

# Small Businesses Present Ideas to OSBP



(Left to right) Hanani Wade and William Lash with Chirality Capital Consulting present their business during the Navy is Open for Business session. *SOLARES PHOTOGRAPHY*

During the Tuesday afternoon Navy is Open for Business forum, 11 small businesses had the opportunity to pitch their products and ideas to a panel of Department of the Navy procurement experts. The companies, which were chosen from a group of applicants to the Department of the Navy Office of Small Business Programs, included:

## **Chirality Capital Consulting**

Chirality, from the Greek word for hand, is based on mirror images. The concept behind Chirality Capital Consulting is that the left hand (the company) is a mirror image of the right hand (the federal government). Chirality provides program and

product management; organizational design and development; technology modernization; data analytics; training logistics; and diversity, equity and inclusion capabilities to clients inside and outside the defense space.

### **Chitra Productions**

CEO Vibhaa Vermani came to the U.S. as a bride in an arranged marriage 30 years ago. In 2008, she launched Chitra Productions. Products include risk management framework support. The typical Department of Defense RMF process takes 12 to 18 months to achieve, Vermani said, but Chitra products help make approvals faster and less expensive.

### **Giesler**

In the private sector, Geisler has developed technologies that help secure the power grid and can network and encrypt data in fractions of a milliseconds. Working with the Department of Defense, it can also encrypt sensors around Navy vessels in real time without interrupting any systems.

### **International Trade Management Group**

There's a need to automate, secure and create resiliency in our supply chains. ITM creates logistic strategies to enhance global supply-chain assets and ensure visibility and accountability in the physical supply chain.

### **JA Moody**

Seawater is a highly corrosive substance that can shorten the life of a ship. This family-owned business creates fluid products that use cold-spray technology that don't heat metal to the melting point, and can double the lifecycle of a bow. In 2021, it introduced the Vanessa Hardened Seat Next Generation TOTS Valve to the U.S. Navy.

### **Maritime Arresting Technologies**

This company sees itself as an evangelist for nonlethal weapons. Products include prophylactic maritime port security barriers that can detect security breaches and determine the intent. Maritime also manufactures the Stingray counter unmanned water vehicle net, which forms a barrier from the sea surface to seabed and captures hostile divers and UUVs. The company's newest product is a recoilless launcher that can deploy non-kinetic effectors from small, unmanned platforms.

### **Maureen Data Systems/FylaxCyber**

Nearly six ransomware attacks occur every minute. Maureen Data Systems is partnering with Black Kite to develop the Ransomware Susceptibility Index to help both defense and private clients understand how likely they are to experience an attack, provide continuous system monitoring and identify which vendors are most susceptible to attacks.

### **Metamagnetics**

This company spun out of the Northeastern University Center for Microwave Magnetic Materials and Integrated Circuits in 2009, and now designs and manufactures microwave and millimeter-wave components. Its products are designed to enhance the effectiveness of mission-critical radar, communication and power-supply systems, and its flagship technology can mitigate high-powered jamming that affects a signal of interest.

### **Mistral**

This systems integrator and ideas company works with warfighters and first responders. Its products include the C-Master Diver Navigation System, which allows up to 15 combat divers to securely communicate with each other, and provides the divers with mission-specific crucial data.

### **Physical Sciences**

This company creates powerful, next-generation lithium-ion battery technology for maritime systems. Its manufacturing process creates more energy and power in the batteries. It also uses nonflammable electrolytes, making the batteries safer to handle than traditional lithium-ion batteries. The batteries are operationally deployed, and in use today.

### **Vision Engineering Solutions**

U.S. warfighters need more imagery and intelligence from space. At the same time, data products from space are increasing in number and complexity. Optical communications can increase bandwidth over RF networks and are more secure, but there are a lack of optical-communication ground stations to communicate this data. Vision has a Phase II Small Business Innovation Research contract with the Navy to provide these optical ground stations.

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## **CMS Breakfast Speakers: New Strategy, Posture Focus on Integrated Deterrence**



Dr. Mara E. Karlin (middle), Assistant Secretary of Defense for Strategy, Plans and Capabilities, speaks during a panel discussion at the CMS breakfast. *SOLARES PHOTOGRAPHY*

NATIONAL HARBOR, Md. – An essential aspect of the recently released National Defense Strategy is that it was developed in conjunction with the Nuclear Posture Review, which creates a focus on “integrated deterrence,” a top Defense Department official said April 5 at the Center for Maritime Strategy breakfast.

“So, when you think about the national security challenge, you also think about the nuclear challenge. It seems so obvious,” said Mara Karlin, assistant secretary of defense for strategy, plans and capabilities.

That scenario forces a more rigorous and integrated process, which also includes cyber and can apply to our pacing challenge of China and the threat of Russia, Karlin said. That leads to an “integrated deterrence” that can bring together actions that can work across all these challenges.”

Retired Adm. James Foggo, session moderator and dean of the Center for Maritime Strategy think tank, which hosted the breakfast, said he did not agree with the strategy's description of Russia as an "acute" challenge.

Karlin explained that "China poses a geopolitical challenge and Russia does not." Although the Pentagon is focused on Russia's invasion of Ukraine and its actions in other regions, "that does not pose a geopolitical challenge in the same way as China."

Also speaking at the session, Adm. Samuel Paparo, commander of the U.S. Pacific Fleet, said his first year in that command has been a "very dynamic" time. Much of the fleet is now operating in the Pacific, after the withdrawal from Afghanistan allowed it to refocusing its effort on the U.S. Central Command region to the Pacific, where it deals with the challenge from both China and Russia.

Paparo stressed how Pacific Fleet is part of a joint naval force that includes extensive involvement of Navy, Marine Corps and Coast Guard elements.

"The morale of the naval forces is high, and it is operating on a high operational level," he said.

Paparo noted that a Russian naval group operated in the Hawaiian area last year, which warranted a "very robust U.S. response." But asked about China as the "pacing threat," the admiral said the fleet "operates every day as if the PRC [Peoples Republic of China] is going to attack Taiwan."

Along with the other U.S. forces, the fleet operates in a way that "any potential adversary would look out and say, "today is not the day," to take aggressive action.

Lt. Gen. Karsten Heckl, commanding general Marine Corps Combat Development Command, echoed Karlin's and Paparo's statements, calling for a "tri-service" naval force and for more

integration of the national deterrence strategy.

“Everything hinges on the national defense strategy and the integration piece, [which] I think is critical,” Heckl said. “I think we need to do a better job of integrating” so it has real applicability to day-to-day operations.

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## Decker, Jenkins Among Those Honored at SecNav Luncheon Awards Ceremony



Jo Decker of BAE Systems won the Nimitz award for industry leadership. *LISA NIPP*

The Secretary of the Navy Luncheon on Tuesday, April 5 was capped by an awards ceremony, where the Navy League of the

United States and Secretary Carlos Del Toro doled out the year's top honors.

The Fleet Admiral Chester W. Nimitz Award, which honors a leader of industry who has made a major contribution to our nation's maritime strength or enhanced our national security, went to Jo Decker, vice president of business winning and strategy at BAE Systems, for her decades-long career "in driving solutions to critical technology challenges in the national security and public safety environment."



Saildrone CEO Richard Jenkins won the Michelson award for civilian innovation. *LISA NIPP*

The Albert A. Michelson Award, which honors a civilian scientist, technical innovator or technical organization for scientific or technical achievement, was given to Richard Jenkins, founder and CEO of Saildrone. Last year, the company sent its flagship autonomous platform into the eye of Hurricane Sam, a Category 4 that stayed off the East Coast in

the Atlantic Ocean. The company took scientific measurements and HD video “that could transform our understanding of hurricane forecasting,” according to the award citation.

The award ceremony, which also included the Navy and Marine Corps’ group and individual Safety Awards, closed with the Secretary of the Navy’s Distinguished Public Service Award, which went to Navy League Past National President William A. Stevenson III for his efforts to reshape the organization’s board of directors and overseeing the implementation of active-duty membership during his tenure.

## **Safety Awards**

### **Adm. Vern Clark Award Winners**

Helicopter Training Squadron 28, Naval Air Station Whiting Field, Milton, Florida

AWF1 Carlos M. Gomez, San Diego

### **Gen. James L. Jones Safety Award Winners**

1st Radio Battalion, 1 Marine Expeditionary Force, Camp Pendleton, California

Benjamin M. Lebidine, Camp Pendleton, California

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# **JADC2 Panelists Express Fears of ‘No Joint Process’**



Rear Adm. Susan BryerJoyner said as the Navy continues its move to distributed naval operations and cannot mass its ships together, it further complicates command and control. *LISA NIPP*

NATIONAL HARBOR, Md. – The biggest problem with the effort to develop a joint all-domain command and control system that would integrate all the sensors and communication devices of the U.S. armed forces and our allies and partners may be that there really is no joint process. That was the situation described by a panel of experts at the Navy League's Sea-Air-Space expo on April 5.

The challenge for the Navy alone was how do the forces operate beyond line of sight when they know they will not have uncontested communications, "how does the Navy do that when we have a proliferation of sensors" and how do they leverage the sensors on one platform with those on another "in order to get the effects that we need," said Rear Adm. Susan BryerJoyner, director of the Naval Cyber Security Division. And as the Navy

continues its move to distributed naval operations and cannot mass its ships together, it further complicates command and control, she said. The Navy needs to do more exercises to begin testing solutions to those problems, she advised.

Andrew Mara, executive vice president of the Center for Naval Analysis, asked how with the aggregation of different sensors does anyone achieve effects, and how do they assure the logistical needs are met. "All of those pieces will have to come together," he said.

And Todd Harrison, Director of the Aerospace Security Project at the Center for International and Strategic Studies, noted that the issue becomes more complex when you try to bring together allies and partners in the desired coalition operations, when each of them have their own unique systems.

Harrison suggested adopting the model of the F-35 Joint Program Office that has allied users of the F-35 included from the beginning of discussions.

Harrison warned, "This is not the first time we tried to do this," listing a host of supposed joint programs that failed to produce compatible communication systems among the U.S. forces. "It didn't work. I fear it won't again."

BreyerJoyner shared Harrison's concern about the allies. Asking how would the Navy be able to fight as a joint and coalition force, which would be needed against China or Russia. "How would we share targeting information to get weapons on targets?"

Margaret Calomino, senior director of Strategy at L3Harris, one of the contractors that provide electronic systems to the U.S. and allied militaries, said it "would be good" if all the services would come together to determine what they needed. She also called for exercises to develop solutions.

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# Navy Budget Should be Driven by Strategy, Not the Reverse, Del Toro Says



In his speech Del Toro reiterated his support for Adm. Mike Gilday's vision for distributed maritime operations. *LISA NIPP* NATIONAL HARBOR, Md. – The U.S. Navy budget “should be driven by strategy and not the strategy driven by the budget itself,” said Navy Secretary Carlos Del Toro at the April 5 luncheon keynote at Sea-Air-Space 2022. “That’s why we’ve put together a clear strategy to deliver the lethal, resilient, sustainable, survivable, agile and responsive course called

for in the 2022 National Defense Strategy.”

The budget faces likely headwinds in Congress, where some lawmakers say it doesn’t do enough, but Del Toro emphasized the importance of maintaining the trust and support of American taxpayers so each dollar reaches the American warfighter in the most efficient and effective way, while also ensuring the warfighter is equipped with the most effective platforms and equipment.

Del Toro said the Navy Department’s strategy is rooted in three guiding principles.

The first, he said, is to maintain and strengthen the nation’s maritime dominance, so forces can deter potential adversaries and fight and win if necessary. The second deals with empowering U.S. Sailors and Marines by fostering a culture of warfighting excellence founded on treating each other with dignity and respect. Del Toro said the third principle is to strengthen strategic partnerships across the Joint Force with industry and with international partners around the globe.

“It’s clear, it’s direct, it’s concise,” Del Toro said. “In order to maintain our maritime dominance, we have to be serious about building and maintaining the right capabilities to win tomorrow’s wars. The National Defense Strategy for integrated deterrence requires us to campaign forward from the South China Sea to the Arctic to the Mediterranean and to the Gulf. And that is indeed what we are doing.”

Del Toro said right now the Navy has 74 ships deployed around the globe, including four aircraft carriers and two assault ships. Furthermore, he said, every one of these ships operates as part of a fully networked, agile and survivable fleet capable of delivering coordinated, long-range fires and unmatched lethality from many points at once.

“That’s the power of distributed maritime operations,” said Del Toro. “I strongly support, let me be clear, I strongly

support Adm. [Michael] Gilday's vision for distributed maritime operations and all aspects of the Navy's navigation plan."

He said the Navy plans to continue progress on new programs such as the Columbia-class submarine and Constellation-class frigate, and “we will also invest in our amphibious fleet, fully funding an additional LHA and an additional LPD [landing platform/dock] this year,” Del Toro said. “These warships are vital for the organic mobility and persistence of our Marine Corps. Always in high demand as a Swiss Army knife to meet the needs of the Joint Force, the modern amphibious ready group and marine expeditionary unit are indeed the ‘911 call’ for combatant commanders in the most dynamic and volatile situations, humanitarian disasters and combat.”

Del Toro said he is intent on maintaining as much fiscal transparency as possible – something he said is informed by “an abiding respect for the American taxpayer of today and tomorrow.

“We must build and prepare the most powerful and agile force that we can in the most efficient way possible while preserving options for future leaders to adjust to a changing security environment,” Del Toro explained. “We have not always done that in our past. I don’t want tomorrow’s secretary of the Navy to have to choose between building the right capabilities or maintaining high-cost legacy platforms that don’t meet our needs today.”

**Program Manager: Navy,**

# Industry Must Change the Way It Communicates During Contract Process

NATIONAL HARBOR, Md. – The F/A-18 and EA-18G recently found a way to shrink a complex contract to a 90-day turnaround by changing their approach to contracting entirely, and it's the kind of approach the Navy needs in order to work better and more efficiently with industry, a Navy official said during comments at the Navy League's Sea-Air-Space conference April 4.

Capt. Jason M. Denney, F/A-18 and EA-18G program manager (PMA-265) at Naval Air Systems Command, said that the program had figured out a way to dramatically shrink the contracting process in an experiment, and it involved doing a few things fundamentally different to how they had been done in the past.

"[We asked] can we do a contract with industry, a full-up complex contract from start to finish in 90 days?" Denney said. "Yeah, we can. On the industry and government side at the beginning there was a lot of naysaying, a lot of folks saying it's not possible, we can't do it and here's why. But then you say, 'Well, let's challenge those assumptions.' Instead of saying why you can't, turn those into what barriers need to be removed so that you can."

As the program began to answer those questions, they discovered new processes and a new way of interacting with industry and government that shortens those time frames, he said.

"And this can't be a stunt," he said. "It can't be something we do once, work overtime and weekends, get it across the finish line, and say, 'Oh my God, that was terrible. Let's never do that again.' We need to work on normal working hours

per day. It can't be something that completely consumes us because it's not sustainable."

So what the program did is rather than go back and forth between prime contractors and subcontractors over emails or through contracting letters, they brought everyone in at the beginning of the contracting effort – not just the prime contractor.

"We brought everyone ... to the kickoff meeting to ensure alignment," he said. "So we can ensure everyone had the same mental model of what we are trying to accomplish rather than a telephone game two or three steps down. I told them to bring your concerns and questions.

"For example, one of the things the prime said when we started discussing the timeline for the proposal, they said, 'Well, we have a lot of assumptions,'" Denney continued. "OK, have you discussed those with your sub? 'No.' Well, they're sitting right next to you right now. Talk about assumptions and turn them into facts."

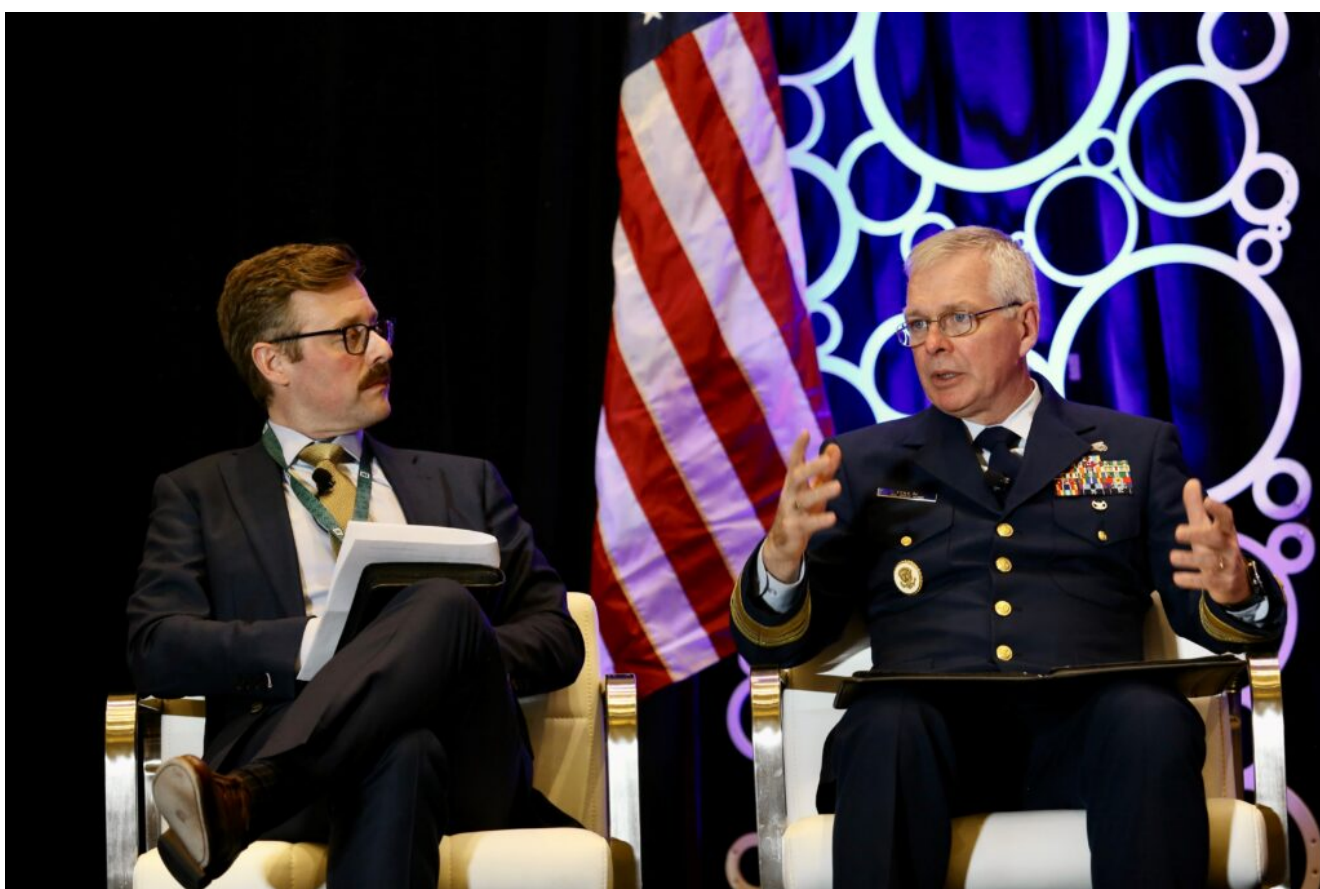
Instead of hashing those things out over email over a period of months, the program believes they were able to accomplish most of what they needed in an afternoon, Denney said.

Improving communication between the government, the prime contractor and the subcontractor also helps to resolve barriers that come up, Denney argued.

"We need to identify the barriers early and ask for that help so that leadership can get engaged and remove the barrier before it stops forward progress on it, so it's not a weakness," he said. "We've been taught our entire professional careers, 'Hey, handle this at your own level and take it to a point where [you can't go any further] and then elevate it.' Well, that's too late."

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# Coast Guard's Atlantic Commander Says More Attention to South Atlantic Nations Needed



Vice Adm. Stephen Poulin discusses what the changing security environment in Europe means for the U.S. Coast Guard. *LISA NIPP*

NATIONAL HARBOR, Md. – The widening political and economic effects of Russia's invasion of Ukraine may help focus attention on the strategic significance and strategic needs of the Atlantic Basin, a top U.S. Coast Guard commander says.

"The security environment in Europe has changed. I believe with that change will come a broad demand for the U.S. Coast

Guard,” Vice Adm. Stephen Poulin told a panel discussion of the maritime security needs of the region April 4 at Sea-Air-Space 2022.

“Most of our Arctic partners are in the Atlantic. We have to maintain strong relationships with our European neighbors,” said Poulin, commander of the Coast Guard’s Atlantic Area. There is “a growing thirst” for U.S. Coast Guard presence “in certain parts of Europe, especially in the Mediterranean.”

There is an interconnectedness between Mediterranean security and Atlantic security, Poulin said, noting the Coast Guard has built ties with maritime services in Greece, Malta, Italy, Lebanon, Jordan, Israel, Algeria and Tunisia. Four of six Fast Response Cutters have been delivered to Bahrain, where they are based with Patrol Forces Southwest Asia, the Coast Guard’s largest unit outside of the United States. The final two FRCs are slated for delivery this summer.

The Biden Administration’s \$13.8 billion fiscal 2023 Coast Guard budget includes \$40 million to support maritime security issues in the Atlantic Basin, including illegal, unregulated and underreported fishing, illegal trafficking and transnational crime.

Poulin said that move would allow him to achieve more persistent engagement with all the Atlantic nations “but in particular our African partners.”

“This isn’t just about IUU fishing,” Poulin said, noting as much as 5% of illegal narcotics flow leaves South America and winds up going through Africa or Europe. There is a growing threat of armed robbery and piracy in West Africa’s Gulf of Guinea, he said, adding “that is happening where there is a growing expectation in the future of higher offshore energy production.”

Another panelist, Lyston Lea II, principal adviser to the U.S. National Maritime Intelligence Integration Office, said the

prime security challenges facing the Atlantic Basin are climate change, illicit activities such as IUUF, and great power competition. Solutions, he said, include “meaningful unclassified data sharing and more partnerships between government, the private sector and allies.”

Lea, who said IUUF was a bad acronym and he prefers calling it “evil fishing,” said he was pleased to see so many policy makers taking IUUF seriously as an economic, political and environmental issue and not simply about “dead fish,” as one lawmaker told him in a contentious meeting in 2014.

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## CVN 78 Quietly Declared IOC in December



USS Gerald R. Ford (CVN 78) transits the James River after leaving Newport News Shipyard during sea and anchor, Feb. 25.  
*U.S. NAVY / Mass Communication Specialist 3rd Class Jacob Mattingly*

NATIONAL HARBOR, Md. – The lead ship in the Navy's new fleet of aircraft carriers, the USS Gerald R. Ford (CVN 78), has achieved initial operational capability, the program manager revealed at Sea-Air-Space 2022 on April 5.

The ship actually achieved IOC in late December of 2021, but the program did not announce it at the time, said Capt. Brian Metcalf, PMS-378 program manager.

"IOC was just recently declared and set on December of 2021 with the turnover of the last elevator," Metcalf said. "We didn't announce it. Some people know what IOC means and some people don't. It's an acquisition-specific milestone. The conditions on the ship don't really change because of IOC. So, we did not make a public announcement on it."

The Ford is slated for its first operational deployment this fall, Metcalf said. All 11 of the advanced weapons elevators have been turned over to the crew, he said, and a total of 17,000 individual elevator cycles have been completed.

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## **SmartPower Boosts Epirus' Leonidas Drone-Busting Directed Energy System**



Epirus' Leonidas directed-energy defense system, displayed in scale model form. *SOLARES PHOTOGRAPHY*

NATIONAL HARBOR, Md. – Epirus, a Southern California startup, has incorporated its SmartPower concept into a directed-energy system capable of disabling the electronics of threats such as drones, says Andy Lowery, the company's chief product officer.

The company, located in the VIP Lounge near the Prince George's Exhibit Hall, "started to take a look at embedded systems, especially when energy conversion was the process," Lowery said. That means things like microwaves and lasers, where power is converted.

"We decided to see if we couldn't digitize them and basically create a digital mind that controls the analog circuits that do the conversion," he said. "We were able to very meaningfully improve the performance of those conversion circuits" while also solving heating issues that dogged earlier versions.

One result, on display in model form, is Leonidas, which the

company describes as “an electronics system with the power and precision to neutralize a single [drone] system in tight, crowded spaces or disable multiple threats across a wide area.”

It’s not through traditional jamming, Lowery said, but instead “it’s literally just zapping it, like with such a high electrical field that the electronics can’t work.”

It’s also scalable, in the form of Leonidas Pod, a much smaller version that could be carried by drones and deployed from ships; that system has already had a sale.

Epirus, in existence for only about three years, is moving fast.

“We’re on our third-generation system ... and we’re ready to start operationally deploying,” Lowery said. “We’ve had four to five companies express interest in being pilot customers on the defense side, looking to deploy upwards to half a dozen systems over the next 12 months or so, of the big ones.”

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## **Collaboration on Information Warfare Needed, But So Is Cybersecurity to Thwart Prying Eyes**



Rear Admiral John Okon discusses Warfare Integration during a session in the exhibit hall at Sea-Air-Space 2022. *SOLARES PHOTOGRAPHY*

NATIONAL HARBOR, Md. – The U.S. Navy has to shift its focus from warfighting platforms to warfighting knowledge gleaned from information warfare resources if it wants to maintain an edge over pacing competitor China, says the admiral in charge of integrating that vital information across the Navy.

“Everything we do in the Navy has IW [information warfare] capability,” Rear Adm. John Okon, head of the Warfare Integration Directorate (N2/N6F) in the Office of the Chief of Naval Operations, said at Sea-Air-Space 2022. “We speed the kill chain and deliver kinetic and non-kinetic effects to the enemy.”

When he sees a destroyer now, Okon said, “I don’t see a destroyer. I see a truck that carries information warfare capabilities. I see radars, communications, kinetic and non-kinetic effects.” The destroyer now is a platform with integrated technologies that “really deliver that warfighting

capability.”

But precautions must be taken to ensure those capabilities don't fall into an adversary's hands. “The enemy is listening in on our phones and internet. We have to protect out intellectual capital,” Okon said, “Otherwise the next fighter from China will look exactly like ours.”

While the U.S. military lost its technological edge through the theft of its intellectual capital in previous decades, it still holds a knowledge edge with its smart and well-trained force. “China does not have a professional Navy. They don't have professional sailors. That's where our advantage lies,” Okon said. “It's not just the information but the application of that information into knowledge.”

To maintain the edge, however, requires collaboration among the military and civilians, academic and industry, and especially with partner nations. He cited the Warfare Development Center as a game changer and the Fleet Information Warfare Command-Pacific, recently stood up at Pearl Harbor, Hawaii.

“We cannot go it alone,” Okon said, adding that partner nations need to be included. “It doesn't matter the size of the Navy but the capabilities of exquisite things that they are world class that we want to collaborate and leverage.”

But cybersecurity is key, especially in industry and academia. “It can't be bolted on. It has to be there when you write the code,” said Okon. “China is watching us every day.”