



## MARCH 2021 | NAMC MEMBER SPOTLIGHT

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EXTERNAL SYSTEMS  
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## AUTONOMY

**Real Time Innovations** | Sunnyvale, CA | [Nontraditional](#)

POC: Chip Downing | [chip@rti.com](mailto:chip@rti.com) | [Website](#) | [LinkedIn](#) | [Facebook](#) | [Twitter](#)

### What are your organizational goals?

Real-Time Innovations (RTI) is the largest software framework company for autonomous systems. RTI Connex<sup>®</sup> is the world's leading architecture for developing intelligent distributed systems. Uniquely, Connex shares data directly, connecting AI algorithms to real-time networks of devices to build autonomous systems.

RTI is the best in the world at ensuring our customers' success in deploying production systems. With over 1,500 designs, RTI software runs over 250 autonomous vehicle programs, controls the largest power plants in North America, coordinates combat management on U.S. Navy ships, drives a new generation of medical robotics, enables flying cars, and provides 24/7 intelligence for hospital and emergency medicine. RTI runs a smarter world. RTI is the leading vendor of products compliant with the Object Management Group<sup>®</sup> (OMG<sup>®</sup>) Data Distribution Service<sup>™</sup> (DDS) standard. RTI is privately held and headquartered in Sunnyvale, California with regional offices in Colorado, Spain, and Singapore.

RTI strives to be the leading supplier of products conformant with the Object Management Group (OMG) Data Distribution Service (DDS) standard. Our certified conformant Future Airborne Capability Environment (FACE<sup>™</sup>) Transport Services Segment (TSS) product leads the military avionics industry. We also offer commercial off-the-shelf (COTS) RTCA DO-178C DAL A and ISO 26262 ASIL D certification evidence for our solutions to support the use of our Connex product in safety-critical commercial and military avionics systems and autonomous ground vehicles.

### What is something unique about your product or service?

RTI Connex software connectivity foundation enables the Army and Navy to use multiple defense suppliers to work as one integrated system to target and shoot down multiple inbound threats in real-time. It also enables a robotic medical system to perform surgery on a beating heart, NASA's Kennedy Space Center (KSC) autonomous launch system to reliably deliver more than 500,000 critical messages per second, and autonomous systems of all sorts to make life or death decisions in the air, on city streets, across the ocean, and in space. Connex is based upon an open standard, Data Distribution System (DDS), and coupled with a layered security capability that allows security to be rapidly provisioned and deployed in military networks and autonomous systems. We couple these capabilities with commercial-off-the-shelf (COTS) RTCA DO-178C DAL A and ISO 26262 ASIL D safety certification evidence.

### What do you consider your organization's differentiator?

RTI customers bet their lives on the performance of our real-time distributed software connectivity framework. RTI does not let its customers fail -- our products are proven in over 1,200 military systems, and supports systems requiring Technology Readiness Levels (TRLs) 7-9. In addition, we offer affordable commercial-off-the-shelf (COTS) FAA RTCA DO-178C DAL A and ISO 26262 ASIL D certification evidence for air and ground systems that require the highest levels of safety and airworthiness certification. Safety is the foundation of autonomy.



## COLLABORATION

**Darley Defense (W.S. Darley & Co.)** | Itasca, IL | [Nontraditional](#)

POC: George McCullough | [georgemccullough@darley.com](mailto:georgemccullough@darley.com) | [Website](#) | [LinkedIn](#) | [Twitter](#)

### What are your organizational goals?

To be the most reliable and customer-focused SBA distributor of capabilities to the DOD by integrating technologies from multiple entities to deliver unique solutions to defense-related problems.

### What is something unique about your product or service?

Our sales team is comprised of U.S. Military Veterans. We understand the needs of our customers better than anyone because we used to be in their boots. We are not just a distribution and logistics company but have engineering and manufacturing capacity as well. From CAD drawings to CNC to welding we help bring material solutions to the Warfighter. We are actively seeking partners for several NAMC opportunities we are pursuing.

### What do you consider your organization's differentiator?

We maintain and actively seek out new relationships in emerging technologies and with DOD end-users. This provides us the ability to assess and understand current capability needs and/or deficiencies. We leverage those relationships to combined complementary manufacturers' products into new and innovative solutions. Then we guide DOD customers through the contracting process to get those solutions fielded rapidly.

### Capabilities:

C4ISR

Counter UAS

Fire and Emergency Services Equipment

Tailored Logistic Solutions

Integrated Wireless Communications

Special Operations Equipment

UAS



## EXTERNAL SYSTEMS

**The City College of New York** | New York, NY | [Nontraditional](#)

POC: Alan Shih | [ashih@ccny.cuny.edu](mailto:ashih@ccny.cuny.edu) | [Website](#)

### What is something unique about your product or service?

We have ballistic and blast and other dynamic impact testing capabilities that are difficult to replicate at other institutions. Our shock tube used for blast testing simulation is the most powerful in American universities. We are also expert in manufacturing, dynamic testing and analysis of adhesive joints. We have developed a technique to embed sensors such as PZTs in layered composites manufactured via compression molding.

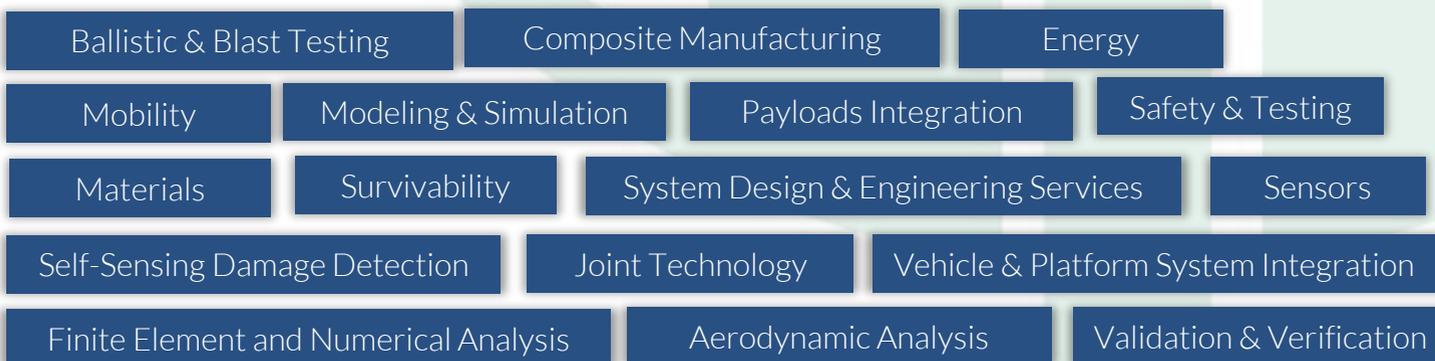
### What do you consider your organization's differentiator?

CCNY is a Minority Serving Institution with a diverse population of students and faculty. We have built a first-class research and development program with limited resources. We have access to a great pool of student and faculty talent and other facilities that we can draw on for our research.

### Which Government Customer would you like to pitch your organization to?

The bulk of our expertise is relevant to DOD agencies, especially the Army (GVSC, ARL, etc.). Our work has also relevance to NASA.

### Capabilities:





## MOBILITY

### **MSU Composite Materials and Structures Center** | East Lansing, MI | Nontraditional

POC: Lawrence T. Drzal | [DRZAL@EGR.MSU.EDU](mailto:DRZAL@EGR.MSU.EDU) | [Website](#)

#### What is something unique about your product or service?

Extensive knowledge and resource for polymer composite materials, analysis, testing, characterization and multifunctional design.

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

Independent source for polymer composite expertise supported by 15+ engineering professors in all disciplines.

#### What are your teaming goals within NAMC?

Available to provide technical support related to any aspect of polymer composite materials.

#### Capabilities:

Lightweight

Composite Materials

Multifunctional



## MODELING & SIMULATION

**Czero, Inc.** | Fort Collins, CO | [Nontraditional](#)

POC: Lyle Shuey | [lyle.shuey@czero-solutions.com](mailto:lyle.shuey@czero-solutions.com) | [Website](#)

### What are your organizational goals?

Czero is committed to enabling pioneering clients around the world solve energy transformation challenges through innovation. Working across industries, Czero takes ideas and designs for energy conversion, use and storage technologies and makes them more efficient, more effective, longer lasting, simpler, lower cost, more easily manufactured, less polluting and safer. This is the True North of Czero's vision.

### What do you consider your organization's differentiator?

Czero has a strong combination of skills and experience that enables us to look at a problem with depth and insight to solve very complex problems. We bring breadth and depth diversity and can apply the right capability to deliver exceptional results.

### What are your teaming goals within NAMC?

Czero seeks to enable NAMC partners to deliver exceptional capable solutions to the US Military by providing engineering skills and experience to rapidly expand team capabilities, achieving much more as a team than on their own.

### Capabilities:

Dynamic Modeling

MATLAB/Simulink

Architecture Trade Studies

Magnetic Modeling

Thermodynamic Analysis

GT Suite, Machine Learning

Algorithms

Finite Element Analysis

Data Reduction and Analysis

System Analysis

Multiphysics Simulation

Powertrain Systems

Computational Fluid Dynamics



## PLATFORMS

**Mistral, Inc.** | Bethesda, MD | [Nontraditional](#)

POC: Ronnen Paytan | [rpaytan@mistralgroup.com](mailto:rpaytan@mistralgroup.com) | [Website](#) | [LinkedIn](#)

What is something unique about your product or service?

Cost-effective land/riverine/maritime steel/aluminum rust protection; no sandblasting required; non-toxic.

Which Government Customer would you like to pitch your organization to?

GVSC; PEO GCS; PEO CS&CSS; NGCV CFT

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

Corrosion maintenance costs DOD about \$20B/yr. and up to 25% of every maintenance man-hour; Mistral is seeking to work with corrosion maintenance service providers and OEMs

Capabilities:

Communications	Corrosion Protection	Electronics	Modeling & Simulation
Perception & Situational Awareness		Survivability	Platforms
Payloads Integration	Sensors	Energy	



## TEST & EVALUATION

**Independent Rough Terrain Center, LLC.** | San Antonio, TX | **Traditional**

POC: William Mott | [william.mott@irtc-tx.com](mailto:william.mott@irtc-tx.com) | [Website](#) | [LinkedIn](#)

### What is something unique about your product or service?

Our product is the RT240 RTCH, or Rough Terrain Container Handler. It is unique in the world as being the only RTCH that can fly aboard the US Air Force C17, providing expeditionary heavy lift capability for the DoD.

### Which Government Customer would you like to pitch your organization to?

The US Army. The Army has 900+ RTCHs that are moving 80% of the the containerized logistics. This is a key system with a rich history stemming from OIF/OEF and is ready for technology insertion. What started the century as a manned system could very well become the Army's first autonomous system providing logistics expertise through AI insertion.

### How did your organization originate?

Independent Rough Terrain Center LLC began as a US RTCH repair facility but expanded in 2008 to become the OEM. The RTCH has its home in Cibolo, Texas, a small suburb of San Antonio. Offered for sale in 2018, the old Kalmar Rough Terrain Center was reborn as a new, independent small business. The company took that name and self-determining Texas spirit to give birth to IRTC. The company is still the OEM, proudly sustaining a fleet of 1,300+ machines and bringing modern-day technology and ideas to the future of DoD containerized logistics. "Come and Lift It" is our motto; what solution can IRTC provide for you?

### Capabilities:

Electronics	Energy	Fuels & Lubricants	Human Machine Teaming	Mobility
Modeling & Simulation	Sensors	Life Cycle Management	Manipulation	
Perception & Situational Awareness	Powertrain	Prototyping	Materials	
Survivability	Suspensions	System Design & Engineering Services	Safety & Testing	
Vehicle & Platform System Integration	Validation And Verification			