



**INNOVATION
SOURCING
NETWORK**

Innovation Sourcing Network Monthly

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Systems Overview**

Get to Know Katie

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**Get to Know the
SCM Team**



GENERAL DYNAMICS
Mission Systems



Scotty Miller II

VP, Supply Chain Management

THANK YOU ALL

I would like to thank you all for your collaboration and partnership efforts throughout the past year. On November 12, we hosted our Small Business Partnership Forum in Washington, DC, where we emphasized the importance of partnering, innovating and winning business together. Through partnering and investing for success, we can accomplish our mission together.

I wish you all a happy holiday season and a happy new year!

A handwritten signature in black ink, appearing to read "Scotty", with a long, sweeping horizontal line extending to the right.



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About this publication: This is General Dynamics Mission Systems' Innovation Sourcing Network, open supplier innovation ecosystem monthly newsletter.

Suppliers may submit articles to be considered for publication to: isn@gd-ms.com

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Maritime and Strategic Systems Overview

As we have done in our last three newsletters, today we will break down another of our lines of business at General Dynamics Mission Systems. This issue we will focus on our Maritime and Strategic Systems line of business. Our maritime solutions are trusted above and below the open sea to address next-generation challenges. From secure communications to complex weapons systems, underwater vehicles to electronic warfare, our innovations equip the U.S. Navy, Coast Guard and maritime communities with a vast array of advantages to protect the freedom of the seas. This line of business is split into seven sections to better understand the capabilities that we support.

Surface Systems

The world's most powerful military depends on mission-critical technology from General Dynamics. We specialize in electronic systems integration as well as the design, development and support of command, control, communications and computing solutions for the Navy.

This group is responsible for systems integration on the Expeditionary Fast Transport (EPF), Littoral Combat Ship (LCS), Submarine Launch Platforms, Surface Electronic Warfare Improvement Program (SEWIP), and Tactical Control Systems (TCS).



The **Expeditionary Fast Transports (EPF)** are catamarans designed to be fast, flexible and maneuverable even in shallow waters, making them ideal for transporting troops and equipment quickly within a theater of operations. The ships are also capable of supporting humanitarian relief efforts, operating in shallow waters and reaching speeds in excess of 35 knots fully loaded. General Dynamics Mission

Systems designs, integrates and tests the Expeditionary Fast Transport's electronic mission systems, including the backbone computing infrastructure, internal and external communication, electronic navigation, aviation and armament systems.

The core mission system of the U.S. Navy's Independence-variant **Littoral Combat Ship (LCS)** is built on General Dynamics' computing infrastructure. Our computing technology controls everything from driving the ship to firing its guns, and it is designed to maximize automation, enabling sailors to focus on their missions. Our technology provides an adaptable and highly capable command and control environment for a coordinated air, surface and undersea tactical picture. Our technology delivers greater useable space and higher mission module capacity, increasing on-station time and minimizing time to reconfigure for a new mission.



Undersea Systems



The complex weapon systems in use across the Navy's strategic, nuclear and conventional submarine fleet depend on General Dynamics and our proven capability for systems engineering and integration. We also provide software engineering, production and lifecycle support services for these systems.

General Dynamics Mission Systems develops the **Tactical Control Systems (TCS)** for every submarine in the U.S. and Australian Navies. TCS ingests data from all of the submarine's sensor and communication systems to provide a common operational picture. TCS provides sensor data fusion, target motion analysis, tactical situational awareness, and command decision tools to enable the watchstanders and commanding officers to execute their mission.

Unmanned Undersea Products and Services



Our family of Bluefin Robotics products consists of autonomous unmanned underwater vehicles (UUVs) and related technologies for defense, commercial and scientific customers worldwide. We offer a full range of modular, free-flooded UUV platforms and products, including more than 70 different sensors on more than 100 vehicles. The blue ducted thruster may be our most

recognizable feature representing our long history of proven performance.

Our Bluefin Robotics family of products includes the Bluefin™ UUVs in diameter size 9, 12, and 21, as well as the Bluefin HAUV and a subsea battery pack.

We also offer numerous base UUV designs and batteries that can be customized for your mission and program requirements.

Engineering Services: Our engineers are experienced in investigating and offering solutions for newly identified unmanned underwater missions and applications. Our capabilities span the traditional engineering discipline and extend to prototype, design, testing and fielding.

Marine Operations Services: Our team has decades of collective experience in fielding, deploying and operating UUVs worldwide for a wide array of commercial, scientific, and defense customers.

Airborne Systems

General Dynamics Aircraft Mission Computers are the nerve center of the Navy's F/A-18 Super Hornet and the Marine Corps' AV-8B Harrier. Our mission computers provide aviators with the ability to see and control the battlefield with the advanced situational awareness and combat systems control that is necessary to complete their missions.



From airborne computers that process and display mission data in the cockpit, to crypto products for identifying friendly aircraft, and weapon control systems that enable the launch and control of precision guided weapons, we work to ensure the world's most advanced aircraft maintain air superiority and information dominance.

Strategic Systems



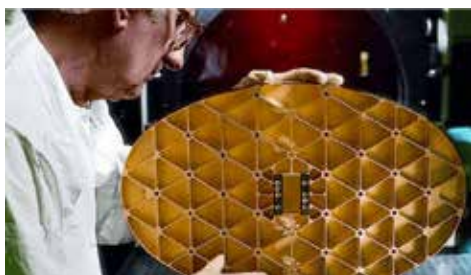
General Dynamics has over 50 years of experience providing full life cycle support for strategic nuclear ballistic guidance and weapon control systems. Our proven capabilities enable us to support the U.S. Air Force intercontinental ballistic missile (ICBM) strategic weapon systems.

Composite Solutions

We produce high performance, cost-effective radomes and composite aerospace components for commercial and military applications. General Dynamics is a trusted leader in the design and manufacturing of high-performance Ku, K, Ka, Tri-band and Quad-Band Radomes for commercial and military aircraft. With 65,000+ produced on 45 different platforms, General Dynamics has more multi-band radomes in flight today that are providing more bandwidth and faster speeds for passengers and flight crews than any other company.



Precision Structures and Optics



Our high precision optical systems and advanced beryllium machining provide our customers with the clarity, accuracy and reliability needed for their high-stakes targeting, navigation and surveillance missions.

Our field-proven **optical systems** provide our customers with the clarity, accuracy and reliability needed for their high-stakes targeting, navigation and surveillance missions.

General Dynamics offers close tolerance machining and processing of beryllium and its alloys to deliver optics and optical assemblies with precise, complex geometric features. With more than 50 years of expertise and state-of-the-art equipment, we are able to achieve virtually unmatched tolerances.

One-third the weight of aluminum, six times stiffer than steel and with a high thermal stability, beryllium is the ideal material for applications in space or other harsh environments. We machine our beryllium to tolerances up to 1/100,000 of an inch (0.000001 in.) to meet the most demanding mission requirements.

Meet our Maritime and Strategic Systems Leadership:



CARLO ZAFFANELLA is vice president and general manager of Maritime and Strategic Systems (M&SS) for General Dynamics Mission Systems. In this role, he leads a diverse array of programs serving the U.S. Navy, the U.S. Air Force, restricted customers, TSA, various government labs and a variety of international and commercial customers.



Katie Ducharme

Procurement Manager – Maritime and Strategic Systems

What led you to a career in Supply Chain Management (SCM)?

I started working in the defense industry after serving in the military as a Program Manager for a subcontractor. During that time, I learned how important the Supply Chain was for providing quality products to our warfighter. I then transitioned to Supply Chain Management where I held various positions including procurement manager and subcontract program manager before becoming Procurement Director.

What has been your most rewarding experience at General Dynamics Mission Systems?

Leading and working a team of talented Supply Chain professionals.

In your opinion, why are relationships with suppliers so important to the SCM mission?

While we have contracts in place with the suppliers, business is always conducted between people. If you have solid relationships in place with your suppliers, you will be better able to weather the good and bad times.

What would people never guess that you do in your role?

Supply Chain Management is responsible for a significant portion of the dollars spent at General Dynamics. Because of this I work closely with our finance partners to ensure we are meeting our business commitments in all areas of finance.

How do you contribute to achieving an integrated supply chain?

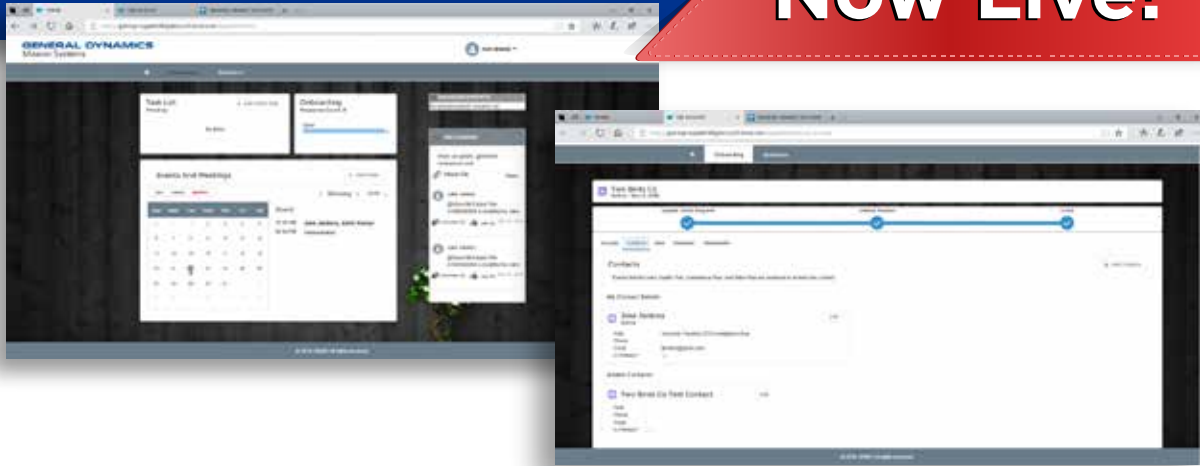
By ensuring that our teams collaborate together to provide the best solutions to our customers.

Contact Katie at:

Katherine.Ducharme@gd-ms.com

NEW General Dynamics Mission Systems Supplier Management Portal

Now Live!



GDMS Supply Chain Management Systems is pleased to announce the arrival of Supplier 360. This new tool combines supplier on boarding, supplier relationship management, and supplier compliance in to one seamless workflow.

What are the benefits of this change?

- Centralized Supplier Information across all GDMS procurement systems
- Electronic Communication and process workflow for reps and certs
- Web based Portal that allows suppliers to directly onboard and update with Self Service feature

How do I participate?

You must first be an active Supplier to participate, GDMS has issued your company a purchase order in the last thirteen months or you have an active GDMS sub contract. Please contact your GDMS Supply Chain representative to activate your account. You can also email us at S360@gd-ms.com

Where do I find more information?

[S360 Supplier Website](#)

The SCM Systems team will be updating the website with more training, frequently asked questions and pertinent news and information about expanded features.

Thank you for supporting this new process, we hope it will improve supplier relationships and provide a consistent supplier information across GDMS.

Buyers Please Note Temporary Process Change.

For questions or support contact S360@gd-ms.com for assistance.

Small Business Partnership Forum Overview

On Nov. 12, 2019, General Dynamics Missions Systems partnered with Dell Technologies to host its Small Business Partnership Forum (SBPF) event at the National Union Building in Washington, DC. Previously known as the Small Business Technology Conference (SBTC), this yearly event is open to small and large partners of General Dynamics Missions Systems, current and prospective, and hosts a variety of presentations from General Dynamics Missions Systems executives, government representatives and small business advocates.



As a partner of this year's Small Business Partnership Forum, Dell Technologies offered participants a space to connect and recharge throughout the day.

What Happened at This Year's Small Business Partnership Forum?

Throughout the day, leaders within and outside General Dynamics Mission Systems covered a variety of topics and resources that catered to both small and large businesses. Subject-areas included Supply Chain Risk Management, Compliance, Other Transaction Authorities (OTAs) and Small Business Advocacy.



Amongst the executives, were, General Dynamics Mission Systems President Chris Brady and Supply Chain Management Vice President Scotty Miller II, who provided the day's opening and closing addresses, respectively.

In addition, small business experts from a variety of organizations took part in a panel discussion that addressed the importance of cybersecurity in federal contracting.

In support of this topic, Mr. Shannon Jackson, deputy director of the DoD Office of Small Business Programs, and keynote speaker of the event, also touched on cybersecurity. In particular, he highlighted some of DoD's efforts towards helping small businesses improve cybersecurity, which included the DoD Mentor-Protégé Program cybersecurity training and the organization's involvement in developing its Cybersecurity Maturity Model Certification (CMMC). General Dynamics Mission Systems Joanne Chabot provided more information regarding CMMC compliance at the event, as well.



These conversations and many others aimed to educate suppliers on ways to improve supply chain practices, advocate small business participation in government contracting and introduce suppliers to new opportunities available within General Dynamics Mission Systems.

New Year, New Name and a New Direction

While the overall objective of the small business conference remains to educate and advocate small business partners of General Dynamics Mission Systems, the team at General Dynamics Mission Systems decided this year's conference should take on a new initiative: Strengthening partnerships with suppliers and communicating the importance of securing their supply chain.



To achieve those initiatives, this year's conference hosted a smaller number of participants, which allowed for more dynamic and meaningful conversations. It also gave participants a better opportunity to connect and learn with the other small and large businesses attending. One participant wrote, "The small size enabled us to connect directly with other small businesses and General Dynamics Missions Systems folks so we could have real, substantive discussions..." (Anonymous).

In addition to the lower number of attendees, the National Union Building provided a range of floors and meeting spaces to accommodate the day's agenda and enabled procurement managers to host commodity-related breakout sessions, where they met suppliers face to face and discussed subject matter applicable to their area of business.



This year's conference also focused on informing partners about the changes and improvements made to General Dynamics Supply Chain Management processes, which included tools implemented to enhance security along the supply chain. General Dynamics Missions Systems Supply Chain Technical Project Manager Vince McCarger announced the newest supplier database tool, Supplier 360, which aims to provide the most accurate, consistent and up-to-date information on all of General Dynamics Missions Systems suppliers. In addition, members of our Core

Risk Management team discussed the importance of Supply Chain Risk Management, which featured Everett Weston and Bradley Paster from RapidRatings and riskmethods, the newest improvements to General Dynamics Mission System's risk evaluation tools.

These new initiatives aided in creating an environment where small and large businesses could learn and share information, technology trends and innovation in a more productive way. Moreover, the one-on-one interactions reinforces connections General Dynamics Mission Systems has with suppliers.

The Small Business Partnership Forum furthers General Dynamics Mission Systems' goal of Partnering, Innovating and Growing alongside its suppliers, which is critical in allowing the organization to continue supporting its government customers. The team at General Dynamics Mission Systems appreciates everyone's involvement in making this year's event a great success!



Gwenda DeFriest

Mechanical

A Conversation with Our Buyers

Gwenda is a new hire as of June 2019 but was working as a contractor here since August 2018.

What technologies or capabilities are you seeing most often in your commodity?

The mechanical commodity deals most often with machined parts using a variety of processes and materials. Drawings are required when the parts are custom. Quite often, we work with foundries and machine shops to build custom products for use by the customer.

3D printing is a newer technology that some machine shops are adding to their list of capabilities. It is a process of using a digital file(s) to create 3D images using a variety of materials, including plastic and metal. According to an article in Space News dated November 2019, 3D printers are expected to revolutionize manufacturing.

What separates a good supplier from a great supplier?

Communication differentiates a great supplier from one that is only good and cannot stop once an order is placed. The best vendors will share changes in status of the order throughout the course of production, including plant shut downs, and delays in delivery. At times, updates can resolve small problems before they become major.

Contact Gwenda at:

Gwenda.DeFriest@gd-ms.com

Industry Events Supply Chain Management Attends

Stay tuned for the list of events for 2020!

TechScouts



TechScouts are our process to communicate our needs and technical opportunities with your organization. TechScout is critical to our supply chain process to source potential outside solutions. We need your innovative approaches to build partnerships to solve our customers' greatest challenges. Sign up to receive our alerts so that you can respond and share your innovative solutions with us.

gdmembersystems.com/isn

Current Open TechScouts

Staff Augmentation (Labor) - Radiation Engineers

The Innovation Sourcing Network is sharing an immediate requirement for Staff Augmentation (Labor) in the form of Radiation Effects Engineers to support multiple radiation analysis across all orbital regimes. We are seeking labor companies who can immediately provide minimum of 2 TS/SCI CLEARED or CLEARABLE Radiation Engineers as soon as possible in either Scottsdale, Arizona or El Segundo, California.

For More Information visit gdmembersystems.com/techscout





Jessica Schell

Supply Chain Procurement Manager

Jessica works in Taunton, Massachusetts. She has been with the company 31 years.

What led you to a career in Supply Chain Management (SCM)?

In college, I determined that I wanted to take the business route, but still wanted to work at a strategic level that was data driven. This brought me to pursuing my undergrad in business management and SCM and my master's in SCM.

What has been your most rewarding experience at General Dynamics Mission Systems?

The Manufacturing Leadership Program (MLP) was a wonderful opportunity that gave me a strong baseline in my career as it provided me opportunities to work in manufacturing, quality, engineering, supply chain and a supervisor role.

In your opinion, why are relationships with suppliers so important to the SCM mission?

Strong communication and transparency with one's suppliers is essential to having a successful supply chain that produces timeliness and cost effective strategies. Everybody has different motivators and money is not always No.1, but it does help!

What would people never guess that you do in your role?

Something that people would probably not guess about my role is how heavily it relies on working with data and working with/creating tools. I have created tools that assist with proposal work, material forecasts, open commits, and weekly Req/PO metrics. SCM is a data driven function, and it is of the upmost importance to have good inputs and correctly use the data available to drive forecasts, decision-making, and negotiations.

How do you contribute to achieving an integrated supply chain?

I keep metrics on future material that is coming down the pipeline, current Reqs and POs, and received POs that have yet to be paid. This gives me a strong hand in giving our critical suppliers a heads-up of what is coming, giving the program advance notice of when material needs to be released by to make schedule, keeping on top of current orders, and making sure our vendors get paid in a timely manner to keep relationships healthy. Overall, this feeds to strong relationships with suppliers and reduces risks.

What motivates you?

Making things better motivates me. Whether it's improving the current process, spreading consistency and best practices, or helping facilitate communication between departments and/or GD and suppliers, I enjoy assisting in making a better end product and work environment.

How do you balance your career and personal life?

I play on a volleyball league and volunteer at the Humane Society throughout the week. Both commitments make me break my focus from GD work and housework so I can refocus on myself and be refreshed for the next morning.

Perfect day would be?

Taking my Jeep off-roading up in the beautiful mountains of the Berkshires with my dog, Ranger.

Commodities

OPERATIONAL



Commodity Manager

Matt Robertson

Products

Active Attenuators	Manufacturing & Machine Tools	RF Assemblies
Adhesives	Manufacturing Equip. & Mach.	RF Circulators
Air Circulators & Blower Eq.	Material Handling Equipment	RF Filters
Asset Tools	Motors	RF Mixers
Bandpass filters	MRO	RF Switches
Chemicals, Lubricants & Grease	Optical Instr.	Sensors
Chillers	Oscillators (Crystal)	Shelters
Compressors & Vacuum Pumps	Packaging & Packaging Supplies	Shop Floor Supls. & Cons.
Controls	Paint	Sonars
Converters (RF) - Up and Down	Pallets, Crates & Lumber	Standard Pkg. Supplies
Electron Tubes	Power Amplifiers	Tape
Explosive Devices	RF (Not Component Level)	TCXO
Fan & Fan Assemblies	Radar Eq.	Tents
Furniture - Lab	Radio & Comms Eq.	Test Equipment & Calibration
Generating Parts	Refrigeration - Cooling & Heating	TLNB
Generators		Trailers
Inspection Gages		TWTA
Inverters		VCOs
Isolators - RF		Vehicles
Jacks		Waveguide
Limiter - RF		

MECHANICAL



Commodity Manager

Susan Carpenter

Products

Actuating Levers	Firing Pins	Ornamental Parts
Antenna Masts	Flat Mechanical Part	Pistons
Arms	Gaskets	Plastic-Fabricated Items
Bearings	Gears	Plastics
Bellows	Glass parts	Pulleys
Bolts	Grommets	Quick Release Plungers & Slides
Brackets	Heat Sinks	Raw Material Retaining parts
Calibrated parts	Holding/ Positioning Parts	Rivets
Cams	Insulating parts	Screens/ Ventilating Parts
Cases	Joy Sticks (Custom)	Screws
Casters	Keypad	Sealing Parts
Castings	Membrane	Sectors and Spools
Chassis and Bases	Labels	Shafts
Container Hardware	Lanyards	Sheet Metal
Custom Fabric Parts	Lenses	Shielding parts
Custom Packaging	Links	Springs
Decals	Machining	Tags and Instruction Cards
Disks	Mechanical Clutches	Washers
Drive Belts	Mechanical Hardware	Wheels
Drums	Metals	
Enclosure parts	Nameplates	
Eyelets	Nuts	
Fan Blades and Rollers	Operating Control Parts	
Fasteners		
Fastening Parts		

SERVICES



Commodity Manager

Tracy Loper

Products

Commercial Services (Non-Product)	HR
Contract Labor	Job Advertising
Environmental Health and Safety	Marketing
Environmental Testing Facilities	Prof Consulting
	Agreements
	Quality
	Recruitment
	Telecom

IT HW AND SW



Commodity Manager

Cindi Wong

Products

Cameras	Optical Transceiver
Computer Hardware	Routers
Hardware Services	Servers
Keypad Assembly (Standard Offering)	Software
Networking	Commodities
Networking Switches	Storage
	Video

ELECTRO MECHANICAL



Commodity Manager

Matt Robertson

Products

Antennas
Audio Equipment
Batteries & chargers
Bells and Buzzers
Circuit Breakers
Display Optics
Earphones
Handsets
Headsets
Indicating Parts
Microphones
Populated Racks
(Enclosures)
Power Dist.
Relays
Speakers
Surge
Suppressors
Switches
Transformers
UPS

COMPONENT ASSEMBLY



Commodity Manager

Matt Maisano

Products

Capacitors
Circuit board
Assemblies
Circuit boards
Coil Forms
Contract
Manufacturing
(Keypad
Assemblies, Box
Build, CCA)
Delay Lines
Flex circuits &
Flex Assemblies
FPGA Boards
Fuses
Inductive Devices

Inductors
LED
Microcircuits
PCB-Mounted:
Amplifiers,
Passive
Attenuators,
Passive filters,
Transformers
Populated
Boards
Resistors
Semiconductors
Substrate
Tuners
Tuning Cores

BUSINESS PROCESS MGMT



Commodity Manager

Stephanie Baker

Products

Business Cards
Mobile Devices
Office Supplies
P-Card Program

INTERCONNECT



Commodity Manager

Matt Robertson

Products

Back Shells
Cable Assemblies
Cables
Computer Cables
Connectors
Cords

Headers
Holders
Sleeving
Sockets
Terminals
Wire

TRAVEL



Commodity Manager

Tracy Loper

Products

Airlines	Hotels
Car Rental	Travel Agency
Hotel Event/	Services
Trade Show	Travel booking
Support	Tech
Ground Services	(Concur)
(Airport	Other
Parking,	Travel-Related
Car Services)	Service

Spotlight on Pittsfield

SPOTLIGHT ON PITTSFIELD



Our Community

Our Pittsfield facility is located in the Berkshires of Western Massachusetts, renowned for its distinguished theatre, farm-to-table restaurants, and of course, its beautiful scenery. Adventure seekers can enjoy outdoor activities year round like skiing, hiking, fishing, water sports, golfing, and more.

As a small city with surrounding rural towns, Pittsfield has a reasonable cost of living and relaxing short commutes. We are centrally located in the northeast, providing easy access to major cities like Boston and New York City.

We are proud to closely partner with our community and local organizations to support development and growth in the Berkshires.

Many of our employees are active volunteers in our community, supporting charitable organizations and educational initiatives such as the Berkshire United Way, Habitat for Humanity, Soldier On, 3rd Thursdays, and numerous STEM programs for local students.

OUR CULTURE

Collaboration

We have an open door, collaborative environment where you can be heard, learn and lead.

Our engineering and program teams embrace agile processes and tools so we can deliver the best systems for sailors.

Commitment to Excellence

We have been trusted with building mission critical systems for over 50 years. These systems need to work. Every. Single. Time.

Our team of experienced professionals consistently deliver on this promise and commitment to excellence.

Engineering and Building the Navy's Latest Technology

Our Pittsfield team develops advanced solutions to support the U.S. Navy's latest ships and combat systems – and we are growing. With 100+ technical jobs currently available, we are looking for talented professionals with specialties in math, physics, computer science, engineering, and more.

Our team in Pittsfield works on exciting technology including:



Surface Ship Integration - Our computing technology controls everything from driving the ship to firing its guns, and it is designed to maximize automation, enabling sailors to focus on their missions.

Submarine Combat Systems - Our systems provide sailors on-board the Navy's new submarines the ability to visualize their underwater surroundings and respond to potential threats.

Strategic Weapons Systems - Our advanced weapon control systems provide resilient, real-time command and control capabilities and increase access to critical data that informs decision making for high-consequence missions.



CALL FOR SPONSORS & EXHIBITORS

DC20 will once again deliver a world-class attendee experience unlike any other cyber security event as we join forces for 3 days to get ahead of this most critical, most pervasive threat we face in the digital domain today.

NAVIGATING CYBER SECURITY

- Position your brand as a technology leader
- Showcase your products and technology in The Hive tech expo
- Network with customers, partners and the General Dynamics team
- Schedule one-on-one engagements with key decision makers and end-users

For more information or to request the DC20 Prospectus, please email DynamicConnections@gd-ms.com.

www.GDDynamicConnections.com

DC Dynamic Connections **2020**
April 28-30 | San Diego, CA

GENERAL DYNAMICS
Mission Systems