Unmanned Aircraft Systems (UAS) technology lifecycle lasts about two weeks. That means, technology is delivered, employed, defeated and outdated in two weeks. To match this pace, we need to bring the material scientist closer to the warfighter.

Jesse Silverberg, CEO of Multiscale Systems, an advanced materials engineering company, and its subsidiary, Hybrid CNC Parts, which specializes in hybrid metal additive/subtractive manufacturing, has found that the path to effective productization in defense applications depends on a critical trifecta: materials, manufacturing and product design. While Multiscale and Hybrid directly address the first two through advanced material solutions and precision manufacturing, product design hinges on a deep understanding of end-user needs—something often obscured by



necessary operational security. Without direct access to warfighter insight, innovators are left to reverse-engineer requirements, while warfighters operate with tools that may fall short of their actual needs. Bridging this gap is essential for accelerating innovation where it matters most.

This shift in operational technology availability is not a recent development. It has evolved over decades. The Army found value in its Transformation in Contact (TiC) business process modernization efforts and is currently planning on increasing the program’s scope in future iterations. While eliciting memories of Troops in

Contact (also known as a TiC), the new TiC effort allows industry experts the opportunity to employ technology and iteratively improve with real-time feedback. Advanced manufacturing in combat has improved the ability to maintain and sustain equipment. It also greatly improves logistics. We need to ensure that modern methods are employed to outfit our warfighters with capabilities necessary to compete. Or, at the very least plan for it. As Warren Buffett said, “An idiot with a plan can beat a genius without a plan.”

We need to ensure that our processes obviate the need for detached reflection when our warfighters face the inevitable uplifted knife.

**Tim Crane**  
Editor-at-Large



# Emergent Defense

MAGAZINE

The Global Editorial Board of ***Emergent Defense*** magazine is where expertise converges to illuminate the intricate landscape of defense.

Led by seasoned president and publisher, Eric Harmon, our board boasts a formidable assembly of military veterans, defense analysts, geopolitical strategists and industry pioneers.

With a keen eye on emerging technologies, evolving threats and shifting geopolitical dynamics, our diverse team ensures that ***Emergent Defense*** magazine remains at the forefront of informed discourse. Through rigorous analysis and profound insights, we endeavor to provide our readers with a comprehensive understanding of defense matters, empowering them to navigate the complexities of today's security challenges with clarity and foresight.

Are you interested in learning more or possibly joining our board?

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Even the defense industry needs defenders.



Glenn D. Bellamy

For decades Wood Herron & Evans has worked with clients across the defense industry to protect their inventions, brands, and creative content. We bring expertise in all fields of engineering and in all phases of IP protection, enforcement, and monetization. Let's discuss how Wood Herron & Evans can protect your competitive edge.



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