



JANUARY 2021 | NAMC MEMBER SPOTLIGHT

AUTONOMY

[APT-Research, Inc.](#)

[Colorado Engineering, Inc.](#)

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[Rafael Systems Global Sustainment \(RSGS\), LLC](#)

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Submit your [form here!](#)

Note:

NAMC will not alter submitted content.

Please make sure all information is correct and signed off on by your organization.



AUTONOMY



APT-Research, Inc. | Huntsville, AL | **Nontraditional**

POC: Brian Weyenberg | bweyenberg@apt-research.com | [Website](#)

What do you consider your organization's differentiator?

We are a niche safety engineering company; we don't do SETA work and we are looking to stay/grow our lane as a prime or teammate.

What do you want other NAMC Members to know about you?

Safety is in everything, but most organizations don't look at it until there is a problem. We are upfront and early in the acquisition cycle to save industry and the govt money and help field your solution on schedule.

What are your teaming goals within NAMC?

As most prototypes are purely safety in nature we are looking to team with traditional and non-traditional members to bring value and a better product to the end user.

Capabilities:

Safety Engineering

Software Safety

IV & V



AUTONOMY

Colorado Engineering, Inc. | Colorado Springs, CO | **Nontraditional**

POC: Richard Bayley | richard.bayley@coloradoengineering.com | [Website](#)

What is something unique about your product or service?

CEI is sought after by the major RF-IC manufacturers to develop custom mmWave and radar solutions.

What do you consider your organization's differentiator?

CEI cross trains its staff in Software, Hardware, RF and Systems engineering so that we can look at a customer's needs holistically.

What do you want other NAMC Members to know about you?

CEI works successfully with traditional government contractors to augment their engineering organizations in an agile and cost-effective manner.

Capabilities:

Autonomous Vehicles

Sensor Fusion

Computer Vision

Artificial Intelligence



AUTONOMY

Exyn Technologies | Philadelphia, PA | **Nontraditional**

POC: Ben Williams | bwilliams@exyntechnologies.com | [Website](#) | [in](#)

What do you consider your organization’s differentiator?

A defining quality of Exyn’s commercial offering, the Advanced Autonomous Aerial Robot (A3R), is its “self-contained” design in which all computation is done on-board without the need for external communications. The underlying technology is infrastructure-free meaning it does not require GPS, any communication (except initial mission tasking), or even prior information about its operating environment and can operate beyond line-of-sight of the control and visualization interface. This enables the A3R to operate in unknown and dangerous subterranean and dense urban environments without a pilot in-the-loop (keeping soldiers out of danger).

The 3D exploration mission mode is an industry first which enables the user to select a relative volume of interest in a known or unknown environment (tunnel/cave network, building(s), urban canyon, etc). The robot will then utilize this volume to relentlessly scout and collect data for all unknown areas while providing the operator with high-fidelity, 3D, multi-layer spatial data including survey-grade maps with machine learning-based object detection and localization (using EO cameras) overlaid.

What capability gaps are you able to fill and which industry colleagues would you like to know about them?

The Exyn A3R equips the warfighter in dense urban, indoor, and subterranean environments with real-time enhanced situational awareness. They will be able to view a real-time, high-resolution 3D map of the explored space that highlights localized objects of interest.

Due to Exyn’s modular architecture and platform agnostic capabilities, the ExynA3R has the ability to integrate with/on many types of vehicles (ground-based, aerial, or man carried) and can integrate and leverage inputs from additional sensors configurations (including CBRN, Visual, IR, Thermal, or Radar / STW sensors) and computation payloads. The combined system provides the operator with customizable overlaid information from the fused sensor streams and Machine Learning insights to enable enhanced situational awareness on the ground and gives the ISR capability to the forces on the ground.

What are your teaming goals within NAMC?

ML Classification providers; Drone or Ground Vehicle Manufacturers / OEMs; Sensor Experts / Vendors; Partners looking for infrastructure-free autonomy; Partners in providing high-resolution models of the operational environment; Partners with expertise in Synthetic Training Environment (STE) Generation

Capabilities:

Command & Control	UAS, SUAS, ISR, c4ISR	Machine Learning, Artificial Intelligence
Edge Compute & Computation	Enhanced Situational Awareness & Understanding	Intel
Surveillance	Reconnaissance	Detection
		Early Warning



AUTONOMY

Kratos Defense & Rocket Support Services, Inc. | Huntsville, AL | **Traditional**

POC: Jeff Carey | jeff.carey@kratosdefense.com | [Website](#)

What are your organizational goals?

Kratos provides a full spectrum of solutions for complex CSISR, engineering, and operational requirements and military weapon systems. We have years of experience in logistics, engineering, and target operations support, as well as international programs, rocket program services, technology initiatives, and advanced weapon system research and engineering. Our in-depth understanding of our client missions, in conjunction with the strategic location of our employees, enables us to offer cost effective solutions tailored to our clients' specific requirements and consistent with their evolving mission objectives. We have experience with sophisticated weapons systems, and we provide engineering and technical support to such strategic customers as AMCOM, PED STRI, PED Aviation, SMDC/ARSTRAT, PED Missiles and Space, Naval Surface Warfare Center (NSWC), WSMR, NUWC Keyport, USMC, and the Warner Robins Air Logistics Center. In addition, we provide Foreign Military Sales (FMS) to a number of international government clients. We develop program requirements, support implementation of acquisitions programs, and work with field activities in developing and testing new systems. Many of our professionals work onsite supporting critical DoD program initiatives. Because of our long-term involvement, we provide the organizational knowledge and continuity for many programs. Kratos engineers and analysts play a critical role in providing program synergy and reducing the impact on programs during the rotation of military and civilian personnel. Many of our ces are provided within the framework of the internationally-recognized ISO 9001:2000 quality standard.

What do you want other NAMC Members to know about you?

Aethon serves as a demonstrator for CSISR, sensory, and radar mission solutions by providing persistent payload delivery. These capabilities are made possible through an innovative tether technology, consisting of high power and quick data transfer, which provides power, command, and control to the vehicle. Aethon is a platform agnostic, modular, and mission configurable solution. All aspects of the system are scalable to meet specific mission and payload requirements.

Features

- Highly efficient, heavy lift motors with triple bearing support for long service life.
- Dynamically balanced carbon fiber propellers for increased responsiveness.
- Redundant safety systems, including an independent parachute, rated for max payload, with dual deployment methods.
- LED anti-collision lights and ADS-B for situational awareness and collision avoidance.
- 20x zoom, EO/IR stabilized gimbal camera with target tracking. Video feed downlinks securely over tether.
- Proprietary, high powered tether with GigE fiber optic communication.
- Active tether management currently configured to 150 meters maximum altitude.
- Payload and platform agnostic.

Mission Concepts

- CS – Mesh radio network provides resiliency and extends range with altitude. High bandwidth data link over tether.
- SIGINT – Detects UAS C2 and telemetry, Wi-Fi and cellular, and RF-Dark capability for contested environments.
- ISR – Persistent aerial coverage, multi-spectral imaging, laser designation, and range finding.
- Elevated Sensor – Extended range and vertical profiling of HPM, CBRNE, meteorological, or other applicable sensors.
- Radar – Altitude reduces environment obscuration and ground effects, while increasing effective range.

How did your organization originate?

Kratos is changing the way breakthrough technology for these industries are rapidly brought to market through proven commercial and venture capital-backed approaches, including proactive research and streamlined development processes. Kratos specializes in unmanned systems, satellite communications, cybersecurity/warfare, microwave electronics, missile defense, hypersonic systems, training, and combat systems.

Capabilities:

Tethered UAS Systems



AUTONOMY

Rafael Systems Global Sustainment (RSGS), LLC | Bethesda, MD | **Nontraditional**

POC: Joe Anderson | joseph.anderson@rsgsllc.com | [Website](#)

What do you consider your organization's differentiator?

Our products and services are capable, proven and tested literally every day in Israel.

What capability gaps are you able to fill and which industry colleagues would you like to know about them?

Precision fires, air & missile defense, vehicle protection, combat AI, homeland security - DRS, Raytheon, GDIT, LM, Oshkosh, Pratt & Miller.

How did your organization originate?

As a brand-new American subsidiary to better market Rafael's products and services in the US.

Capabilities:

Fully Augmented Situational Awareness

Autonomous Mission Support

Automatic Target Acquisition



AUTONOMY

Textron Systems Corporation | Hunt Valley, MD | [Traditional](#)

POC: Adam Horton | publicrelations@textronsystems.com | [Website](#) | [in](#)

What do you consider your organization's differentiator?

Our business is medium and mighty, with the agility of a small business to meet our customers' most urgent requirements, yet large enough to empower our team members to push past possible in any scenario. As a leader in autonomous design and architectures across air, land and sea domains, we can scale quickly to solve the big problems, working across functions, industry, academia, sites, and business lines to combine diverse skillsets to make things happen from concept through production.

What capability gaps are you able to fill and which industry colleagues would you like to know about them?

Textron Systems enables our customers to harness the power of technology through applied system integrations and the successful deployment of emerging technologies and disruptive capabilities to the field. Textron Systems benefits from a diverse portfolio of experience integrating manned and unmanned technologies and products to provide mission-focused solutions that meet the unique challenges inherent in defense applications. Our decades of experience in the air, land and sea domains, combined with our strong commitment to our customers, drive us to stay ahead of the curve and to focus on a diverse set of enabling technologies that uniquely position us to deliver tomorrow's solutions today. Our expert personnel are well-versed in providing total lifecycle support, rapidly moving from concept to proven military products tailored to support your crucial missions.

What are your teaming goals within NAMC?

We would like to leverage our relationships to create new partnerships with technology providers to inject leading innovations and mission specific capabilities.

Capabilities:

