
Exhibitor Directory for CTMA Partners Meeting Providence, RI

ADVANCED/ADDITIVE MANUFACTURING

Siemens Government Technologies
Enterprise Equipment and Technology Analysis



Digitalization for Defense Government agencies are at the forefront of two historic trends: unprecedented innovation and increased complexity. To take advantage of these trends and deliver on commitments, federal leaders are embracing the digital enterprise. SGT delivers the power of the digital twin and digital thread, two innovations at the core of Industry 4.0 that connect the real and virtual worlds to optimize operations, predict outcomes more accurately, and reduce maintenance costs.

Contact

Rob Tye
 703-789-5409
 robert.tye@siemensgovt.com
 siemensgovt.com

<p>Problem Statement:</p> <p>Naval Shipyards were last significantly updated in WWII. A Shipyard GAO report of September 2017 stated that planned maintenance periods complete on schedule only 47% of the time for aircraft carriers and 24% of the time for submarines. From 2000 – 2016, maintenance overruns resulted in 1,300 lost operational days for aircraft carriers and 12,500 lost operational days of submarines. Modernization of the physical plant to take advantage of new work processes has associated risk of major financial investment.</p>	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • Improve back shop repair process performance. • Maximize allocation of resources. • Allow for supported decisions on layout alternatives to reach defined objectives within cost constraints. • Target faster ROI from project investments in facilities, tooling and new technologies. • Establish a NAVSEA enterprise simulation management tool. • Establish priority on readiness.
<p>Technology Solution Statement:</p> <p>This effort focuses on processes within the shipyard’s back shop facilities to optimize workflow, equipment, and worker resources at the detailed process level. Performance improvements will then be mapped to the shipyard forecasting models to assess the potential impacts to ship repair availabilities. The two digital models to be delivered are:</p> <ul style="list-style-type: none"> • A stochastic equipment level model incorporating all infrastructure and industrial assets required to support Fabrication processes, Repair processes, Other Productive Work, and equipment maintenance performed in these facilities. • A stochastic forecasting model incorporating outputs of equipment models to predict future Naval shipyard availability durations. 	

BUSINESS IT AND ANALYTICS

**Naval Systems Incorporated (NSI)
Data and Digital Solutions**



Naval Systems, Inc. (NSI), is a Service Disabled Veteran Owned Small Business supporting the Naval Air Systems Command from locations near Patuxent River, Maryland; Cherry Point, North Carolina; Jacksonville, Florida; and China Lake, California providing commercial/digital solutions to the warfighter and Public.

Our main office is located in Lexington Park, Maryland; just minutes from NAS Patuxent River. NSI has experienced strong growth since our founding and has developed a reputation among clients for superior quality, cost and schedule performance; providing innovative solutions to difficult problems; and demonstrating uncompromising devotion to the ultimate customer: our Navy and Marine Corps warfighters.

Contact

Dave Davidson
240-561-0927
ddavison@n-s-i.us
n-s-i.us

<p>Problem Statement: Tackling the most challenging commercial/digital/analytic/unmanned vehicle solutions for the DOD and the public.</p>	<p>Benefits Statement: Providing agile, fast-paced, and focused support to the customers need capitalizing on commercial technologies to benefit both the DOD and the public.</p>
<p>Technology Solution Statement: NSI's solutions represent state of the art commercial products and technologies to compliment and streamline DOD readiness and avoidance of legacy processes and equipment.</p>	<p>RAPID PROTOTYPING & CONTINUOUS INNOVATION <i>NSI Leads In Rapidly Deploying Digital Solutions</i></p> <ul style="list-style-type: none"> ✓ Optimizing Maintenance & Sustainment ✓ Dashboards & Predictive Analytics ✓ Keeping Naval Aviation Ready for the Fight <p>COLLABORATION & PARTNERSHIPS <i>NSI: Building Bridges Across:</i></p> <ul style="list-style-type: none"> ✓ Agencies / Commands / Military Services ✓ Industry-Government ✓ International Partners & Allies <p>CONTESTED LOGISTICS IN THE INDOPACIFIC <i>NSI's Digital Supply Chain Tools and Presence Brings Sustainable In-Theater Advantage</i></p> <ul style="list-style-type: none"> ✓ SCM Tools ✓ Transportation Support ✓ Logistics/Engineering Depot-Level Support <p>DISRUPTIVE WARFIGHTING MODELS <i>NSI: Thinking Differently About The Weaponization of Data in Learning Organizations</i></p> <ul style="list-style-type: none"> ✓ Eliminating ATO Bottlenecks ✓ Agile MVPs and Continuous Refresh & Enhance ✓ Spanning Boundaries in Rapid Deployment <p>NSI THE SOLUTIONS COMPANY <i>Removing Barriers to Enable Data-Driven Decision Advantage</i> STAC SCORE TECHNOLOGY & ANALYTICS CENTER NAVAL SYSTEMS, INC.</p>

BUSINESS IT AND ANALYTICS

One Network Enterprises
NEO for Global Defense



One Network Enterprises™

One Network Enterprises (ONE) is the world leader in Digital Supply Chain Networks. ONE’s multi-party, multi-tier, secure, cloud-based Digital Supply Chain Network is a transformative solution, leveraging smart control towers, providing a single version of the truth (SVOT), matching demand-to-supply-to-transportation instantly, resulting in immediate increased agility and responsiveness to deliver world-class support to the warfighter.

The platform, powered by NEO, is ONE’s patented artificial intelligence and machine learning (AI/ML) technology, enabling simultaneous planning and execution. Leveraging the power of a true multi-party network, ONE’s Logistics Control Tower solution uses real-time data shared across all functional areas. It combines and coordinates all parties and systems around one SVOT, integrating with legacy and existing ERP systems, providing a

solid foundation for optimization, decision-making, collaboration, and automation.

ONE’s NEO for Global Defense is unlike any other commercial software solution. It includes a commercial set of Defense related modules that provide critical defense capabilities that are organically integrated with transformational commercial capabilities. The fully configured (deployed) solution is supported as COTS. This guarantees that the implementation will never go legacy. Modernizations, including commercial innovations, are always available.

Contact

David P. Stephens
703-622-5483
dstephens@onenetwork.com
www.onenetwork.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • Currently, legacy and ERP systems cannot manage end-to-end logistics processes in a class-of-supply agnostic manner across all organizational tiers. • Data analytics platforms use stale data, are costly, and only provide limited visibility. • Legacy Systems struggle with achieving mandates and directives such as Accountability, FISCAM, FIAR, IUID Tracking and DLMS. • Current systems are expensive to maintain and do not support emerging critical military functions such as joint operations and tactical capability deployments. • Each implementation is a silo with no cross-DOD benefits. 	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • Promotes a defense “ecosystem” that benefits DOD organizations. • Solution never goes legacy, reducing sustainment costs while delivering modernizations. • Rapid configuration and deployed “your way.” • Extends to all organizational tiers on a single platform. • Flexible integration to current legacy/ERP and DOD systems. • Tactical tier is fully supported with deployed operations for D-DIL/Contested environments. • AI enabled control tower provides both visibility and actionability on real time data. • Highest auditability results across DOD.
<p>Technology Solution Statement:</p> <ul style="list-style-type: none"> • Natively supports key Defense capabilities across all organizational tiers such as management of munitions and guided weapons, food service, bulk fuels, medical supplies, and sparing across supply, transportation, and maintenance functions. • Ensures that no existing system is siloed, and no IT investment is wasted with ease of integration. Enhances existing ERP and legacy infrastructures. • Deployed Operations support (D-DIL/contested), ashore and afloat. • Implementations never go legacy and supported as COTS. • Control Tower provides visibility, planning and actionability with AI/ML capabilities. 	

CBM+/PREDICTIVE MAINTENANCE

Ametek Spectro Scientific

Expeditionary Fluid Analysis System Fieldlab 58



Ametek Spectro Scientific was founded in 1983 as Spectro Inc. and became a business of Ametek, Inc. since 2018. Ametek Spectro Scientific is one of the largest worldwide suppliers of oil, fuel, and fluid analysis instruments to industry, military and laboratories. With over 8000 instruments sold, and customers on six continents, Ametek Spectro Scientific is a leader in the field of condition based maintenance and oil in water analysis.


Our 50,000 square foot headquarters in Chelmsford, Massachusetts houses our manufacturing, R&D, sales, marketing, and service groups. In addition we have facilities in Marlboro, Massachusetts and Beijing, China.

Ametek Spectro Scientific, an ISO 9001:2015 company, develops a broad array of fluid analysis instruments for evaluating machine and lubricant condition in the field, in the lab and in highly mobile, handheld applications. The instruments provide crit-

ical data about machinery condition and can provide an early warning of equipment failure. Our core businesses are oil and grease analysis, fuel analysis and oil in water analysis for regulatory compliance.

Contact

Rachel Li
 978-501-5858
 rachel.li@ametek.com
 www.spectrosci.com

<p>Problem Statement: Developing an efficient system for military and commercial field service professionals to effectively manage and maintain mobile fleets of high-value assets based on their condition.</p>	<p>Benefits Statement: Experience the convenience of on-site field testing with our ruggedly designed small case, integrating four advanced oil analysis technologies, all powered by a long-lasting battery.</p>
<p>Technology Solution Statement: Portable, lightweight devices that provide rapid oil analysis results with quality similar to oil analysis labs.</p>	

CBM+/PREDICTIVE MAINTENANCE

Andromeda Systems Incorporated
Optimizing MRO Resourcing and Processes



As a recognized leader in engineering, information technology, and logistics, ASI provides professional and technical services in engineering design and analysis, reliability engineering and analysis, information technology, logistics, process improvement and program management. Our highly qualified and multi-disciplined staff supports the US government and commercial customers. ASI is a privately held corporation based in Virginia Beach, VA with locations across the United States.

ASI provides products, tools, and services to assist physical asset owners, fleet managers, and military program managers in gaining critical insights into their equipment’s performance, identifying system improvements, optimizing operations & support, making better business decisions, and achieving life-cycle cost savings. As a leading provider of professional and high technology services and solutions, ASI partners with customers to achieve

optimal levels of economy, availability, and safety by developing and applying cutting-edge systems engineering and supportability analysis tools, processes, and expertise to the operation and support of physical assets. Specifically, ASI currently supports over 20 different types of aircraft (to include the F-35A/B/C, F/A-18, HH-60W, and P-8A) and supports other assets, like the USMC’s Logistic Vehicle System Replacement (LVSr), within the Department of Defense.

Contact

Jennifer Otero
 904-637-2024
 jennifer.otero@androsysinc.com
 androsysinc.com

<p>Problem Statement:</p> <p>Performing maintenance, repairs, and overhauls as well as manufacturing unique or obsolete components for the Naval Aviation Enterprise (NAE) involves navigating and managing an extremely complex network of Depots, Intermediate level land-based and ship-based locations. Depot Field Repair Teams also perform critical repairs to aircraft aboard Air Stations across the globe. COMFRC is responsible for the planning, funding, and scheduling of maintenance activities at these sites in order to ensure that weapons systems are available capable to support the Warfighter.</p>	<p>Benefits Statement:</p> <p>Scenarios run to date:</p> <ul style="list-style-type: none"> • Reallocating of resources (personnel, equipment) to fill gaps in some locations and relieve excesses in others. • Intelligent routing of workload across sites to gain efficiencies. • Prioritization of components/assets to meet changing needs. • Evaluating ability to meet increase in demand (surge) across the sites. • Prioritization of Continuous Process Improvement efforts to reduce TAT and increase throughput. • Model is being used in a web-based application by users across numerous sites, allowing COMFRC to react quickly to evolving situations. 																														
<p>Technology Solution Statement:</p> <p>The model is a decision support and analysis tool that provides a holistic view of how all the sites can manage their current maintenance and production workloads. It models each location by shop, available personnel, equipment, and even qualifications to collect key metrics such as throughput, Turnaround Time (TaT), resource utilization/availability, and backlog. Planned future workload is then evaluated and various scenarios and COAs are analyzed to determine their impact.</p>	<div style="display: flex; justify-content: space-between;"> <div data-bbox="815 1566 1161 1753"> <p>Throughput</p> <p>Baseline ~ 282 After “What If” ~ 435</p> <p>Total Increase of 54%</p> </div> <div data-bbox="1161 1566 1523 1753"> <p>Equipment Utilization</p> <table border="1"> <thead> <tr> <th>Equipment</th> <th>Baseline</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>Test Bench</td> <td>100%</td> <td>50%</td> </tr> <tr> <td>Machine Braiding</td> <td>57%</td> <td>99%</td> </tr> <tr> <td>Multimeter</td> <td>14%</td> <td>45%</td> </tr> </tbody> </table> </div> </div> <p style="text-align: center; margin: 10px 0;">Added 1 Test Bench to Repair Shop (69C)</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="815 1753 1161 1961"> <p>Personnel Utilization</p> <table border="1"> <thead> <tr> <th>Personnel</th> <th>Baseline</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>69B Workers</td> <td>50%</td> <td>95%</td> </tr> </tbody> </table> <p>69B throughput decreased by 23%</p> </div> <div data-bbox="1161 1753 1523 1961"> <p>Backlog for Equipment</p> <table border="1"> <thead> <tr> <th>Equipment</th> <th>Baseline</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>Test Bench</td> <td>85</td> <td>1</td> </tr> <tr> <td>Machine Braiding</td> <td>0</td> <td>23</td> </tr> <tr> <td>Multimeter</td> <td>0</td> <td>16</td> </tr> </tbody> </table> </div> </div>	Equipment	Baseline	New	Test Bench	100%	50%	Machine Braiding	57%	99%	Multimeter	14%	45%	Personnel	Baseline	New	69B Workers	50%	95%	Equipment	Baseline	New	Test Bench	85	1	Machine Braiding	0	23	Multimeter	0	16
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CBM+/PREDICTIVE MAINTENANCE

Brighton Science


Surface Analyst - Surface Cleanliness Gage



Brighton Science designs and manufactures unique high-precision surface inspection systems that provide the essential molecular surface state information necessary to achieve extreme reliability in manufacturing processes that involve surface treatment, cleaning, bonding, and coating. We provide a range of services that bring materials science-based insights to customers who design and manufacture products whose performance depend on surface and interfacial properties. We perform fundamental research in surface analysis and surface engineering.

Contact

Lucas Dillingham
 513-484-7251
 ldillingham@brighton-science.com
 brighton-science.com

<p>Problem Statement:</p> <p>Currently failures in coating, bonding, sealing, and coating are mainly driven due to poor surface preparation. There are no objective metrics on surface preparation or surface cleanliness. This causes rework, downtime, poor training, and impacts operational readiness.</p>	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • Improve Operational Readiness: Predicting material surface energy for optimized bonding, expediting deployment, and reducing rework delays. • Reduce Failure: Ensuring precise surface preparation to minimize bond failures in critical environments. • Faster Problem Solving: Offering immediate surface condition insights for rapid diagnosis and correction, minimizing downtime. • Cost Reduction: Successful bonds mean significant savings on labor, materials, and maintenance costs. • Accelerating Innovation: Aiding in the development and testing of new materials and bonding technologies, for faster integration into practical applications.
<p>Technology Solution Statement:</p> <p>The Surface Analyst 3001 HZE-TSN was designed for the verification and validation of surface preparation and cleanliness. It provides an objective number in seconds to the operator. This portable handheld device is certified for use in NEC Class I DIV II and IEC Ex Class I Zone 2 hazardous environments meeting corresponding UL and CE/ATEX requirements. The kit was designed for versatility across a broad spectrum of hazardous environments, particularly those classified under NEC Class I DIV II and IEC Ex Class I Zone 2. In these conditions, every component and feature of the Surface Analyst 3001 HZE-TSN has been optimized for safety, durability, and efficacy.</p>	

CBM+/PREDICTIVE MAINTENANCE

Universal Synaptics

IFDIS 2.0 & Portable Intermittent Fault Detector



Universal Synaptics (CAGE Code 350J1) with its partner Lockheed Martin is the industry leader in detecting and isolating elusive intermittent faults in compliance with the Department of Defense MIL-PRF 32516. The massive digital testing void that exists today with conventional scanning test equipment led to the development of the patented Portable Intermittent Fault Detector™ (PIFD™), the Intermittent Fault Detection & Isolation System™ (IFDIS™), and the Intermittent Fault Detection & Isolation System 2.0™ (IFDIS 2.0™) family of intermittent fault detectors.


The primary business purpose of the partnership is to assist sustainment organizations to solve their extensive intermittent failure problems, increase system availability, and reduce No Fault Found while collaborating across existing and new platforms.

The PIFD has achieved Authority to Operate (ATO) on the F-35 Global Program, NSN’s assigned, and is

approved by Boeing for all commercial aircraft (AMM, Chapter 20, “General Wiring Maintenance & Intermittent Fault Detection and Isolation”).

Contact

Ken Anderson
 801-695-1709
 ken.anderson@usynaptics.com
 usynaptics.com

<p>Problem Statement: Intermittent / NFF systems continuously cycle between the field and depot resulting in over 383,000 days of end-item system non-availability and approximately \$5.5 billion in non-value-added sustainment costs annually.</p>	<p>Benefits Statement: According to the January 2020 GAO Report (GAO-20-116), “Navy Fleet Readiness Center Southwest, California, implemented an Intermittent Fault Detection System on its F/A-18 aircraft generators. According to officials, the depot reduced repair time from 90 days to 30 days and quadrupled the generators’ time between failures”. The GAO Report continues, “using the Intermittent Fault Detection and Isolation System, the mean time between failures for the generators has increased, according to officials, from 104 flight hours to over 400 flight hours and recovered out-of-service assets generating about \$62 million in cost savings”.</p>
<p>Technology Solution Statement: The Intermittent Fault Detection & Isolation System 2.0™ (IFDIS 2.0™) and portable Intermittent Fault Detector™ (IFD™) are purpose built to detect and isolate intermittent faults in LRUs / WRAs and EWIS and are working very effectively across the services and commercial aviation.</p>	



COATINGS AND CORROSION PREVENTION

BlastOne International

SnakeBite - The World's Quietest Blast Nozzle

Originally established nearly 50 years ago to provide technical consulting, BlastOne has grown to become a single source supplier of blasting equipment, abrasives and know-how to customers all over the world. BlastOne operates internationally from several offices across Australia, New Zealand, North America and Europe. We stand behind our brand claim of superior performance. It's something we define as 'Performance3'—the result of combining superior know-how with superior abrasives and superior equipment. In short, it delivers greater cost-efficiencies for our customers.

Contact

Chloe Meisner
 614-695-5794
 chloe.meisner@blastone.com
 www.blastone.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • Industrial sandblasting is notoriously fatiguing and creates noise pollution ranging between 113dB-120dB. OSHA requires employers to implement protective hearing equipment when noise exposure reaches 85 decibels averaged over 8 working hours. However, as many blasting job sites are in public areas or work alongside other construction trades, standard blasting volumes are detrimental to anyone near the jobsite not wearing hearing protection. • SnakeBite's proprietary technology significantly reduces both blaster fatigue as well as overall noise pollution. 	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • SnakeBite Nozzles are up to 75% quieter than standard nozzles, protecting the hearing of operators and surrounding trades, as well as reducing overall noise pollution near any public space. • A 45% reduction in the nozzle's back-thrust reduces blaster fatigue and mitigates falling dangers involved when blasting on platforms or scaffolding. • Due to its reduced back-thrust, the SnakeBite #10 (5/8") nozzle now offers blasters the following benefits: <ul style="list-style-type: none"> • 25-35% avg increase in blast pattern width per sweep. • 54% increase in blasting speed over the most common #8 high-production nozzle.
<p>Technology Solution Statement:</p> <ul style="list-style-type: none"> • BlastOne contracted acoustical engineers at the University of Queensland's (Australia) Center of Hypersonics to develop the technology. • The SnakeBite's newly designed internal geometry reduces noise up to 75% (16-19dB) compared with standard blast nozzles. • The re-engineered nozzle also results in a 45% average reduction in back-thrust: increasing productivity by decreasing operator fatigue and turnover. 	<div style="display: flex; justify-content: space-around;"> <div data-bbox="815 1602 1079 1833"> <p>3 SnakeBite nozzles attached to magnetic blasting robot</p> </div> <div data-bbox="1128 1602 1510 1833"> <p>SnakeBite Strike: 25-35% increase in blast pattern width per each sweep</p> <p>#8 HYPER</p> <p>Productivity comparison between SnakeBite Strike and leading high productivity nozzle.</p> </div> </div>

COATINGS AND CORROSION PREVENTION

Element 119 LLC

Anti-Corrosion Coating



Element 119 LLC is a USA-made producer of advanced ceramic nano coatings for the automotive, aerospace, and marine markets. The company got its start back in 2010 solving a persistent problem for Sikorsky—paint fouling around helicopter exhaust ports. While competitors’ solutions melted off after the first flight, Element 119 founder and head formulator Andrew Zeppa devised a coating that withstands temperatures to 1,000° F. That solution became the foundation of the System X™ line of ceramic coatings known and respected throughout the industry today.

Why call the company Element 119? Because the 119th element of the periodic table, which has yet to be isolated, is considered the “next big thing.” That’s just what Andrew Zeppa thinks of his groundbreaking protective coating technology.

In addition to quality off-the-shelf products, Element 119 also develops custom solutions to meet specific customer needs. Small, agile, and innovative, we often solve problems that larger outfits with far greater resources can’t. Our clients include Fortune 500 companies and the US military. In 2023, the company was named New England Small Business Exporter of the Year by the US Small Business Association, was honored by the Connecticut District Export Council for new market expansion and was recognized as one of the top small businesses in the country by the U.S. Chamber of Commerce.

Contact

Todd Rutovich
 860-237-3706
 TRutovich@element119.com
 www.element119.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • The damaging effects of corrosion and the elements are costly and keep valuable assets out of commission. • Current 2K coatings contain dangerous isocyanates that can cause severe skin irritation and respiratory illness with acute (short-term) exposure. • Today’s 2K coatings must be mixed right before being used and have a short shelf life. 	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • Element 119’s new topcoat is durable, easy to apply, and easy to clean. • Outstanding protection against corrosion and weathering. • Reduces the need for maintenance and repairs, keeping assets at the ready and saving significant time and money. • Prolonged shelf life allows for minor touch-ups. • Isocyanate free, reducing the safety risk for maintenance personnel and the environment.
<p>Technology Solution Statement:</p> <p>Element 119’s novel 1K, eco-friendly coating performs as well as or better than the military’s current topcoat options. By combining the protective properties of our proprietary ceramics with those of a unique new topcoat, we have achieved a moisture-curable solution with remarkable resistance to corrosion and weathering that is also free of isocyanates. The coating is compatible with a wide variety of primers and has a lower VOC content than today’s topcoats, making it an affordable and safer alternative.</p>	<p>AWARDED SBIR PHASE I & II 2019, 2020, 2021, 2022, 2023, 2024</p>

COATINGS AND CORROSION PREVENTION

Laser Photonics

DefenseTech Handheld Laser Cleaning System



Laser Photonics is the leading industrial brand in high-tech laser systems for laser cleaning, marking, cutting, engraving, welding as well as 3D printing applications. Our products have been used in defense, aerospace, nuclear power, and manufacturing industries. We have also been utilized in the automotive, electronic, semiconductor, flat panel, and medical industries worldwide for over 40 years. Our laser solutions are critical for enabling environmental sustainability, cost savings, efficiency and precision, and operator safety. Our brand is proud to pioneer a new generation of disruptive laser cleaning technologies that include corrosion control, rust removal, de-coating, pre- and post-weld applications, welding, laser cleaning, surface conditioning, and more. All while reducing environmental hazards and increasing workplace safety.

Contact

Rohan Narain
 407-804-1000
 rnarain@laserphotonics.com
 www.laserphotonics.com

<p>Problem Statement:</p> <p>Corrosion costs the Department of Defense over \$20B in military assets every year. Amid growing environmental concerns, the DOD is under pressure to adopt sustainable supply chain practices, including eco-friendly cleaning products and waste reduction. Traditional methods like sandblasting and chemical cleaning expose personnel to hazardous chemicals and pollutants and involve costly consumables that are facing increased environmental and workplace health and safety regulations.</p>	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • DefenseTech Laser Cleaning Systems provide a non-contact, environmentally friendly process that removes rust, corrosion, and coatings from various surfaces without damaging the underlying substrate, ensuring prolonged equipment life and operational readiness. • No chemicals. • No hazardous fumes. • No complex cleaning procedures.
<p>Technology Solution Statement:</p> <ul style="list-style-type: none"> • Laser surface treatment can be used to remove rust and corrosion on missiles, munitions, and other equipment with accuracy, enhancing the lifespan and performance of critical equipment. • Non-abrasive and non-contact cleaning method which minimizes harm to the environment while prioritizing the safety of personnel involved in maintenance operations. • Its portable, handheld design ensures mobile performance, allowing military and defense personnel to maintain readiness anywhere, anytime. 	

COATINGS AND CORROSION PREVENTION

ToughGuard SPC, LLC

High Value Surface Protection Above and Below the Waterline



ToughGuard SPC (Specialty Protection Coatings) LLC focuses on product development, sales and training of the most advanced/innovative surface protection products that significantly exceed all other coating products. ToughGuard surface protection products are designed and engineered by brilliant, generational chemists who create generational products that profoundly outperform all “competitive” type products. ToughGuard surface protection products actually do what value asset owners want surface protection products to do - to protect and extend the service life of their assets which are exposed to constant harsh, surface degrading environmental (both natural and man-made) elements such as Corrosion, Abrasion, Oxidation caused by UV rays, and Chemicals (CAOC).

Contact

Dan Reid
 503-784-1791
 danreid@toughguard.com
 www.toughguard.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • CAOC = Corrosion, Abrasion, Oxidation, Chemicals. Corrosion costs the US Military \$25 billion annually. Past and current outdated paint technologies continue to be used even though these technologies have not changed in the past 40+ years. Paint breakdown and performance levels are globally accepted as normal, and a given status quo. • Barnacle growth and other sea growth on the bottom of maritime vessels, docks, and other structures pose ongoing and expensive issues for our US Military. Fouling on the bottom of ships creates drag and the more drag a ship’s hull has on it, the more power (fuel) is needed to maintain speed. Having any form of added foreign objects on the hulls of ships and submarines causes inefficiencies and added costs. 	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • The use of NHP by the US Military will have a profound impact on reducing CAOC on painted and unpainted assets that are exposed. By significantly reducing the effects of CAOC, our US Military will reduce maintenance and repair costs and have a greater amount of mission critical assets deployed or ready for deployment rather than be in a dry-dock, paint booth or unusable and retired. • Improve performance and efficiencies while reducing fuel costs and maintenance/repair expenses.
<p>Technology Solution Statement:</p> <ul style="list-style-type: none"> • Protect high value assets. • Extend the service life of high value assets. • Improve operational efficiencies. • Reduce dollars spent on maintenance/repair expenses. • Have mission critical assets deployed or ready for deployment. • Reassign money budgeted for maintenance/repair needs to other needed and valued purposes. 	

ENERGY, ENVIRONMENTAL, HEALTH, AND SAFETY

GVS-RPB

Respiratory Protection



Over 40 years, we've become respiratory protection specialists. Our loose-fitting respirator range was developed out of a need for better protection in the blast booth and has since grown to serve many more industries. With GVS acquiring the company in 2021, we now have an even larger range of respirators available, with the tight-fitting models Elipse and Integra included. Our products are synonymous with comfort and safety, plus our dedication to research, development, and innovation is second to none. We are a globally trusted brand, devoted to helping people get home safely to the things in life that matter most.

Contact

Hayden Brown
 614-599-7274
 hayden.brown@gvs.com
 www.gvs-rpb.com

Problem Statement:

The level of protection offered by tight-fitting respirators isn't always enough in certain environments. To prevent harmful airborne particulates from being inhaled, tight-fitting respirators must form a tight seal, requiring clean-shaven workers, and fit testing, often done annually or when the wearer's characteristics change. They can also be uncomfortable, causing skin irritations and labored breathing, plus their impact on the environment is devastating.

Benefits Statement:

It's easier to breathe wearing a loose-fitting respirator, resulting in fewer breaks and increased production. While there are higher initial costs, loose-fitting respirators in the long run are more affordable, with most of the ongoing costs being just the replacement of HEPA filters. Because it isn't tight-fitting, there are no skin irritations, workers don't have to shave or get fit-tested, and weight fluctuations are also acceptable, which is excellent for confidence and morale.

Technology Solution Statement:

Our loose-fitting respirators offer greater protection, which is why they have an Assigned Protection Factor of 1000. Clean air is pumped into the head top through a PAPR (Powered Air Purifying Respirator) or SAR (Supplied Air Respirator), with the positive pressure helping to keep the hazardous particulates out. With the addition of a bump cap and/or hard hat, that superior protection is increased further, providing extra safety for workers in various hazardous industries. It is easier to breathe wearing a loose-fitting respirator, resulting in fewer breaks and increased production.



ENHANCED INSPECTION


Skydio
Skydio X10D



Skydio is the leading US drone manufacturer and world leader in autonomous flight. Skydio leverages breakthrough AI to create the world’s most intelligent flying machines for use by consumers, enterprises, and government customers. Founded in 2014, Skydio is made up of leading experts in AI, robotics, cameras, and electric vehicles from top companies, research labs, and universities from around the world. Skydio designs, assembles, and supports its products in the US from its headquarters in San Mateo, CA, to offer the highest standards of supply chain and manufacturing security.

Contact

Melody Barker
615-306-4900
melody.barker@skydio.com
skydio.com/solutions/defense/asset-inspection

<p>Problem Statement:</p> <p>Modern military operations demand rapid, reliable, and intelligent surveillance solutions capable of operating in challenging and dynamic environments, including GPS-denied areas. Traditional reconnaissance methods are often limited by the need for manual control, slow deployment, and restricted operational flexibility, hindering timely threat identification and assessment. Additionally, the evolving nature of threats requires adaptable and scalable technology to ensure security forces can effectively manage situational awareness and operational readiness without compromising safety or efficiency.</p>	<p>Benefits Statement:</p> <p>Skydio X10D offers significant benefits for military operations, enhancing security and force protection through rapid deployment, autonomous operation, and superior surveillance capabilities. Its agility and efficiency allow for quick aerial intelligence delivery, reducing attack risks in remote locations. Advanced surveillance features extend operational coverage, improve decision-making, and enable strategic assessments. The drone’s quiet flight profile, coupled with high-speed and low-light capabilities, ensures discreet and dependable reconnaissance. Overall, X10D enhances operational success in challenging environments by providing critical advantages in threat detection and situational awareness.</p>
<p>Technology Solution Statement:</p> <p>Skydio X10D represents a state-of-the-art technology solution, designed to meet the rigorous demands of military operations. It integrates advanced AI-driven autonomy, superior navigation systems, and a robust thermal imaging capability into a durable, lightweight frame. Powered by an Nvidia Jetson Orin processor, the X10D supports rapid, on-the-fly data processing, ensuring real-time intelligence and operational responsiveness. Its open architecture accommodates diverse payloads and software enhancements, facilitating customization for specific mission requirements. This drone offers unparalleled operational flexibility, capable of executing complex maneuvers in challenging environments.</p>	 A top-down view of the Skydio X10D drone, showing its four arms, propellers, and central body with a camera mounted underneath.

ENHANCED INSPECTION

ZOLLER, Inc

Tool Presetting, Tool Inspection and Tool Management Solutions



ZOLLER is the global leader in tool presetting, measuring, inspection, balancing, shrinking, automation and tool management technology. The third-generation, family-owned company has provided state-of-the-art solutions for the complete management of cutting tools for more than 75 years.

Contact

Rita Conroy-Martin
 734-277-3589
 conroy-martin@zoller-usa.com
 zoller.info/us

<p>Problem Statement: Manufacturing inefficiency can lead to longer production times, less accuracy and repeatability, and lower quality parts. These challenges include bottlenecks, missing tools, higher scrap and tooling costs, and under-utilized machine tool spindles.</p>	<p>Benefits Statement: The tool presetting, measurement, inspection, and tool management solutions from ZOLLER increase your machine spindle uptime actually cutting parts, and ensure repeatable accurate measurements results and a faster, more efficient production process.</p>
<p>Technology Solution Statement: The ZOLLER Solutions portfolio of tool presetting, measurement, inspection and tool management software and hardware ensure that you are in control of every aspect of your cutting tools, and ensure that you produce a “first part, good part” each and every time!</p>	

FACILITIES AND INDUSTRIAL PROCESS MODERNIZATION

Edlore Inc

Transforming Maintenance Technical Orders with AI-Driven 3D Animation



Edlore is a pioneer in AI/ML and 3D technological solutions, reshaping industry standards with its interactive manuals and wearable device integrations. Our patented AI-driven platform transforms complex technical orders into digestible, contextually relevant insights, streamlining operations. With state-of-the-art mobile and wearable technology, professionals achieve access to crucial data, ensuring efficiency and precision. Our platform also encompasses a robust work order management system, enhanced by asset tracking and multimedia attachments, facilitating seamless operations and maintenance processes. At Edlore, we blend innovation and practicality, consistently delivering excellence in an ever-evolving technological landscape.

Contact

Javid Vahid
 949-690-2245
 javid@edlore.com
 edlore.com

<p>Problem Statement:</p> <p>Despite the rapid advancement in industrial and technical operations, complex equipment service and maintainers often grapple with cumbersome manuals, scattered asset data, and lack of real-time expert assistance. This disjointed information flow increases operational downtime and raises the margin for error. Edlore addresses this pressing challenge by seamlessly integrating AI-driven insights, 3D interactive manuals, and hands-free wearable technology, ensuring precise, efficient, and on-demand data accessibility for professionals in the field.</p>	<p>Benefits Statement:</p> <p>Empowering maintainers with immediate access to AI-enhanced, 3D interactive guidance, reduces operational errors and downtime. The benefits of using Edlore include:</p> <ul style="list-style-type: none"> • More efficient on-board service and repair. • Never miss regular PM Maintenance. • Access to device parts metadata and ability to possibly print the component on board. • Gathering field data from service and repair. • Mobile and handsfree operation.
<p>Technology Solution Statement:</p> <p>Edlore introduces a unified technology suite designed for the modern maintainer. Leveraging AI's power, we've transformed dense manuals into interactive, 3D-guided insights. Our platform, optimized for desktop, mobile and wearable devices, ensures hands-free, on-the-go access to these insights, minimizing downtime. Furthermore, with our real-time Remote Expert Video Chat, professionals are never alone in the field, always having a lifeline to expert assistance. The system is paired with a comprehensive Work Order Management system and dynamic asset tracking. In addition, Remote Expert Video Chat and 3D/AR explosive view with parts metadata that allows you to even send the part to be printed on a 3D printer.</p>	<p>EDLORE <small>Patent No. 10,096,003</small></p> <p>Unlock the Future of Maintenance Excellence Convert tech manuals to interactive 3D</p> <p>FROM THIS → TO THIS → TO THESE</p> <ul style="list-style-type: none"> • Simple User Experience • Technical Documentation Repository • Massive library of 3D parts • AI driven Procedures / 3D animations • Remote Expert Video Chat • Preventative and Predictive Maintenance • Procedural videos and pictures upload • Asset tracking / Repair History <p>REPTX NAVSEA AMERICA'S NAVY FORGED BY THE SEA U.S. AIR FORCE</p>

FACILITIES AND INDUSTRIAL PROCESS MODERNIZATION

Industrial Coating Services

Industrial Coatings & Automation Solutions



Industrial Coatings Services, Inc. - Automation Solutions, specializes in providing cutting-edge technologies tailored to meet the diverse needs of manufacturing processes and the modernization of these areas. We focus on innovation and leverage advanced technologies such as RPA Robotic Process Automation, advanced rotary paint atomizers and generative AI to deliver superior coatings and automation applications to manufacturing platforms. The core of our operation is a commitment to delivering unmatched performance and reliability in paint application and other automation opportunities.

Through the integration of automation, we streamline and enhance production processes while minimizing humans in hazardous manufacturing areas. Our state-of-the-art robotics are equipped with advanced sensors and algorithms enabling them to adapt to changing conditions and achieve optimal results in real-time.

In addition to robotic innovations, we leverage generative AI to enhance our industrial solutions across various applications. By harnessing AI-driven algorithms, we can analyze extensive datasets to identify patterns, predict outcomes, and continually refine our solutions to meet evolving project requirements and environmental considerations. This integration of AI technology enables us to optimize formulation processes, refine application techniques, and improve overall performance and efficiency across a wide range of industrial solutions.

Contact

Matthew Prendergast
651-226-2333
matthewp@ics-inc.com
ics-inc.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • Streamlining production processes and minimizing human exposure to hazards. • Enhancing adaptability to changing conditions through robotics and automation. • Leveraging generative AI to analyze data and optimize formulation processes. • Continuously refining solutions to meet evolving project requirements and environmental considerations. • Maximizing operational efficiency and minimizing costs across diverse industrial settings. 	<p>Benefits Statement:</p> <p>Our data-informed solutions have shown a 30% increase in production efficiency, 20% reduction in manufacturing defects, and 15% decrease in downtime due to predictive maintenance. By minimizing human involvement in hazardous areas, we've achieved a 50% decrease in workplace accidents. Real-time monitoring ensures 99% precision in operations, even in fluctuating conditions. Through predictive analytics, we've optimized formulations, resulting in 25% longer product lifespan. Ultimately, our integrated approach maximizes operational efficiency, saving clients up to 20% in overall costs.</p>
<p>Technology Solution Statement:</p> <p>To address these challenges, we automate repetitive tasks, optimize workflows, while enhancing efficiency and safety. Real-time monitoring and adaptive controls ensure precision and adaptability, while data-driven insights enable proactive decision-making and continuous improvement. Through predictive analytics and refined processes, we optimize formulations and applications, enhancing durability and quality. Overall, our comprehensive approach aims to maximize operational efficiency and minimize costs across diverse industrial environments.</p>	

FACILITIES AND INDUSTRIAL PROCESS MODERNIZATION


Siemens Government Technologies
Digital Thread for OIB Modernization



Siemens, as an industry partner of the National Center for Manufacturing Sciences, an OSD organization whose goal is to infuse technology into the Department of Defense through partnership between industry and government, will be at the Commercial Technologies for Maintenance Activities (CTMA) Partners Meeting May 7-9. Siemens has worked with NAVSEA, NAVAIR, US Army and the USAF through CTMA to rapidly infuse commercial technologies into the maintenance and sustainment communities. Through this acquisition vehicle, DoD entities are able to acquire and validate technology to be used for proof of concepts at their organization through a very nimble and collaborative partnership with CTMA.

Contact

Aaron Johns
 484-752-5510
 aaron.johns@siemensgovt.com
 siemensgovt.com

<p>Problem Statement: As the military undertakes massive OIB modernization efforts they need outside expertise from companies who excel in facilities and manufacturing modernization.</p>	<p>Benefits Statement: Siemens, as a global industrial leader, who has already modernized our own facilities globally to Industry 4.0 can continue to support the services as they embark of their own modernization programs. Through our business units that combine IT and OT software and hardware, as well as infrastructure modernization, we are uniquely positioned to support the OIB modernization efforts.</p>
<p>Technology Solution Statement: We will show current NCMS projects where we are aiding various services for modernization and distributed manufacturing in contested logistic locations.</p>	

RELIABILITY IMPROVEMENT (HARDWARE)

DIT-MCO International
Wiring Harness Test Solutions



For cable testing, harness testing and other automated product testing, customers rely on DIT-MCO wiring analyzers. DIT-MCO is your complete solution provider for electrical testing of cables, harnesses, wired boxes, panel assemblies and more. From simple cables to complex assemblies requiring EE & LM, DIT-MCO has the solution. We also provide custom adaptation and test programming, giving you a complete turnkey solution.

Contact

Gage Steen
816-444-9700
gsteen@ditmco.com
ditmco.com

Problem Statement:

Electrical wiring harnesses are inherently complex and labor intensive to build. Errors in the process occur everywhere from the first wire run to the last pin placed. With more than 80% of harness building done manually, eye strain, labor fatigue and simple human errors can lead to mistakes in the finished harness.

Benefits Statement:

- First ended pinning drastically reduces cross wiring errors.
- Increased throughput.
- Saves time and money.
- Reduces labor fatigue and eye strain.
- Portable testers to troubleshoot/repair wiring errors.
- Final test solutions to guarantee 100% correct cables and harnesses.

Technology Solution Statement:

DIT-MCO's technology helps eliminate wiring errors. From the first connector being pinned, to the final point being tested, DIT-MCO offers products that provide solutions. PinMate, a guided wire insertion tool, helps operators insert wires correctly, ensuring less errors at final test. DIT-MCO's analyzers aid in fault detection and troubleshooting of cables and wiring harness. This ensures mistake free harnesses, which is critical in the aerospace and defense world.



DIT-MCO Products - Wiring Harness Test Solutions



WORKFORCE DEVELOPMENT/VISUALIZATION

Boston Engineering





BEEP and Family of Sustainment Assisting Robotics



Boston Engineering is a leader in sustainable digital transformations, implementing innovative technologies, and developing road maps to solve tomorrow’s business challenges. Leveraging the latest in emerging technologies, such as Sustainment Robotics (SR), Augmented Reality (AR), Virtual Reality (VR), Internet of Things (IoT), and more, Boston Engineering helps you bring innovation to bear on your mission. Whether leading ideation, developing proofs of concept, building consensus, providing training, or handling post implementation support, simply imagine the possibilities and Boston Engineering will expand your capabilities to innovate.

Contact

Mark Smithers
 781-314-0714
 msmithers@boston-engineering.com
 boston-engineering.com

<p>Problem Statement:</p> <ul style="list-style-type: none"> • The need to erect support structures, like scaffolding, necessary to get workers to desired locations requires added time to maintenance schedules already under pressure. • Rapid deployment of maintenance and sustainment capabilities, such as inspection or cleaning systems, or remote SME oversight, is needed to increase efficiency and allow flexibility in the skill level required to perform required tasks. • Capabilities are needed that reduce requirements for workers wearing safety gear or working in unsafe locations. • Multiple design solutions for largely similar tasks lead to increases in overall training time and required spare parts stocking. 	<p>Benefits Statement:</p> <ul style="list-style-type: none"> • Quick system setup allows rapid work initiation and eliminates the need to erect scaffolding. • A modular TRL 7 design provides easier modifications to special configurations and new sensing and work attachments. • Ruggedized system worthy of operating in DOD operational environments, such as shipyards and depots. • Scalable platform providing versions sized for specific applications and end effector tools, e.g., smaller for aircraft, larger for ships. • Open architecture enables capability advancement contributions by multiple people/organizations in industry, academia and DOD R&D Centers.
<p>Technology Solution Statement:</p> <ul style="list-style-type: none"> • The Vacuum Crawler Robotic System (VCRS) provides workers a safer work location and eliminates the need for temporary erected infrastructure and the use of safety gear/harnesses. • VCRS can be outfitted with work and inspection capabilities appropriate for the job, i.e., spray nozzles like those carried by workers needed to remove hull biofouling. • VCRS, part of the Family of Sustainment Assisting Robotics (FOSAR), leverages open architecture, interchangeable work packages, and existing inspection devices. 	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><u>Leverage Existing Technology</u></p> <p>Commercial → Defense</p>  </div> <div style="text-align: center;"> <p><u>Reconfigurable Technology</u></p> <p>Above Water → Below Water</p>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>System to Remove Biofouling</p>  </div> <div style="text-align: center;"> <p>Dual Configuration</p> <p>Robot 1 SHT Cutting Tool</p> <p>Robot 2</p>  </div> </div>

WORKFORCE DEVELOPMENT/VISUALIZATION
Cumulus Digital Systems
Cumulus QMS



Cumulus is a Quality Management System (QMS) that ensures critical construction and maintenance activities are done right the first time, every time. By integrating AI-powered workflows and connected IoT devices, the Cumulus QMS improves the productivity and quality of critical work, such as bolt tightening, welding, and pressure testing.

Cumulus is headquartered in Waltham, Massachusetts, with additional offices in Houston, Texas, and Kuala Lumpur, Malaysia, and serves customers across the globe.

To date, Cumulus has been used to manage over 7,000,000 work completions across industries such as energy, construction, manufacturing, semiconductors, data centers, transportation, chemicals, renewables, and more. In addition to improving safety and sustainability, our technology also has been proven to reduce costs for quality control and data review by over 60%.

Contact

Matthew Kleiman
 617-756-9735
 mkleiman@cumulusds.com
 cumulusds.com

<p>Problem Statement:</p> <p>The construction and maintenance industries are facing an unprecedented demand to build and upkeep critical infrastructure, especially across the energy, transportation, and manufacturing sectors. Progress is limited by a lack of meaningful digitalization hampering productivity and a skilled labor shortage of approximately half a million construction workers. The result is that many projects are behind schedule and over-budget. The 2021 US Chamber of Commerce Commercial Construction Index study found that 88% of contractors report difficulty finding skilled workers. Even worse, inadequate training contributes to massive safety risks both for workers and surrounding communities.</p>	<p>Benefits Statement:</p> <p>Cumulus solves these problems by allowing users to transform any procedure into a digital workflow in seconds. Each workflow features step-by-step instructions to guide workers through even the most complex work processes. Along the way, the app collects quality data from connected IoT devices and requires each worker to submit quality data to ensure the work is being done correctly. Supervisors can then validate work quality via automatically generated digital quality reports. Cumulus makes it easy to digitize and store all work procedures in one place, making it simple to upskill existing workers or quickly train new workers in a safe, efficient way.</p>
<p>Technology Solution Statement:</p> <p>Cumulus is a Quality Management System (QMS) that ensures critical construction and maintenance activities are done right the first time, every time. By integrating AI-powered workflows and connected IoT devices, the Cumulus QMS improves the productivity and quality of critical work, such as bolt tightening, welding, and pressure testing.</p>	