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Naval Postgraduate School (U.S.)

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NPS IN THE NEWS

Weekly Media Report – April 19-25, 2022

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EDUCATION:

[NWC-at-NPS Awards Academic Honors for Winter Quarter Class](#)

(NPS.edu 22 Apr 22)

The Naval War College (NWC) Monterey program for Joint Professional Military Education (JPME) recognized 13 graduates from its latest class earning academic honors for the Winter Quarter of the 2022 Academic Year.

RESEARCH:

[Editorial: Recalibrating The Anti-Insurgency War](#)

(Punch 21 Apr 22)

The killing of over 120 persons and abduction of scores of others across the country in recent weeks has again reinforced the imperative of recalibrating the campaign against insurgents and other terrorists. Despite massive funding for security, deployment of soldiers and numerous task forces, the country is descending deeper into criminality and becoming more fragile by the day. Urgently, new and more effective strategies have to be adopted to halt the slide into state failure... The US Centre for Contemporary Conflict at the **Naval Postgraduate School**, Monterey, recommends that all counter-strategies must contain psychological programmes, diplomacy, intelligence, military force, covert special operations, law enforcement, protective security, emergency crisis management and reconstruction assistance. The military should adopt these measures. The focus should be on neutralising present and future threats.

STUDENTS:

[Naval Postgraduate School Meyer Scholar Shines at NSWC Dahlgren Division](#)

(DVIDS 19 Apr 22)

“Why did I join the Navy?” Lt. Sasha Barnett asked rhetorically. “Since I was probably 10, I’ve always felt a calling to be a part of something bigger and greater than myself.”

[Cal Maritime Graduate Living Her Dream as a Navy Officer](#)

(Daily Republic 19 Apr 22)

Sasha Barnett wanted to be part of the U.S. Navy since she was 10 years old... After executing her engineering duty option, she attended the **Naval Postgraduate School** in Monterey, where she was selected as a plank owner in the Meyer Scholar program, becoming one of the first six officers in a program that has since enrolled and graduated about 50 officers. The program was the vision of Vice Adm. Jon Hill, the article states.

ALUMNI:

[Reducing Military and Veteran Suicide with a Push for Gun Safety](#)

(Yahoo! News 20 Apr 22) ... Joe Raedle

As the Department of Defense ramps up suicide prevention efforts focused on firearm safety, the CEO of Stop Soldier Suicide shares data to put the issue in context, and a military widow shares her story and how she's found healing and hope in the eight years since her husband's death by suicide... Chris Ford is the CEO of Stop Soldier Suicide, where he is responsible for the strategic direction and day-to-day management of the organization. He is the founder of the National Association of Veteran-Serving Organizations, or NAVSO, and a 20-year Air Force veteran. He retired in 2014 from the Joint Chiefs of Staff, where he served in the Chairman's Office of Warrior and Family Support. In this role, he leveraged his perspectives on veteran reintegration to assist communities across the nation seeking to improve their support for military families. Ford previously served in nearly a dozen countries around the globe supporting Operations Southern Watch, Enduring Freedom, and Iraqi Freedom. He was awarded the Bronze Star Medal and is a graduate of the United States Air Force Academy, University of South Carolina, **Naval Postgraduate School**, the FBI National Academy, and Syracuse University's Boots-to-Business Program.

[Biography, Navy Talent Acquisition Group Philadelphia Commanding Officer, Cmdr. Todd Winn](#)

(DVIDS 21 Apr 22) ... U.S. Navy Chief Petty Officer Diana Quinlan

Commander Todd Winn, born in Denver, CO, enlisted in the U.S. Navy in 1988 and attended recruit training at RTC Orlando. He successfully completed signalman A-school and served aboard the USS America (CV-66) from 1988-1991... In June 2011, Cmdr. Winn reported to the **Naval Postgraduate School** in Monterey, CA. In March 2013, he was awarded a Master of Science degree in management with an emphasis in manpower analysis.

[DoD Names Head of New Office Managing Data and Artificial Intelligence Efforts](#)

(The Record 25 Apr 22)

(Department Defense 25 Apr 22)

(governmentciomedia 25 Apr 22)

(C4isrnet 25 Apr 22)

(Engadget 25 Apr 22)

(Washington Examiner 25 Apr 22)

(Silicon Angle 25 Apr 22)

(Breaking Defense 25 Apr 22)

The Defense Department announced on Monday that Craig Martell has been chosen as the new Chief Digital and Artificial Intelligence Officer (CDAO)... Martell has previously served as head of machine learning for Lyft and before that, led machine learning efforts at Dropbox. He was a tenured computer science professor at the **Naval Postgraduate School** before leading several initiatives at LinkedIn.

[Preparing Sailors for the Age of AI](#)

(USNI 25 Apr 22)

The U.S. Navy has moved ahead in developing and fielding unmanned systems on, above, and under the ocean. Navy leaders envision a future in which manned and unmanned ships will sail side by side, and unmanned systems will operate over the horizon supported by shore-control facilities. The Navy is funding research and development for 215 projects related to artificial intelligence (AI), including greater autonomy for unmanned systems and aiding warfighter decision-making. Despite fielding physical systems, the Navy has not defined the training and education for operators and maintainers of AI systems. This despite a 2020 plan to educate and train Department of Defense (DoD) employees. The Department of the Navy (DoN) has released several strategy documents about AI and autonomous systems including the Strategy for Intelligent Autonomous Systems and the Unmanned Campaign Framework. Unfortunately, these documents both avoid discussion of how the Navy will train sailors or operate future unmanned systems... Many of the sailors within this "hidden AI workforce" received their skills at Navy expense. Naval Reserve Officer Training Commands and the U.S. Naval Academy commission new ensigns every year with STEM degrees in computer science, math, operations research, and other disciplines relevant for AI work. The Navy pays for master's degrees in similar fields at the **Naval Postgraduate School** and civilian universities. Officers who earn these degrees often return to fleet units to with little application of their advanced education. These sailors represent a cadre of talent that the Navy can employ in AI projects without expending the time and money to recruit outside talent.



[A Tale of Two Bears: Russian Experience in Syria and Ukraine](#)

(USNI 21 Apr 22) ... Benjamin Arbitter and Kurt Carlson

Over the opening phase of their invasion of Ukraine, Russian forces have struggled to achieve their most ambitious objectives. In the face of spirited Ukrainian resistance, the Russian advance has slowed, and losses of men and equipment have been substantial, even if hotly debated. Russia's difficulties have surprised some Western observers, who expected a rapid victory. Russian malaise is even more surprising considering recent experience in Syria, where Russian forces demonstrated efficient use of drones and tailored force structure—elements they have failed to effectively implement in Ukraine thus far... Maj. Benjamin Arbitter and Maj. Kurt Carlson are Army Special Forces officers with operational and combat experience in the European Command and Central Command areas of responsibility. Both are from 10th Special Forces Group and have recently completed master's degrees in defense analysis at the **Naval Postgraduate School** in Monterey.

[The Pentagon Needs to Adopt Data-Brokering Solutions](#)

(USNI 21 Apr 22) ... Major Julia Weber, U.S. Marine Corps

As the services seek to become data-centric organizations, data lakes are popping up across the Department of Defense (DoD). DoD data lakes include the Office of the Undersecretary of Defense (Comptroller)'s (OUSD(C)'s) Advancing Analytics platform (Advana), the Navy's Deckplate, and the Marine Corps' proposed Logistics Data Warehouse (LDW). These data lakes replicate, in a single location, the data available from a variety of disparate source systems, applications, and equipment. This was done to support combined analysis on data from multiple sources... Major Weber previously served as both a UH-1 Huey pilot and financial management officer (comptroller) in multiple assignments state-side and overseas, including in Afghanistan, Pakistan, and Guatemala. A recent graduate of the **Naval Postgraduate School** and a DARPA Service Chiefs' Fellow, she is currently an operations research analyst in the Program Analysis and Evaluation Division of Headquarters Marine Corps Programs and Resources.

UPCOMING NEWS & EVENTS:

Apr 26-29: [Center for Executive Education SCW Workshop](#)

May 11-12: [Acquisition Research Symposium](#)

May 13: [Discovery Day](#)

May 17: [Defense Energy Seminar](#)



EDUCATION:

NWC-at-NPS Awards Academic Honors for Winter Quarter Class

(NPS.edu 22 Apr 22)

The Naval War College (NWC) Monterey program for Joint Professional Military Education (JPME) recognized 13 graduates from its latest class earning academic honors for the Winter Quarter of the 2022 Academic Year.

Graduates earning “with Highest Distinction” honors by completing the Command & Staff program in the top five percent of their class are Navy Lt. Benjamin Rowe and Army Maj. Bryan H. Harrison and Caleb J. Edwards.

Graduates earning “with Distinction” honors by completing the Command & Staff program in the top 15 percent of their class are Navy Lt. Cmdrs. Yolanda E. Gutierrez and Joseph B. McGinnis; Navy Lts. Kuran W. Bricker, Mitchell Wagner Nuss and James E. Wigle; Marine Corps Maj. Daniel J. Paton; Army Maj. Randall P. Groller; and, Army Capt. Nathanael B. Anchor, Andre K. Gatlin and Mary K. Lord.

[NWC-at-NPS Awards Academic Honors for Winter Quarter Class 2022 - Naval Postgraduate School](#)

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RESEARCH:

Editorial: Recalibrating The Anti-Insurgency War

(Punch 21 Apr 22)

The killing of over 120 persons and abduction of scores of others across the country in recent weeks has again reinforced the imperative of recalibrating the campaign against insurgents and other terrorists. Despite massive funding for security, deployment of soldiers and numerous task forces, the country is descending deeper into criminality and becoming more fragile by the day. Urgently, new and more effective strategies have to be adopted to halt the slide into state failure.

The audacious attack on the Kaduna-Abuja train at Katari in Kaduna, on March 28, by terrorists had already demonstrated the existential threat facing the country. Eight persons died and 26 were injured in the attack. No fewer than 68 others are still being held captive by the daredevils who have threatened to slaughter them if ransom is not paid. Killings and abductions occur frequently, especially in the North, perpetrated by terrorists of diverse hues – Islamic jihadists, Fulani herders and ‘bandits’/kidnappers.

The Federal Government must devise new strategies that emphasise intelligence-led operations. This must include a comprehensive and integrated cohesive, coordinated approach.

A recent report showed that over 700 soldiers were slaughtered by terrorists within the past 18 months. The UN High Commissioner for Refugees says the violence in the Lake Chad Basin has dislocated 3.3 million people, including over 300,000 Nigerian refugees who fled to neighbouring countries, and some 2.2 million in Adamawa, Borno and Yobe states. PDP, After Defection

Regrettably, the President, Major General Muhammadu Buhari (ret.), and his security team have bungled the fight against terrorism. Stakeholders in the various regions too have not been able to agree on a common course of action. More than two years after the Northern Governors Forum resolved to set up a standing committee on security in the North, nothing concrete has been done. The governors of the five South-East states have similarly failed to fully concretise the Ebubeagu regional security outfit initiative. They should all wake up.

Apparently, Nigeria’s state governors value politics over the security of lives and property.

Governor of terror-stricken Kaduna, Nasir el-Rufai, has come under fire for threatening to engage mercenaries. This statement riled Nigerians who believe the governors have failed in their duty to the citizens. Rather than waste funds on mercenaries, the governors should set up well-funded state security agencies and also work for a North-West regional security network to complement the federal police and the armed forces.



Protecting the borders is also critical. A country with unattended, porous borders cannot safeguard its territorial integrity and its people. The regime's nonchalant attitude is evident in its failure to implement the e-border project mooted over four years ago. Approved by the Federal Executive Council, the N52-billion project was meant to cover 86 border control posts, comprising six mega-control posts, 16 medium control posts and 64 mini-control posts. The project comes with a battery of high definition video surveillance cameras.

Consequently, terrorists, smugglers and other unsavoury elements continue to invade the country at will. This is unacceptable and should be addressed.

Instructively, the anti-insurgency campaign lacks organisational structure, coordination, bite and lasting efficacy. With no distinguishable authority in charge, there is poor coordination among the services, duplication of efforts resulting in waste of funds, men and materials. For effective coordination, the war should be overseen by an overall commander. The structure must incorporate horizontal, as well as vertical coordination and cooperation at every level to ensure effective managerial and operational coordination, particularly where bureaucratic capabilities overlap.

Overall responsibility must reside in the coordinator who derives his authority directly from the President. The United States reorganised its armed forces into a regional command structure to allow direct presidential control over the field commanders. The National Security Adviser, Babagana Monguno, lacks effective coordinating authority as seen in his complaint that the past service chiefs bypassed him.

The US also established the Department (Ministry) of Homeland Security to coordinate national security in the aftermath of the 9/11 terrorist attacks.

Terrorists should be denied free rein in the ungoverned or lightly governed areas where they currently insert themselves as de facto governing authorities. Winning the hearts and minds of the people should entail driving the terrorists out and providing effective governance; security, social services and permanent presence. Terror groups cannot survive without some degree of public sympathy and support. Eroding that support base should be paramount.

The government is losing ground because the intelligence services are inefficient and politicised. Yet, the war has to be intelligence-driven. Reliable, timely intelligence collection, analysis and dissemination and sharing are absolutely necessary. The State Security Service should be reformed and refocused from regime protection to its core mandate of securing the country. Technology deployment, infiltration and targeted elimination of terrorist leaders should be a priority.

Surveillance and armed drones should be employed. One intelligence report observed, "Armed UAVs are a good option to add to Nigeria's military arsenal as are several force multipliers. These are particularly important given the multiple theatres of conflict the military is engaged and the fact that it is spread thinly." Security services should track, block and disrupt the criminals' logistics and financial flows.

Terrorists, their financiers and abettors should be put on trial. The quirky, ill-defined and politically-motivated "amnesty" for so-called "repentant terrorists" should be halted. Criminals, murderers should be made to face the full wrath of the law. It is their victims that should be rehabilitated.

The US Centre for Contemporary Conflict at the **Naval Postgraduate School**, Monterey, recommends that all counter-strategies must contain psychological programmes, diplomacy, intelligence, military force, covert special operations, law enforcement, protective security, emergency crisis management and reconstruction assistance. The military should adopt these measures. The focus should be on neutralising present and future threats.

Given the country's dire situation, Buhari should take charge, replace incompetent security chiefs and ensure effective coordination. Without further delay, the state governors must take responsibility for the safety of their people by establishing, funding, arming and equipping state, regional and local security agencies.

[Editorial: Recalibrating the anti-insurgency war \(punchng.com\)](#)

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STUDENTS:

Naval Postgraduate School Meyer Scholar Shines at NSWC Dahlgren Division

(DVIDS 19 Apr 22)

“Why did I join the Navy?” Lt. Sasha Barnett asked rhetorically. “Since I was probably 10, I’ve always felt a calling to be a part of something bigger and greater than myself.”

Barnett, a Naval Surface Warfare Center Dahlgren Division systems engineer who supports the High Energy Laser Integrated with Optical-dazzler and Surveillance (HELIOS) program, speaks humbly about her Navy career that began when she commissioned as a Surface Warfare Officer with an Engineering Duty Option in 2014 after graduating from the California Maritime Academy where she received her bachelor’s degree in mechanical engineering.

She embarked on two sea tours, the first from 2014 to 2017 during which she was assigned as the Main Propulsion Officer aboard the USS Hopper (DDG 70) homeported in Pearl Harbor, Hawaii. Afterwards, she came to Dahlgren in the Spring of 2017 for the Combat Systems Officer/Fire Control Officer Pipeline Course at AEGIS Training and Readiness Center. That same year she was assigned to the USS Higgins (DDG 76) homeported in San Diego as the Fire Control Officer. After executing her Engineering Duty Option, she then attended the **Naval Postgraduate School**, where she was selected as a plank owner in the Meyer Scholar program.

She was among the first six officers in a program that currently has enrolled and graduated a total of about 50 officers, according to John Hammerer, Chair of Integrated Air and Missile Defense at **NPS**. Acting on the vision of Vice Adm. Jon Hill, Hammerer started the program in August 2019. Just after he announced it, he received a call from Barnett who expressed interest in joining.

“I was mainly interested in participating because I didn’t want to lose that tactical warfighting mindset. I have a well-rounded technical background and coupling that with how we think we will employ weapon systems is key in future system developments,” Barnett said.

Barnett was the perfect candidate.

“The purpose of the program is to develop officers who are competent and confident in their ability to acquire and employ advanced naval warfare systems,” Hammerer said. “I think we’re producing world class officers when it comes to combat systems,” he said, noting Barnett is one of them.

The Meyer Program was named after retired Navy Rear Adm. Wayne E. Meyer who is widely-renowned as the “Father of AEGIS.”

“Admiral Meyer’s mantra was, ‘Build a little. Test a little. Learn a lot,’ and we’re trying to get back to that – that kind of mindset. And, it’s difficult to do that with the fast-paced environment that we are in today while also trying to maintain that tactical and technical overmatch against adversaries,” Barnett said. “The Meyer Scholar Program gets us back to that and really helps us collaborate across the joint Services.”

Hammerer would agree.

“If you think about it, just like Sasha Barnett, all of these officers are going to be ready to contribute on the first day of their next assignment after graduating from the **Naval Postgraduate School** and in follow-on assignments as well. Whether Engineering Duty Officers like Sasha, or Surface Warfare Officers like Capt. Casey Plew, NSWCDD’s Commanding Officer, they learn the how and why of combat system requirements, design, test, production and lifecycle support in conjunction with their regular academic programs. There are few if any other places in the Navy that provide this interdisciplinary approach to combat systems. As a result of years of study in the Meyer Scholar program, they have a tremendous advantage” Hammerer said.

After graduating from the **NPS** with a master’s degree in applied physics in 2021, Barnett came to NSWCDD – a place she was drawn to during a NPS Experience Week visit.

“I came to NSWCDD and I knew I wanted to be a part of it. I wanted to be at the forefront of the research, development, and integration of warfare systems and you just don’t get that kind of experience anywhere else,” Barnett said.



Today, she supports HELIOS as the console integrator coordinating efforts between Program Executive Office Integrated Warfare Systems (IWS 2.0) and the NSWCCD Strategic and Computing Systems Department console subject matter experts to bring the technology aboard a ship.

With her bright career path, Barnett may not be too different from Meyer, according to Hammerer.

“Just as Admiral Meyer was pioneering guided missiles, Sasha Barnett is pioneering directed energy weapons,” Hammerer said. “She might be the most, or one of the most, qualified officers in the United States Navy when it comes to laser system engineering...She’s right up there with the best when it comes to what she’s done for NPS and what she’s doing right now.”

Barnett has high aspirations.

“The goal for me is to get to the program office and be either a major program manager or perhaps even come back to the warfare center as a commanding officer, but to do either I need to have that program management experience,” Barnett said.

As Barnett looks toward the future, she shared some advice for Sailors who may wish to follow a similar career path.

“Never stop asking questions. I do not consider myself an expert in any subject. I still find that I’m learning something new every single day which is very humbling,” Barnett said.

[DVIDS - News - Naval Postgraduate School Meyer Scholar Shines at NSWC Dahlgren Division \(dvidshub.net\)](#)

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Cal Maritime Graduate Living Her Dream as a Navy Officer

(Daily Republic 19 Apr 22)

Sasha Barnett wanted to be part of the U.S. Navy since she was 10 years old.

Now Navy Lt. Barnett, a 2014 graduate of the California University Maritime Academy in Vallejo, serves as a systems engineer in the Naval Surface Warfare Center Dahlgren Division supporting the High Energy Laser Integrated with Optical-dazzler and Surveillance program – known as HELIOS, the Navy Office of Community Outreach said in an article.

“Since I was probably 10, I’ve always felt a calling to be a part of something bigger and greater than myself,” said Barnett, who joined the Navy in 2014, commissioned as a Surface Warfare officer with an engineering duty option.

Barnett has a bachelor’s degree in mechanical engineering from Cal Maritime.

She has had two sea tours, the first from 2014 to 2017, during which she was assigned as the main propulsion officer aboard the Pearl Harbor-based USS Hopper. After being assigned to Dahlgren for Combat Systems Officer and Fire Control Officer training in the spring of 2017, she was assigned to the USS Higgins, out of San Diego, as the fire control officer.

After executing her engineering duty option, she attended the **Naval Postgraduate School** in Monterey, where she was selected as a plank owner in the Meyer Scholar program, becoming one of the first six officers in a program that has since enrolled and graduated about 50 officers. The program was the vision of Vice Adm. Jon Hill, the article states.

“I was mainly interested in participating because I didn’t want to lose that tactical warfighting mindset. I have a well-rounded technical background and coupling that with how we think we will employ weapon systems is key in future system developments,” Barnett said.

Barnett has since earned a master’s degree in applied physics and arrived at the Naval Surface Warfare Center.

“The goal for me is to get to the program office and be either a major program manager or perhaps even come back to the warfare center as a commanding officer, but to do either I need to have that program management experience,” Barnett said.



She tells sailors who may want to follow a similar path to “never stop asking questions. I do not consider myself an expert in any subject. I still find that I’m learning something new every single day, which is very humbling.”

The next Cal Maritime graduation class will celebrate its commencement May 7-8.

[DVIDS - News - Naval Postgraduate School Meyer Scholar Shines at NSWC Dahlgren Division \(dvidshub.net\)](#)

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ALUMNI:

Reducing Military and Veteran Suicide with a Push for Gun Safety

(Yahoo! News 20 Apr 22) ... Joe Raedle

As the Department of Defense ramps up suicide prevention efforts focused on firearm safety, the CEO of Stop Soldier Suicide shares data to put the issue in context, and a military widow shares her story and how she’s found healing and hope in the eight years since her husband’s death by suicide.

About the guests:

Chris Ford is the CEO of Stop Soldier Suicide, where he is responsible for the strategic direction and day-to-day management of the organization. He is the founder of the National Association of Veteran-Serving Organizations, or NAVSO, and a 20-year Air Force veteran. He retired in 2014 from the Joint Chiefs of Staff, where he served in the Chairman’s Office of Warrior and Family Support. In this role, he leveraged his perspectives on veteran reintegration to assist communities across the nation seeking to improve their support for military families. Ford previously served in nearly a dozen countries around the globe supporting Operations Southern Watch, Enduring Freedom, and Iraqi Freedom. He was awarded the Bronze Star Medal and is a graduate of the United States Air Force Academy, University of South Carolina, **Naval Postgraduate School**, the FBI National Academy, and Syracuse University’s Boots-to-Business Program.

Amber James is a Texan, single mother and surviving spouse of a Marine Corps veteran. She is a passionate advocate for mental health and suicide prevention. She is certified and trained as a laughter yoga leader, life and weight loss coach and erotic blueprint coach. She is also a widow suicide loss peer mentor for the Tragedy Assistance Program for Survivors and a survivor of suicide loss support group facilitator for the American Foundation for Suicide Prevention. James’ purpose is to give hope and show that healing is possible through awareness and conversations by sharing her story.

About the podcast:

The Spouse Angle is a podcast breaking down the news for military spouses and their families. Each episode features subject-matter experts and military guests who dive into current events from a military perspective — everything from new policy changes to research on family lifestyle challenges. The podcast is hosted by Natalie Gross, a freelance journalist and former Military Times reporter who grew up in a military family.

[Reducing military and veteran suicide with a push for gun safety \(yahoo.com\)](#)

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Biography, Navy Talent Acquisition Group Philadelphia Commanding Officer, Cmdr. Todd Winn

(DVIDS 21 Apr 22) ... U.S. Navy Chief Petty Officer Diana Quinlan

Commander Todd Winn, born in Denver, CO, enlisted in the U.S. Navy in 1988 and attended recruit training at RTC Orlando. He successfully completed signalman A-school and served aboard the USS America (CV-66) from 1988-1991.

Following his three year active duty obligation, he transferred to the selective reserves (SELRES) in 1991. In 1996, he was awarded a Bachelor of Science Degree in aviation management from Metropolitan State College of Denver.

Cmdr. Winn was commissioned in 2002 after successful completion of the officer candidate school, and immediately began flight training as a student Naval flight officer. In 2004, he redesignated as a fleet support officer and transferred to the SELRES.

From 2004 to 2007, he served with Navy Central Command detachment bravo (NAVCENT) as a crisis action team (CATCELL) watch officer and was redesignated as a human resource officer (1205).

From 2007 to 2011, Commander Winn served as a CANREC reserve medical and GENOFF reserve officer recruiter for NRD New Orleans, and as the division officer for Pensacola. In 2011, he was redesignated as a full time support (FTS) human resource officer (1207).

In June 2011, Cmdr. Winn reported to the **Naval Postgraduate School** in Monterey, CA. In March 2013, he was awarded a Master of Science degree in management with an emphasis in manpower analysis.

In April 2013 to May 2015, he reported to Navy Recruiting Command, serving in two milestone department head billets as Navy Recruiting Region West Enlisted Programs Officer (EPO) and Navy Recruiting Region West Officer Programs Officer (OPO), responsible for 13 Navy recruiting districts covering 26 states.

After successfully screening for shore command, Commander Winn reported to Navy Operational Support Center (NOSC) Guam from July 2015 to August 2018 as commanding officer responsible for more than 200 selective reservists (SELRES) located in more than 10 foreign countries as America's only forward deployed NOSC.

In August 2018, after successful commander milestone selection, he reported to Commander, Navy Reserve Force Command to serve as the division director for reserve personnel assignments (N12), overseeing the largest division of military personnel responsible for more than 48,000 SELRES and their billet assignments.

Winn reported as the prospective command officer in December 2020 and took command of Navy Talent Acquisition Group Philadelphia in January 2021.

Commander Winn's personal awards include the Meritorious Service Medal (two awards), Navy Commendation Medal (five awards), Air Force Achievement Medal, and various service and unit awards.

[DVIDS - News - Biography, Navy Talent Acquisition Group Philadelphia Commanding Officer, Cmdr. Todd Winn \(dvidshub.net\)](#)

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DoD Names Head of New Office Managing Data and Artificial Intelligence Efforts

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(Washington Examiner 25 Apr 22)

(Silicon Angle 25 Apr 22)

(Breaking Defense 25 Apr 22)

The Defense Department announced on Monday that Craig Martell has been chosen as the new Chief Digital and Artificial Intelligence Officer (CDAO).

The new position was announced in December and will see Martell focus on “accelerating the adoption of data, analytics, digital solutions, and AI functions to generate decision advantage from the boardroom to the battlefield.”

Martell has previously served as head of machine learning for Lyft and before that, led machine learning efforts at Dropbox. He was a tenured computer science professor at the **Naval Postgraduate School** before leading several initiatives at LinkedIn.

The Department of Defense said in a statement that the office was officially set up in February as a way to “elevate digital and AI strategy development and policy formulation to the secretary and deputy secretary, while also ensuring unity of mission and tighter integration for the department’s enterprise-wide data, AI, and cyber organizations.”

Deputy Secretary of Defense Dr. Kathleen Hicks said AI and machine learning are now critical to their efforts addressing a range of challenges. The CDAO reports directly to Hicks.

“With Craig’s appointment, we hope to see the department increase the speed at which we develop and field advances in AI, data analytics, and machine-learning technology,” Hicks said. “He brings cutting-edge industry experience to apply to our unique mission set.”

A memo released by the department in December said the CDAO will run the Defense Digital Service, the Joint Artificial Intelligence Center and the Chief Data Officer.

John Sherman, Defense Department CIO, said in February that the creation of the CDAO “is about decision advantage” and “getting ahead of these near-peer competitors, with the best insight and information that we can possibly have.”

Sherman has been serving as CDAO in an acting capacity since February.

‘Game-changing technologies’

The creation of the position initially caused a stir, with some arguing it would reduce the department’s bureaucracy and others questioning whether grouping the three disparate offices would confuse their mission.

Rep. Jim Langevin (D-R.I.), chair of the House Armed Services Committee cyber subpanel, praised the move at the time, telling The Record in a statement that the CDAO position would “begin to rid the department of cumbersome, bureaucratic stovepipes and foster the integration of these game-changing technologies into every aspect of the warfighting experience.”

Others said the Defense Digital Service operational unit was markedly different from the policy-focused groups within the Joint Artificial Intelligence Center and the Chief Data Officer.

“A nesting initiative suggests a lack of clarity by senior DoD leaders on areas that are critical to our national security,” an official told The Record’s Martin Matishak in December.

“Although the private sector has shown the importance of keeping technology close to the leadership by elevating that this is in fact the opposite.”

[DoD names head of new office managing data and artificial intelligence efforts - The Record by Recorded Future](#)

[DoD Announces Dr. Craig Martell as Chief Digital and Artificial Intelligence Officer > U.S. Department of Defense > Release](#)

[Industry Expert Craig Martell Tapped as New Pentagon AI Chief \(governmentciomedia.com\)](#)

[Pentagon hails Lyft exec Martell for AI post \(c4isrnet.com\)](#)



[The Pentagon's new AI chief is a former Lyft executive | Engadget](#)
[The Pentagon's new AI chief is a former Lyft executive | Engadget](#)

[Pentagon taps former Lyft executive Craig Martell to be artificial intelligence chief | Washington Examiner](#)

[Pentagon hires Lyft machine learning expert Craig Martell as its first chief digital and AI officer - SiliconANGLE](#)

[Lyft exec Craig Martell tapped as Pentagon's AI chief: Exclusive Interview - Breaking Defense](#)

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Preparing Sailors for the Age of AI

(USNI 25 Apr 22)... U.S. Navy Lt. Andrew Pfau

The U.S. Navy has moved ahead in developing and fielding unmanned systems on, above, and under the ocean. Navy leaders envision a future in which manned and unmanned ships will sail side by side, and unmanned systems will operate over the horizon supported by shore-control facilities. The Navy is funding research and development for 215 projects related to artificial intelligence (AI), including greater autonomy for unmanned systems and aiding warfighter decision-making. Despite fielding physical systems, the Navy has not defined the training and education for operators and maintainers of AI systems. This despite a 2020 plan to educate and train Department of Defense (DoD) employees. The Department of the Navy (DoN) has released several strategy documents about AI and autonomous systems including the Strategy for Intelligent Autonomous Systems and the Unmanned Campaign Framework. Unfortunately, these documents both avoid discussion of how the Navy will train sailors or operate future unmanned systems.

The Navy has been slow to establish the necessary career frameworks for sailors that operate unmanned systems, while losing talented sailors to the private sector where their skills are in demand. As AI-enabled naval systems move from the lab to the battlefield, an educated and trained workforce must be ready to meet them.

Why the Navy Needs AI Talent in Uniform

For several years, across multiple defense strategy documents, the DoD has acknowledged the role that AI will play in the near and distant defense systems. The 2018 National Defense Strategy identifies advanced autonomous systems as a key modernizing capability and states that the DoD must broadly invest in these technologies. The 2020 DoD Education AI Strategy stated that the department must develop "world class" AI practitioners to make AI a reality within DoD. The National Security Commission on AI's final report recognizes the importance of talent, stating "The AI competition will not be won by the side with the best technology. It will be won by the side with the best, most diverse, and tech-savvy talent. The DoD . . . face[s] an alarming talent deficit." The report recommends, among other actions, that digital talent must be organized into individual corps and that those within DoD with requisite digital talents should be able to spend a career within this specific career field.

The personnel with the skills to build and manage AI systems must have defined and approved career tracks that keep them in relevant jobs and provided them with the tools and continuing education to succeed for the duration. Those with the skills and motivation to work on AI projects will not want to spend several years on sea duty, away from the cutting edge of AI, to meet an undesired career goal

All

Just as the Navy currently requires basic training and literacy in cyber security, so too it must require basic training in AI. The Joint Artificial Intelligence Center (JAIC) has already begun the work to develop and pilot AI education courses for a general audience. Since AI education will happen across DoD, the



Navy will not have to develop course content on its own. Instead, the Navy can identify where in a sailor's initial and continuing education AI education courses fit and ensure that training is delivered.

Many

Increased adoption of AI will automate many tasks that humans perform today, in both offices and on the battlefield. The changes from adoption of AI systems will fall disproportionately on career fields that predominantly perform administrative and logistical tasks. Intelligence specialists, who pour over images and documents looking for ships or aircraft, will soon be assisted by AI systems that can perform the same tasks faster and more accurately.

The Navy of the near future may have fewer jobs in some career fields and more in others, and automation can spur demand for work when automation makes that work cheaper and faster. The daily tasks that sailors perform may involve more time supervising AI systems than the manual tasks they currently perform. It is up to Navy Personnel Command to match current career fields to these archetypes and identify how they will change.

Few

DoD recognizes that it cannot compete with the private sector in hiring technical talent for AI projects. However, the Navy will need sailors highly educated in AI to manage the acquisition of AI systems, develop AI system requirements, and work with Navy civilian employees to identify new AI research areas to benefit the fleet.

Fortunately, DoN does not have to exclusively hire this talent from outside sources. There are many serving in uniform today with the skills, often acquired at DoN expense, to work on AI projects within the Navy. These sailors comprise a "hidden AI workforce." There are many current career fields, both military and civilian, that are either directly related to AI or AI-adjacent. Service members with a passion for this type of work and with a desire to see reform within DoN end up working on these passion projects on their own time when they could be adding significant value to DoN by working on these projects full time. These sailors have the skills, the Navy must provide them with the opportunity to use these skills to create AI systems that can operate on the battlefield.

Many of the sailors within this "hidden AI workforce" received their skills at Navy expense. Naval Reserve Officer Training Commands and the U.S. Naval Academy commission new ensigns every year with STEM degrees in computer science, math, operations research, and other disciplines relevant for AI work. The Navy pays for master's degrees in similar fields at the **Naval Postgraduate School** and civilian universities. Officers who earn these degrees often return to fleet units to with little application of their advanced education. These sailors represent a cadre of talent that the Navy can employ in AI projects without expending the time and money to recruit outside talent.

Both the Army and Air Force have partnered with the Massachusetts Institute of Technology and Carnegie Mellon University to accelerate AI innovation and bring defense problems to civilian researchers. These arrangements provide active-duty officers and civilian employees with advanced education, allowing them to return to relevant jobs within their departments to lead AI projects. These units provide a means for the services to grow their pool of digital and AI talent from within. The Navy should seek to build these partnerships with academia to leverage both research and education resources.

First Steps

Without a doubt, the goals defined here will take many years of effort across the Navy to implement. However, there are some steps that can be taken with relatively little cost and reorganization. First, the Navy should develop an AI education implementation plan based on the 2020 DoD AI Education Strategy. This plan would ensure that the Navy is meeting the objectives of the DoD strategy without duplicating efforts currently underway in other offices like the JAIC.

Second, the Navy can work to understand the current capabilities of its workforce. A review of personnel records for relevant educational backgrounds and survey of related subspeciality and career codes provide a starting point. Surveys of sailors in technical career fields can also identify those with the



talent and desire to work on AI systems. This is the first step to identifying sailors with the skill set needed for AI-related jobs.

Longer time frame tasks, such as the creation of AI training programs, must begin as pilot projects before scaling up. An academic partner institution can establish a Navy AI Center of Excellence like with the Army and the Air Force. This partnership would bring relevant Navy datasets and problems to academic AI researchers and provide mid-career officers and senior enlisted with advanced education in the field of AI.

If the Navy fails to adapt its talent management systems and careers to current technology, sailors with the knowledge and passion for unmanned systems will leave the Navy. Watchstanders ashore and at sea will not fully grasp how to interact with and operate AI systems. Most of all, the Navy may find itself divided into uniformed operators stuck in their largely traditional role, and civilian contractors who maintain and build unmanned systems without informed input from uniformed sailors. Failure to adapt its workforce and processes for AI adaptation will leave the Navy unprepared for great power conflict this century.

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[Preparing Sailors for the Age of AI | Proceedings - April 2022 Vol. 148/4/1,430 \(usni.org\)](#)

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A Tale of Two Bears: Russian Experience in Syria and Ukraine

(USNI 21 Apr 22) ... Benjamin Arbitter and Kurt Carlson

Over the opening phase of their invasion of Ukraine, Russian forces have struggled to achieve their most ambitious objectives. In the face of spirited Ukrainian resistance, the Russian advance has slowed, and losses of men and equipment have been substantial, even if hotly debated. Russia's difficulties have surprised some Western observers, who expected a rapid victory. Russian malaise is even more surprising considering recent experience in Syria, where Russian forces demonstrated efficient use of drones and tailored force structure—elements they have failed to effectively implement in Ukraine thus far.

Although Russian forces have yet to subdue the Ukrainian military, in certain areas of the country, such as the southern front and recently occupied portions of the Donbas, Ukrainian resistance forces may soon face Russian counter-irregular warfare (CIW) capabilities honed over the past decade in Syria. The current conflict remains predominantly a conventional fight, with the Russian military focused on defeating the uniformed Ukrainian military. The last time Russia faced a comparable foe was the 2008 Georgian campaign, which also exposed deep flaws within the military. However, as Russian forces attempt to secure their rear areas and consolidate control of territorial gains, they will likely increasingly employ CIW methods.

Understanding how Russia employed CIW in Syria can give a fuller picture of potential Russian capabilities and illuminate the challenges faced by a future Ukrainian insurgency in occupied zones. For US practitioners, as Russia once again proves itself to be an enduring security challenge for the West, understanding the methods Russia has used successfully in the past to defeat formidable irregular opponents is more important than ever.

Those Who Can, Advise

Russian operations in Syria leaned heavily on an advise-assist-accompany model incorporating operators from the Russian Special Operations Forces Command (KSSO). Although no strangers to using indigenous forces, the Russian military has often left relationships with those forces to the Russian intelligence services. Spetsnaz (special assignment forces) have focused instead on direct action and reconnaissance missions. In Syria, however, KSSO troops demonstrated an ability to advise and augment indigenous formations. The Russian CIW model now includes a viable foreign internal defense capability. After the fall of Aleppo in 2016, KSSO elements augmented Syrian Arab forces with reconnaissance and



airstrikes, and led trainees on raids in Recondo-style live-fire exercises. Although the bulk of Russian forces in Ukraine remain focused on large-scale combat operations, the incorporation of Chechen forces and Donetsk People's Republic units in the southern offensive against Mariupol could portend a similar approach if these regions are occupied for the long term.

The Russian force composition in Syria reflected lessons learned from operations in the North Caucasus and Africa. Whereas previous CIW operations used traditional Russian divisions executing conventional warfare writ small, the Russian expeditionary force in Syria employed military police units composed of deliberately recruited Muslim servicemen to secure humanitarian convoys, escort journalists onto the battlefield, and prevent sectarian violence by patrolling recently pacified regions in the country. The Russian military police concept is theoretically an adoption of American equivalents during the mid-2000s, but the Russians have expanded their military policemen as a staple of stability operations. In occupied Kherson, this has manifested in an overt reliance on Rozgvardia forces to oppose initial civil resistance.

In Syria, Russia also shifted its force structure to emulate aspects of the Western concept of population-centric counterinsurgency. As early as the siege of Aleppo, the Russian Reconciliation Center was involved in implementing an overtly conciliatory approach to separatist Syrian forces. Units from the Russian expeditionary forces executed what Western practitioners would identify as civil affairs operations. Delivering humanitarian aid, establishing field hospitals for wounded civilians, and negotiating neighborhood-level ceasefires became part of the Russian CIW strategy in Syria. Although the idea of a population-centric CIW effort seems hard to imagine when Russian forces are deliberately bombing medical infrastructure throughout Ukraine, Russian tactics were equally brutal in Syria. Similar civil affairs operations along the model of the reconciliation centers may emerge in occupied zones in Ukraine over the months to come.

Dogs of War on the Russian Leash

In addition to an indigenous approach and the incorporation of stability-focused units, the Russian integration of private military companies (PMCs) in Syria yielded an arguable success. Somewhat counterintuitively to Western observers, even the 2018 killing of several hundred Syrian government and Wagner Group fighters by US forces in Deir ez-Zor province bolstered the utility of PMCs to Russia. After the dust had settled, Russia had lost a significant number of fighters in direct confrontation with little backlash or media coverage at home. Given the current Russian information campaign to limit domestic blowback, recent recruiting drives for Wagner and its affiliates are not surprising. While Wagner Group mercenaries may have mothers, they do not carry the same cultural and historical weight as the Soldiers' Mothers Committee.

Tactical Tech in CIW

Syria was a live-fire proving ground for new Russian technology, specifically drones and integrated mission command systems. Russian unmanned aerial vehicles (UAVs) flew tens of thousands of sorties against anti-Assad forces and provided increased intelligence, surveillance, and reconnaissance to ground elements. During the drive to Aleppo in 2015, Russian drones enabled Syrian Tiger Force columns to quickly clear large portions of the city while protecting their flanks from ambushes. The Russian UAV fleet in Syria also provided aerial observation for airstrikes and artillery. Russian drones were used to shorten the kill chain by finding and fixing enemy forces, and for laser designating targets for precision strike. Although Russian drone integration in Ukraine has been noticeably absent during the first weeks of the conflict, reports of loitering munitions have increased in recent days. In occupied areas of Ukraine, drones will likely be used increasingly to target resistance elements.

Much like PMCs, drones provoke limited to no response from the Russian public when lost, and have been described as indispensable to military conflict by Defense Minister Sergei Shoigu. Russia has thus far fallen short of its goal to integrate strike-capable drones, a priority during operations in Syria. Russia's Orion drone platform executed a lukewarm kinetic debut in Ukraine striking military infrastructure. However, the prioritization of drones within the Russian Ministry of Defense, combined with the



significant role they have played for Russian enemies in both Syria and Ukraine, will likely make them a fixture of the battlefield in the coming months.

Another new piece of technology debuted en masse in Syria was the Russian Strelets system. A command-and-control system similar to the Android Tactical Assault Kit in the US military, Strelets represents a milestone improvement in the Russian ability to track friendly forces, submit digital calls for fire, and manage the battlefield at a tactical level. Designed as a network of communications, data transfer, and blue force tracking, the Strelets system has been heralded by Russian sources as having reduced the time it takes Russian forces to clear ground and commit fires to eight to ten minutes. Although much like Russian advances in drones the Strelets itself is not an overly impressive piece of equipment when compared to Western equivalents, it is significant in its use by the Russian military in a CIW environment. During large-scale combat operations in Ukraine, Russian forces have been reminded of the dangers of unsecured communications platforms. Given the opportunity to consolidate gains in occupied zones, digital mission command platforms will likely be increasingly employed by Russian forces fighting resistance elements.

Challenges and Opportunities

Although far outshone by reports of Ukrainian Bayraktar use so far in the conflict, unmanned aerial vehicles are a major pillar of Russian warfare and are only gaining in importance and proficiency. The layered effect of strike capability from drones combined with digital command-and-control structures means the kill chain will be shorter when targeting Ukrainian resistance fighters than it was even in Syria. Combined with Russia's historical trend of accepting high levels of collateral damage in targeting operations, it appears likely that Russia's irregular foes will increasingly find drones to be one of the most lethal tools deployed against them.

The urban environment poses a distinct challenge for irregular fighters facing Russian forces. Population centers such as Kyiv and Mariupol remain vital to the success or failure of both sides. However, as highlighted in Grozny, Aleppo, Kharkiv, and Mariupol, Russia has historically chosen to destroy cities rather than fight for them. While irregular forces will need to continue to contest these areas, the risks of operating within the cities will remain high for defenders, the civilian population, and infrastructure. Bringing the fight to an urban area will likely result in Russia's mass application of firepower rather than accepting the risks of facing continued armed resistance or fighting block by block.

Any discussion of the current war in Ukraine would be incomplete without emphasizing the critical role messaging and information operations have played thus far and will certainly continue to play as the conflict evolves. The Ukrainian military has put on a veritable masterclass in information operations so far in the conflict, from having young Russian captives call their mothers to highlighting the role of average Ukrainians in resistance and publishing photos of dead Russian soldiers to allow their families to identify them. Information operations will continue to play a hugely important role as Ukrainian resistance continues in occupied zones. Irregular warfare practitioners should take note of the effective layering of information platforms and tailoring of themes and messages for target audiences.

Syria as a Blueprint

Russian operations in Syria merged a robust advise-and-assist capability with technological advances at the tactical level, establishing a template for future Russian military successes. As Russian forces adjust and adapt from the shambolic nature of their operations in Ukraine, Syria will likely provide the organizational baseline by which Russian forces attempt to right the ship. While the ongoing fight against the Ukrainian military poses an entirely different challenge, Russian operations to target resistance elements in rear areas will likely bear more than a passing resemblance to their formula for success in Syria. US irregular warfare practitioners should apply a nuanced understanding of the adaptations in Russian force composition and integrated technology when predicting Russia's response to Ukrainian resistance in occupied zones.

US practitioners cannot assume that unconventional warfare training, planning, and thinking built around historical paradigms is adequate preparation to conduct irregular warfare against a contemporary Russian CIW capability. Nor can they simply incorporate new enemy weapons capabilities as planning



factors and assume that the opponent will behave the same. Irregular warfare practitioners deploying in proximity to Russian forces must understand the threat as modular, multilayered, and employed differently from the older stereotypes of Russia's military capabilities. Although Russian performance against the Ukrainian military has so far proven far less effective than previously assumed, Russia remains a capable and potent threat with an impressive track record of suppressing civil unrest and insurgency.

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The Pentagon Needs to Adopt Data-Brokering Solutions

(USNI 21 Apr 22) ... Major Julia Weber, U.S. Marine Corps

Proceedings

As the services seek to become data-centric organizations, data lakes are popping up across the Department of Defense (DoD). DoD data lakes include the Office of the Undersecretary of Defense (Comptroller)'s (OUSD(C)'s) Advancing Analytics platform (Advana), the Navy's Deckplate, and the Marine Corps' proposed Logistics Data Warehouse (LDW). These data lakes replicate, in a single location, the data available from a variety of disparate source systems, applications, and equipment. This was done to support combined analysis on data from multiple sources.

Creating DoD data lakes is a well-intentioned effort, but the time, money, and manpower being spent to repeatedly copy and store refreshed versions of data from these sources in data lakes is wasteful and time consuming. In addition, the data available in these lakes is often out of date as soon as it has been moved from the source to the lake, and most of these data lakes do not support pulling data back out of the lake for use elsewhere—only putting it in. For example, programmers, analysts, and consumers can only use the data in Advana with the analytic services associated with Advana. The data in Advana cannot be exported for use in other applications or for analysis with other tools. Even the Navy's Chief Data Officer recently lamented this pervasive data duplication problem. The DoD should consider the industry standard instead: data-brokering solutions.¹

How Industry Manages Data

Industry discovered nearly 20 years ago that data lakes are not the best way to share information and instead instituted the ability for software applications and analysis tools to talk directly to data sources, and each other, via application programming interfaces (APIs). APIs enable programmers to setup automated data feeds in which a software application (an "app") or analytics tool pulls information from the source as needed. This API methodology is how applications such as Google Maps, online travel booking platforms like Priceline, smart phone weather displays, and online banking tools provide users with current and accurate information. The most famous example of API adoption by industry is known as "The Bezos Mandate." Reportedly, in 2002 Jeff Bezos issued a memo to all of Amazon that required the various departments to expose their internal data to all other Amazon departments via APIs. This information sharing is often lauded as the key to Amazon's success.

Recent DoD Efforts

The Deputy Secretary of Defense (DSD) recently released a similarly aspirational data-sharing memo that requires the services to log their data in the DoD federated data catalog (e.g. Advana) and to use "automated data interfaces" (presumably this refers to APIs). While this memo is a step in the right direction, it does not specify what data must be shared and by when the services must comply with the



new mandate. And neither the Office of the Secretary of Defense nor Congress have provided the services with the funding to carry out the directives in the DSD's memo. The lack of clarity and funding allows organizations and data owners to presume their data is not within scope of the memo and therefore no action is required. Unlike Bezos' mandate, which specified that failure to comply would be grounds for dismissal, the DSD's memo offers neither sticks nor carrots to incentivize the services to comply.

What Would a Data-Brokering Solution Look Like?

The Navy's Chief Data Officer recently said that his priority is identifying "authoritative" datasets and from where they come, while establishing who can use them and for what purposes. The DoD can better achieve this and its overall goal of "creating decision advantage at all echelons from the battlespace to the board room" via data-brokering solutions.² Data brokering can be compared to an old-school telephone switchboard with operator. A data-brokering solution would have the ability to connect applications and systems or equipment where data is initially collected or generated, via their APIs, to analytics tools and other applications that are consumers/displays of the data, like how switchboards enabled linking various callers with intended recipients.

To meet the DoD's data-security requirements, data-brokering systems must include a credentialing capability. There are different ways this could be achieved, depending on whether the data requestor is an application or an analyst. Source-to-application or system-to-system connections only need to be validated once by a human. Thereafter the connection can be added to an "approved" list and automated. Source-to-analyst connections would have to be validated for each request that a data analyst makes, but the basis for verifying whether an analyst has a "need to know" already exists in the Global Force Management Data Initiative (GFMDI).

The GFMDI seeks to match all DoD personnel, via their Electronic Data Interchange Personnel Identifier (EDIPI), to the specific position or billet they fill within an organization via a billet identification number or GFM identification number (GFM ID). This matching of personnel by EDIPI to billets is available in each service's Org Server. The credentialing portion of a data brokering solution only needs a list of billets and/or organizations authorized to access which data sets. Then, by cross-referencing which organization and/or billet with which a DoD employee is associated with their EDIPI, the data-brokering service could automate approval and servicing of data requests. Analysts would have the ability to request access to data, via the brokering system, from data owners. Likewise, data owners would have the ability to add and remove organizations and billets to the list of who or what applications can access their data in the brokering system. Put simply, a data-brokering system would allow data "consumers" to communicate requests directly to "suppliers," accelerating the rate at which information can be shared across the DoD. In addition, data-brokering solutions would provide a standardized means for the DoD Chief Data Officer to "access . . . all DoD data [and] facilitate the adjudication of data-sharing and/or access disputes" as called for in the DSD's memo.

In addition, data-brokering systems could provide a means to translate data when the output of one system does not match the ingest capability of another. The Defense Advanced Research Projects Agency (DARPA) is developing a number of capabilities that support data translation and system-to-system data sharing, but the DoD has yet to establish a means to make these capabilities widely available to all the services. Most of the capabilities DARPA is developing are being handed off to individual services, which will inevitably preclude the other services from having ready access to them.

A basic data-brokering system could also provide the types of translation services DARPA is developing, in addition to simply enabling connections/data transfers. This would eliminate or reduce the need for the DoD to establish common data standards. Today's data standards might not make sense in tomorrow's operating environments. Given the rate at which technology is advancing compared to the rate at which DoD bureaucracy achieves consensus, by the time the DoD gets around to agreeing to standards, the standards will likely be obsolete. Common data standards could also make it easier for adversaries to exploit our systems. Instead of trying to hold all the services to a single set of standards, the DoD should implement data-sharing solutions that allow for continually changing data formats by providing a means to rapidly update translators and conversion tools (say, in a tool library attached to a



data-brokering system). Data-brokering solutions with add-on translation capabilities would meet this need.

How We Got Here and Where to Go Next

While data lakes like Advana are not the long-term solution the DoD needs, they were a logical first step to address the plethora of DoD systems, equipment, and applications that were originally built without APIs. Initially, the only way to aggregate data for combined analysis from these siloed sources was to manually extract the data from each silo and then add it to a lake. To this end, data lakes have served their purpose of demonstrating the benefits of information aggregation and high-level cross-functional-area analysis.

However, data lakes, as implemented, do not enable cross-domain and cross-service information sharing as required by the Joint All-Domain Command and Control (JADC2) warfighting construct. Under the data-lake construct, data generally only flows upwards from lower-level units to higher headquarters, and from the services to the Office of the Secretary of Defense. As the DoD is modernizing its systems, equipment, and applications, and connecting or moving them to the cloud, the DoD needs to take the next step and provide the infrastructure that will enable rapid, reconfigurable system-to-system and/or application-to-application data sharing.

JADC2 depends on the services being able to share information laterally, all the way down to sharing between equipment owned by low-level units like battalions and squadrons. Currently, the Army, Navy, and Air Force are all developing their own JADC2 systems, without any service paying particular attention to how information will move between them, or what the services will do in deployed environments when elements from different services are expected to work together as a joint force. The Assistant Commandant of the Marine Corps, General Eric Smith, recently stated that in coming years the Marine Corps’ “largest contribution may be that we sense and make sense of what’s going on and that we gain and maintain custody of targets and pass that data to the naval and Joint Force. We may do that more than we prosecute targets, because that’s how the Joint Force goes after a pacing threat. We are not going after . . . a peer competitor solo. That is not the future.” Data-brokering solutions would enable this lateral sharing of information across service lines. For example, an Army unit, when deploying alongside a Marine unit, would add the Marine unit to the list of organizations with access to its pertinent data feeds via the brokering service. When the units returned home, access to the feeds could be turned off to manage network bandwidth and preserve adherence to the DoD’s “need-to-know” policies.

How To Enable Data Brokering and Incentivize Data Sharing

One way for the DSD to incentivize the data-sharing called for in her memo (and potentially save JADC2) would be to:

- Fund the addition of APIs to the Services’ out-of-date applications, systems, and equipment,³
- Fund the creation of data dictionaries for each API-enabled system,
- And provide each data source owner that signs up to get an API with a customized analytic tool to help solve one of the data source owner’s problems/questions (e.g., give them a fish) or access to data analysis training (e.g., teach them to fish).

Adding APIs to DoD systems, applications, and equipment is the minimum threshold required to enable data sharing. To achieve the next level: information sharing, some explanation must be provided to consumers of what the individual data elements available from a source represent, such as a data dictionary. Publishing data dictionaries for each data source will help ensure consumers get the data they want and enable them to use it in a way that makes sense.

Many DoD data owners currently claim that the risk of personnel outside of their silo misinterpreting their data is high and use this as a reason not to share “raw” data directly from their data source with consumers. Providing consumers with data dictionaries is key to minimizing the risk of misinterpretation and accelerating the sharing of information. A way to fund these efforts could be via a no-year appropriation the services could draw on to increase various other appropriations as needed based on the system or equipment they seek to upgrade. This would allow the services the time needed to determine how best to update systems and equipment without putting arbitrary limits on when the funding must be spent. An example of this type of appropriation already exists in Section 8312 of the FY2021



Consolidated Appropriations Act, which provided \$100 million to the DoD to strengthen the defense industrial base and supply chain resiliency “to remain available until expended.”

In addition, many DoD organizations and service elements do not have dedicated data scientists who can help them extract the best information from their own data sources. Providing them access to a group of experts, or as Dr. Tim Grayson (formerly of DARPA, now Special Assistant to the SecAF for Mission-Centered Analysis and Operational Imperatives) likes to phrase it: a “geek squad” to help solve one of their internal problems would answer the “what’s in it for me” question for the data owners.⁴ The geek squad, in return, would gain familiarity with a diverse set of DoD systems, sharpening their skills so they can rapidly adapt data connections and translators as the geopolitical landscape and the evolving information environment generate new challenges for the DoD. There are also several ways to provide DoD employees and servicemembers with access to data analysis training. The Air Force’s Digital University is a great example, but not all services have access to such training.

In return for funding these upgrades, the Office of the Secretary of Defense, as well as the Joint Staff, the combatant commands, and other services/service elements, will gain the ability to quickly request information from the API-enabled data sources when needed. Some program offices will have the ability, and good reasons, to independently oversee API upgrades for their systems or equipment. For example, these offices may have existing maintenance contracts that just require an injection of funding to establish an API. However, for all that do not, using a centralized office has several benefits. Pooling the funding for API upgrades and running many of the purchase agreements through a single, service-agnostic organization will enable the DoD to ensure they are done by a group of tech-savvy contracting officers and software acquisition experts with the ability to compound learning as they go. If the upgrades are acquired in batches for like-systems, they will increase the DoD’s bargaining power, helping to drive down cost. Finally, working through a single, service-agnostic organization will facilitate the collection of information from all data customers to ensure APIs are built to provide all the data that consumers are likely to need.

Which agency should oversee the development of data-brokering solutions and the distribution of funding and acquisition of API upgrades? The Joint Artificial Intelligence Center.

The Joint Artificial Intelligence Center (JAIC)

Given that the data-brokering solutions must serve all DoD customers, it is imperative they fall under an organization that is both service and combatant command agnostic. The organization that oversees funding for data-system upgrades also needs to be staffed with tech-savvy contracting officers as well as functional area experts. The JAIC, with its Tradewind acquisition initiative and teams of command-and-control, logistics, and data-science experts, is an ideal organization to fill this role. Indeed, the JAIC’s vision statement lists the “broad enablement and implementation of artificial intelligence capabilities within the Department” as its primary objective. Providing the infrastructure and tools needed to rapidly share data across the DoD falls squarely in the JAIC’s lane under AI-enablement. To date, the JAIC has had success with implementing some localized AI projects, but has yet to significantly impact the DoD’s ability to operationalize AI. The instantiation of APIs and implementation of data-brokering solutions would provide the DoD with key AI-enablers that are already common in industry, but which the DoD is currently missing.

1. Data-brokering solutions enable the creation of data meshes, vice data lakes.
2. The general concept of a data-brokering solution is applicable in all cases, but the plural here is used intentionally as a data-brokering solution for the DoD’s business systems (accounting, supply, personnel systems) will need to be different from the data-brokering solution for the DoD’s mission systems (C2 platforms, tactical equipment, vehicles). For example, Advana, with some adaptations, could serve as the data broker for the DoD’s business systems, but would not be suited to also serving as a data broker for mission systems.
3. Not all systems or equipment can have an API “bolted on.” Some systems and equipment will have to be replaced with newer versions or different systems and equipment all together.
4. Teams of data scientists, data engineers, and communications and networking experts currently exist within both the Joint Artificial Intelligence Center and the Advana office.



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