



NPS IN THE NEWS

Weekly Media Report – August 9 - 15, 2022

Further reproduction or distribution is subject to original copyright restrictions.

COMMANDER'S CONFERENCE:

[U.S. Pacific Fleet Hosts Commander's Conference at NPS](#)

(Navy.mil 12 Aug 22) ... Mass Communication Specialist 2nd Class Lenny Weston

(DVIDS 12 Aug 22) ... Mass Communication Specialist 2nd Class Lenny Weston

The Naval Postgraduate School (NPS) hosted the Commander, U.S. Pacific Fleet (PACFLT) 2022 Commander's Conference in Monterey, Aug. 8-9.

EDUCATION:

[NPS Showcases Latest Cohort of Summer STEM Interns](#)

(Navy.mil 10 Aug 22) ... Javier Chagoya

(DVIDS 10 Aug 22) ... Javier Chagoya

The Department of the Navy has been a strong advocate for the development of a world-class science, technology, engineering and mathematics (STEM) workforce, and for good reason.

RESEARCH:

[Defending Supply Chains: Resilinc and Naval Postgraduate School Partner to Advance Supply Chain Education and Research](#)

(Benzinga 9 Aug 22)

(Globe News Wire 9 Aug 22)

Resilinc, the world's leading supply chain risk-monitoring, mapping and resiliency solution, is collaborating with the Naval Postgraduate School (NPS) to offer supply chain risk tools and instruction to students focusing on improving the resilience of Department of Defense supply chains.

[Necro-Aeronautics: Raising Undead Aircraft for War](#)

(War on the Rocks 10 Aug 22) ... Zachary Kallenborn

Recent news reports document Russia converting various An-2 passenger and cargo aircraft — old Soviet biplanes that first flew in 1947 — into drones, possibly as decoys to trigger air defenses. China has caught on too, converting 1950s Soviet jets into drones to serve as either decoys or for overwhelming an adversary. This is not new. Some of the earliest remotely piloted aircraft were actually converted piloted aircraft. During World War I, inventors Peter Hewitt and Elmer Sperry converted Curtiss N-9 seaplanes to allow autonomous or remote control. Decades later, the U.S. military continues to convert old aircraft into drones for target practice... Drones are often relatively cheap and can be thrown at an adversary with little regard. Using many drones at the same time may overwhelm a target: Modeling from the **Naval Postgraduate School** in 2012 showed in an eight-drone attack on destroyers, typically four drones would get through the defenses. That ability to overwhelm targets also make drones quite valuable for high-risk missions. For example, drone mass is well-suited to suppression of enemy air defense missions — the loss of cheap drones is far less significant than the loss of an expensive manned aircraft and the death or capture of a pilot. Likewise, drones are well-suited to attacking command posts, convoys, or logistics lines where the strategic benefits may greatly outweigh the loss of large numbers of drones. Even simple roles like



drones for artillery spotting require large numbers, because drone spotters will be relatively close to their targets and prone to being shot down. But that also creates a challenge in sustaining attacks over time because attrition rates will be high. The Russo-Ukrainian War illustrates the problem of mass well, with both sides having struggled with drone stocks. Ukraine and Russia have made significant efforts to increase supply, such as buying up stocks from Turkey and Iran, and both sides are crowdfunding civilian drones.

FACULTY:

[China Seizes on Pelosi Visit to Set ‘New Normal’ for Taiwan](#)

(Bloomberg 8 Aug 22) ... Rebecca Choong Wilkins, Iain Marlow and Cindy Wang

From the South China Sea to the Himalayas, Beijing has shown a willingness to seize on perceived missteps by its rivals to tighten its grip over disputed territory. That’s now playing out around Taiwan...“The Chinese are certainly ratcheting up their response and subsequent crises will take this as a new baseline,” said Christopher Twomey, an associate professor at the **Naval Postgraduate School**. “Their next signal to a perceived or real provocation will have to be more intense.”

[End of an Era? Retiring the GWOT Medal for All](#)

(Responsible Statecraft 8 Aug 22) ... Tevah Gevelber

Experts say narrowing the recipients for this award signals a symbolic as well as practical shift away from counterterrorism and towards China... Erik Dahl, Associate Professor of National Security Affairs at the **Naval Postgraduate School** agrees that this change in eligibility reflects a larger reprioritization within the military.

[How is China Trying to Redefine Power Balance in Taiwan Strait?](#)

(DW 13 Aug 22)

Beijing’s pledge to conduct "regular patrols" near Taiwan after large-scale military drills points to a worrisome and dangerous development, according to analysts... The ratcheting up of tensions between China and the US, and Beijing’s pledge to conduct "regular patrols" near Taiwan, point to a worrisome and dangerous development, said Christopher Twomey, an expert on security affairs at the US **Naval Postgraduate School** in California.

[Analyzing Turkey’s latest incursion into the Eastern Mediterranean \(Audio Interview\)](#)

(ekathimerini 12 Aug 22)

Ryan Gingeras, professor in the Department of National Security Affairs at the Naval Postgraduate School, and HALC Executive Director discuss Turkey sending a new drill ship to eastern Mediterranean, what motivates Erdogan, Turkey’s approach to maritime issues, and the “Blue Homeland” concept taking hold in Turkey.

[Ex-Afghan President Ghani Refused Questioning About ‘Stolen’ Cash](#)

(NY Post 15 Aug 22) ... Isabel Vincent

Ashraf Ghani is still acting like the president of Afghanistan, at least on Facebook...“One million dollars a day was leaving Kabul international airport for Dubai,” said Thomas Johnson, a research professor at the National Security Affairs Department at the **Naval Postgraduate School** in Monterey who has more than 30 years’ experience in Afghanistan. “Anyone who knows Ghani and Afghanistan knows he was a fraud and extremely corrupt.”

[Innovation: People Are More Important than Technology](#)

(USNI 10 Aug 22) ... Mie Augier, Gen. Anthony Zinni (Ret.) and Maj. Sean Barrett

Innovation lies at the heart of American security. Now, huge advances in AI and edge computing and nanotechnology are already underway in America. . . . Nobody innovates better than the United States of America. But we can’t take that for granted... Dr. Augier is a professor in the Departments of Defense Management and Defense Analysis at the **Naval Postgraduate School**. She is a founding member of the Naval Warfare Studies Institute and is interested in strategy, organizations, leadership, innovation, and how to educate strategic thinkers and learning leaders.



ALUMNI:

[JBAB Master Sergeant Wins 12 Outstanding Airmen of the Year Award](#)

(meriTalk 9 Aug 22) ... Mark Hakun

Mark Hakun, Deputy CISO at the Department of Defense (DoD), retired late last month after 34 years of working in both military and Federal civilian capacities, according to a LinkedIn [posting](#) by John Sherman, chief information officer at DoD... Hakun has a Bachelor of Science from the United States Naval Academy and a Master of Science from the **Naval Postgraduate School**.

[Wakeman Retires from Marine Corps](#)

(Eagle Herald 9 Aug 22)

Major Clifford C. Wakeman, born in Menominee, retired from the United States Marine Corps on July 1, after 20 years of honorable military service to his country... Following his second deployment to Iraq, Wakeman was selected to attend the **Naval Postgraduate School**, Monterey, California, to study operations research analysis. In June 2012, he was awarded a Master of Science degree in Operations Research, and his follow-on tour was at Headquarters Marine Corps, Manpower & Reserve Affairs, Quantico, where he served until June 2015 as an Operations Research Analyst. He was promoted to his current rank of major in 2013.

[Naval Air Warfare Center Changes Command](#)

(Southern Maryland Chronicle 15 Aug 22)

Rear Adm. John E. Dougherty IV took command of Naval Air Warfare Center Aircraft Division (NAWCAD), the largest warfare center in the Navy, from Rear Adm. John S. Lemmon during a ceremony at Naval Air Station Patuxent River, Aug. 12... The Pennsylvania native and F/A-18 pilot also served as program manager for the Navy's Precision Strike Weapons Program (PMA-201). Dougherty had various operational tours in Afghanistan, flew with Strike Fighter Squadrons (VFA) 147 and 125, and accumulated more than 1,200 flight hours in the F/A-18C with over 300 carrier landings. Dougherty earned a bachelor's degree in political science from the United States Naval Academy and a master's degree in business administration and systems engineering from the **Naval Postgraduate School**.

UPCOMING NEWS & EVENTS:

Aug 15-18: Hypersonics Week (Sponsored by Meyer Scholars)

Aug 15-19: [JIFX 22-4](#)

Aug 18: Secretary of the Navy visit and Guest Lecture (King Hall 1015)

Aug: 23–25: AI Shura (NWSI)

Aug 30- Sept 1: [Emerging Technology Awareness \(ETA\) for the Warfighter](#)

Sept 5: Labor Day (Federal Holiday)

Sept 12-13: [Blockchain and Beyond: National Security Symposium](#)



COMMANDERS CONFERENCE:

U.S. Pacific Fleet Hosts Commander's Conference at NPS

(Navy.mil 12 Aug 22) ... Mass Communication Specialist 2nd Class Lenny Weston

(DVIDS 12 Aug 22) ... Mass Communication Specialist 2nd Class Lenny Weston

The Naval Postgraduate School (NPS) hosted the Commander, U.S. Pacific Fleet (PACFLT) 2022 Commander's Conference in Monterey, Aug. 8-9.

The conference brought together senior-level commanders from across the Navy and Marine Corps to the NPS campus in order to assess the current operational environment and to discuss the fleet's priorities and challenges, with a focus on the Indo-Pacific region.

Adm. Samuel Paparo, commander, U.S. Pacific Fleet, explained why NPS served as the ideal location for the commander's conference.

"NPS is the premier DOD school of technology for warfighting. It's also close to the center of U.S. innovation and the preponderance of forces assigned to the U.S. Pacific Fleet," said Paparo. "We continue to deepen ties between NPS and the Fleet to identify relevant challenges and find solutions to build out our capabilities today while also simultaneously guiding generations of warfighters in the future."

In addition to leadership from across the naval forces, the conference also incorporated representatives from academia, industry, and senior mentors to cultivate profound discussions on the strategic environment and provide constructive feedback on Paparo's Fleet Orders which include safety, ready to fight, ship shape and seaworthy, teamwork, morale, and family.

As part of the two-day conference, NPS leadership, faculty and students briefed the institution's current education and research initiatives with Pacific Fleet, including the Naval Warfare Studies Institute (NWSI) and the Nimitz Research Group, which launched in February 2022. These sessions allowed NPS personnel to receive immediate and invaluable feedback and guidance from the region's top commanders.

During the conference, flag and general officers also received updates on recent NPS research collaborations with industry partners such as Microsoft, which announced a Cooperative Research and Development Agreement (CRADA) with NPS in May 2022.

"NPS has significantly increased the number of CRADA partnerships we have with world-leading companies, more than doubling the number of projects during the past year," said NPS Vice Provost for Research Dr. Kevin B. Smith. "These agreements, combined with our close relationship with the operating forces, and especially with the U.S. Pacific Fleet, are allowing our faculty, our mid-career warrior-scholars, our civilian engineer students, and our DOD and industry partners to work together on the most pressing warfighter problems in a highly collaborative and iterative way. It is an exciting new way for NPS to help support Naval warfighting innovation."

Paparo and other leaders present discussed how to leverage these agreements in areas such as gaming, exercising, modeling and simulation (GEMS) in order to improve decision-making processes.

"There is no substitute for the experience and insights gained through wargaming," said Capt. Bill Sherrod, air warfare chair and director of the President's Action Group at NPS. "Our GEMS project focuses on enhancing decision advantage by leveraging machine-enabled warfighting analytics to forecast probabilities of various outcomes and understand the consequences of decisions."

In his discussions with NPS leaders on PACFLT's relationships with the Navy's advanced educational institutions, Paparo described NPS as the "operational science of war" and the Naval War College as the "operational art of war." He emphasized PACFLT's desire to bring together the fleet's operational experience with NPS' research and development capabilities in order to assist decision-makers and develop solutions in the PACFLT area of operations.

"The opportunity to host this conference on behalf of Admiral Paparo further underscores the symbiotic relationship between NPS and the U.S. Pacific Fleet," said retired Vice Adm. Ann Rondeau, president of NPS. "NPS delivers innovative leaders and transformative solutions to the Pacific Fleet. The direct feedback we receive from our fleet and force partners continues to enhance the learning and relevance of our work on their behalf."

[U.S. Pacific Fleet Hosts Commander's Conference at NPS > United States Navy > News-Stories](#)



[Return to Index](#)

EDUCATION:

NPS Showcases Latest Cohort of Summer STEM Interns

(Navy.mil 10 Aug 22) ... Javier Chagoya

(DVIDS 10 Aug 22) ... Javier Chagoya

The Department of the Navy has been a strong advocate for the development of a world-class science, technology, engineering and mathematics (STEM) workforce, and for good reason.

For the Navy and Marine Corps to maintain technological superiority, the services require a robust community of scientists, engineers and technologists ready to take on the service's current and future challenges, now and for years to come.

The Naval Postgraduate School (NPS) has its own robust history of advocacy for the STEM disciplines. Working closely with the Office of Naval Research STEM Coordination Office, in addition to partnerships with regional institutions, NPS has become a key contributor to the Navy's aspirations in STEM, providing opportunities for hundreds of high school and college students to cut their teeth on defense-focused research alongside NPS faculty and scientists.

The current crop of interns, one of the smaller groups in relation to past years, has devoted several weeks on a wide range of Navy and DOD relevant research projects while getting to geek out with top researchers in the fields they are most interested in.

Joao McGuire of Monterey has served as an NPS intern for three years in a row and has returned to get re-energized in research work he wants to excel in. He's working on an undergraduate degree in physics and economics at Johns Hopkins University.

"NPS' summer internship program really made an impact on my higher education prospects," said McGuire, a graduate of York School in Monterey. "I got a full ride scholarship to Johns Hopkins because as I see it, NPS provided the tools to be a better learner in my high school years, including the hands-on laboratory work experience I got in those summer months."

McGuire's internship this year is sponsored by the Naval Research Enterprise Internship Program (NREIP), one of several sponsored internship opportunities in the ONR portfolio. His undergraduate degree will have an institutional concentration in materials engineering, and he's looking at pursuing graduate school in the interdisciplinary field of materials science or aerospace.

This summer, McGuire worked with carbon-nanotube steel composite structures, conducting a wear test to determine structure failure dynamics. He used aluminum silicate as the abrasive at various friction points and moments, using a scanning electron microscope to analyze component failure.

"I just got trained on the new Focused Ion Beam Scanning Electron Microscope," he explains. "It's a little daunting to work with these machines, but it certainly is cool."

McGuire worked alongside former NPS Department of Mechanical Engineering Assistant Professor Andy Nieto in the school's materials lab. Tragically, Nieto passed away in a scuba-diving accident in the Monterey Bay in July, but he left a profound impact on so many around him, including his interns.

"I would say Professor Andy Nieto was my favorite person to work with here. He strode forward calmly through problems in a way I hope to emulate. May he rest in peace," said McGuire.

Many of the interns on the NPS campus are part of another program in the ONR portfolio, the Science and Engineering Apprenticeship Program, or SEAP. The program places high school students in Navy laboratories where they take part in real Naval research for eight-week terms during the summer.

SEAP is a competitive program with around 300 placements in more than 30 laboratories around the country. Interns are selected based upon academic achievement, personal statements, recommendations, and career and research interests. There are three regional areas across the U.S. in which students can apply.



NPS research associate Alison Kerr has been at the helm of the university's internship programs for several years, working closely with ONR and several regional institutions to build up an impressive program that has impacted hundreds of students' lives. Kerr is wrapping up her final summer leading the program, retiring at the end of the year.

According to Kerr, 260 interns have come to NPS through SEAP, 167 through NREIP, and localized efforts like Hartnell College's program has provided another 201 students with opportunities to advance their knowledge in the sciences.

Materials science has the largest number of interns in this current cohort, with Nieto and Dr. Claudia Luhrs supporting six total interns over the summer. In addition to McGuire, Abigail Kim and Sneha Gokaraju teamed up to explore research in additive manufacturing.

"Our research is to look at 3-D printed polymer composites under certain conditions, those conditions being the 'as-printed' and the QUV-tested [accelerated weathering test] samples to see if the UV radiation influenced the materials," explained Kim. "This is the first research project that I have been a part of, and I have learned so much."

Interestingly, Kim found out about the SEAP program through a friend just weeks before the deadline to submit the applications.

"I got lucky enough to go to the meet and greet where people can see what projects are available and to meet the mentors," said Kim. "I saw that this project was based off 3D-printed materials, which I found very interesting, so I sent out an email to the mentor of this project and I was lucky enough to get chosen."

Kim, who is beginning her junior year at Carmel High School, credits program manager Kerr for creating such a positive experience for her and her fellow interns, especially under difficult circumstances.

"Alison Kerr is such an amazing person! She has helped all the new interns out by providing them some line of support or contact if we need any resources for our projects or have some general questions about NPS," said Kim. "She was so supportive of us when we lost our mentor [Nieto], and I am so grateful that I had the chance to meet her because she is such a caring and compassionate person to be around."

Lahari Yallapragada got the chance to work with senior faculty in the NPS Department of Computer Science, Drs. Neil Rowe and Arjit Das. The two colleagues have done seminal work in digital forensics and cyberwarfare.

"Coming into this internship, I had very little experience with analyzing big data," Yallapragada said. "After 8-weeks, I have learned many valuable skills, and not just analyzing big data."

"Specifically, [we learned about] fitting data to a logistic scale; creating histograms; using complex math formulas in Python programming, like the Euclidean Distance Formula and the Logistic Sigmoid Function; and the basics of machine learning models through Weka software. I also gained valuable experience working in a professional environment that I hope to use in future internships and jobs," she added.

Yallapragada, a junior at Monta Vista High School in Cupertino, Calif., did her research when it came to finding the best internship program for her, looking at NASA and UCSB before making the decision to apply to SEAP.

"I want to work in computer science, specifically something to do with artificial intelligence," she said. "I can use the many computer science skills I learned at NPS, and I can expand on my basic knowledge of AI/ML that I learned during this internship, for the future."

A rising senior at Carmel High School, Zack Seifert, worked with Faculty Associate Ross Eldred in the Center for Autonomous Vehicle Research where he learned to design and fabricate custom circuit boards.

"This custom circuit is designed to fulfill my professor's goal of constructing a closed loop vehicle, meaning that the vehicle will make different decisions based on its environmental data from sensors," said Seifert, who really valued advancing his skills in computer-aided design (CAD).

"My more advanced CAD skills will help me design new products for my future startups and better lead my high school's robotics team," said Seifert.



“NPS faculty are super cool and helpful,” he continued. “I also love the RoboDojo lab because they have a lot of 3D printers and other awesome tools. And I got to learn a lot about NPS and our country’s military.”

With another cohort of summer internships in the books, the experience, inspiration and education gained ensure the university is contributing to the Navy’s aspirations in STEM, imperative to keep the U.S. competitive in this era of technological superiority.

[NPS Showcases Latest Cohort of Summer STEM Interns > United States Navy > News-Stories](#)
[DVIDS - News - NPS Showcases Latest Cohort of Summer STEM Interns \(dvidshub.net\)](#)

[Return to Index](#)

RESEARCH:

Defending Supply Chains: Resilinc and Naval Postgraduate School Partner to Advance Supply Chain Education and Research

(Benzinga 9 Aug 22)

(Globe News Wire 9 Aug 22)

Resilinc, the world's leading supply chain risk-monitoring, mapping and resiliency solution, is collaborating with the Naval Postgraduate School (NPS) to offer supply chain risk tools and instruction to students focusing on improving the resilience of Department of Defense supply chains.

"We're thrilled to offer our technology-based supply chain monitoring and mapping solutions, data offerings, and resiliency tools to a world-class institution like NPS," said Resilinc's VP of Government Affairs. "Through this partnership we look forward to DoD personnel developing a deeper understanding of some of today's biggest DoD supply chain concerns and how to solve them with targeted adaptations of our already best-in-class solutions."

Resilinc is the latest industry member to partner with NPS following the signing of a Cooperative Research and Development Agreement (CRADA) between the two organizations. CRADAs allow U.S. government research facilities to engage in collaborative efforts with non-government entities. These types of cooperative efforts benefit the Department of Defense and industry leaders by providing opportunities to conduct joint research and learn from each other.

Under the CRADA, Resilinc will provide NPS students with supply chain risk monitoring training, platform licenses, and data; NPS will design coursework, build case studies and research projects related to real-world events, and provide feedback to Resilinc on how to serve the DoD supply chain better.

NPS students and staff will be able to use Resilinc's commercially available monitoring, mapping, and supplier risk assessment tools including: EventWatchAI, Multi-Tier Mapping, and RiskShield, to assess both actual and notional events to determine how they will impact supply chains across all tiers. This training will prepare students that will return to the acquisition workforce with a better understanding of how they can proactively improve supply chains and plan for rapid reactive execution to maximize supply chain resilience.

"We are so excited to explore the state-of-the-art in supply chain visibility tech and to collaborate with Resilinc on new ways to analyze supplier data to develop advanced plans to increase our immunity towards future supply chain disruptions," says Lt. Col. Daniel J Finkenstadt of NPS. "COVID taught us that much of the world, public and private, suffers from too little visibility into their supply chains. Further, so-called "black swan" events tend to be less about truly unexpected events and more to do with a lack of supply chain visibility and risk imagination. This partnership will help us get after those issues and build advanced supply chain and procurement professionals who can better prepare us for the post-pandemic world. "

As the supply chain challenges presented by the global pandemic and the Russia-Ukraine war have shown, global diversification and horizontal integration have opened the world as we know it to intense supply chain challenges. This partnership will provide students with better preparation for the complex



supply chain challenges that must be overcome to assure that the Armed Forces are provided with the best capabilities and critical supplies now and in the future.

About Resilinc

Resilinc was founded with the purpose of strengthening global supply chains, making them resilient, ethical, transparent, and secure. We do this via our technology-driven solutions which create an ecosystem where organizations have unmatched visibility into their supply networks and can collaborate with their suppliers in a transparent environment.

Since our launch in 2010 Resilinc has defined the supply chain mapping, monitoring, and resiliency space and is widely considered the gold standard for supply chain resiliency, worldwide. With 95% of the global supply chain mapped across the industries we serve, we are the first line of defense for our customers, helping them navigate supply disruptions. Our early-warning alert system monitors and predicts potential disruptions across suppliers, sites, and materials; our platform enables them to collaborate closely with their suppliers; our historical data-backed insights give them options on appropriate actions to take. Always innovating, our AI-powered predictive solutions can predict delivery delays, price movements, and supply constraints for raw materials and commodities before they happen. Resilinc helps our customers protect revenue and turn supply chain risks into opportunities to gain competitive advantage.

[Defending Supply Chains: Resilinc and Naval Postgraduate School Partner to Advance Supply Chain Education and Research - Benzinga](#)

[Defending Supply Chains: Resilinc and Naval Postgraduate \(globenewswire.com\)](#)

[Return to Index](#)

Necro-Aeronautics: Raising Undead Aircraft for War

(War on the Rocks 10 Aug 22) ... Zachary Kallenborn

Recent news reports document Russia converting various An-2 passenger and cargo aircraft — old Soviet biplanes that first flew in 1947 — into drones, possibly as decoys to trigger air defenses. China has caught on too, converting 1950s Soviet jets into drones to serve as either decoys or for overwhelming an adversary. This is not new. Some of the earliest remotely piloted aircraft were actually converted piloted aircraft. During World War I, inventors Peter Hewitt and Elmer Sperry converted Curtiss N-9 seaplanes to allow autonomous or remote control. Decades later, the U.S. military continues to convert old aircraft into drones for target practice.

The United States should go a step farther: instead of using old aircraft for target practice, weaponize them and throw them at an adversary. The U.S. military should harvest American and allied aircraft graveyards (both military and civil) to generate cheap, unmanned mass. This will require careful inventories and inspections of aircraft in the graveyards to assess flightworthiness, the feasibility of conversion to remote or autonomous flight, and options for weaponizing. Adding long-range guns, bombs, or missiles might work for some undead aircraft, while others may only be suitable for kamikaze attacks. The broad range of aircraft involved also suggest the Air Force may require specialized pilots — call them necro-pilots, maybe — able to comfortably handle a variety of undead aircraft that may be missing parts or fly a bit janky. Now, conversion may entail some costs (especially if the aircraft needs modern avionics) and trade-offs in and effort with other activities, so at this point the United States should emphasize assessing aircraft and building capacity to convert aircraft, rather than actually converting aircraft.

Looking to Tucson

Drones are often relatively cheap and can be thrown at an adversary with little regard. Using many drones at the same time may overwhelm a target: Modeling from the **Naval Postgraduate School** in 2012 showed in an eight-drone attack on destroyers, typically four drones would get through the defenses. That



ability to overwhelm targets also make drones quite valuable for high-risk missions. For example, drone mass is well-suited to suppression of enemy air defense missions — the loss of cheap drones is far less significant than the loss of an expensive manned aircraft and the death or capture of a pilot. Likewise, drones are well-suited to attacking command posts, convoys, or logistics lines where the strategic benefits may greatly outweigh the loss of large numbers of drones. Even simple roles like drones for artillery spotting require large numbers, because drone spotters will be relatively close to their targets and prone to being shot down. But that also creates a challenge in sustaining attacks over time because attrition rates will be high. The Russo-Ukrainian War illustrates the problem of mass well, with both sides having struggled with drone stocks. Ukraine and Russia have made significant efforts to increase supply, such as buying up stocks from Turkey and Iran, and both sides are crowdfunding civilian drones.

Aircraft graveyards provide a potentially great source to rebuild drone stocks through converting aircraft to unmanned systems. The world's largest aircraft graveyard, the 309th Aerospace Maintenance and Regeneration Group in Tucson, Arizona, claims to typically control over 4,200 aircraft ranging from Soviet-designed MiGs to A-10 Thunderbolts. The low humidity of Arizona means rust build-up on the planes occurs more slowly. The aircraft are in various states of disrepair, with some aircraft designated to the scrapheap, while others are maintained and upgraded. The United States does not need to limit itself to its own graveyards but could also draw on allied stores, either for American use or to provide support for foreign militaries to convert for their own use.

Resurrecting Airframes

Undead aircraft may not be ready to fly immediately. Graveyard aircraft are often stripped for spare parts, but a lot will depend on what parts those are. An undead aircraft does not need to support a living pilot and will require some technical changes to convert to remote piloting. Missing parts may be unnecessary. Fielding any missing parts that are necessary, however, may be a challenge since scrapped aircraft may not have been manufactured in decades. But if blueprints or schematics are available, 3D printing might solve the problem. The additive manufacturing process — layering material on top of other material — may create structural weaknesses that limit aircraft life, but that's fine for an undead aircraft. The part may only need to last until the aircraft arrives at its target.

What would be difficult but worth exploring is adding drone swarm technology to the undead aircraft. This entails adding transmitters, receivers, algorithms, and programming to enable the undead aircraft to communicate and act autonomously based on that communication. Complex swarming behaviors like self-healing or dynamic target selection probably are not needed, but allowing the aircraft to autonomously fly in simple formations or coordinate search areas and target engagement could add considerable value. Greater autonomy also means less demand on the pilot, which is likely valuable given the near-certainty the pilot will have never flown an undead aircraft with any oddities that it may entail, nor likely the particular aircraft model.

Undead Aircraft in War

Undead aircraft could serve a variety of military functions. The most obvious is filling the aircraft with explosives, then carrying out a kamikaze strike. Aircraft confined to the boneyard are not doing anything, so cavalierly throwing them against an adversary only costs the time and technology to prepare the aircraft. The aircraft's long range makes them well-suited to deep-strike attacks against softer targets, like rail bridges. Their low cost also means many undead aircraft can be thrown against a target. Depending on the target, smarter, more advanced munitions may be kept in reserve, saving stocks for when they are really needed. Alternatively, the aircraft may carry bombs, missiles, or other weapons that allow it to carry out multiple attacks against multiple targets. This could be quite effective as a first-wave attack in advance of manned aircraft: The undead aircraft and other decoys trigger radar and air defenses that can be countered with anti-radiation missiles. If undead aircraft make it through the air defenses, they might be able to crash into targets and cause some damage too.

Undead aircraft also could be quite useful as foreign military support. In most cases, an undead aircraft will be a big, dumb, but maneuverable munition — usable once then done. Ideally, undead aircraft would be as autonomous as possible to reduce training and operation requirements, and also have



relatively standardized control systems so that pilots can readily move from one system to the other. In the long term, a true artificial intelligence pilot may be possible, removing the need for a pilot entirely. What would be especially interesting would be providing the capacity to convert downed adversary aircraft into undead aircraft. This would be technologically difficult and opportunities rare, but it's plausible: Germany in World War II employed allied Beuteflugzeuge ("captured aircraft") to carry out attacks and special missions.

Of course, undead aircraft may come with both real and opportunity costs that need to be considered. Graveyard aircraft may vary widely in their age, readiness for flight, and, consequently, costs for conversion. Older aircraft may not have the power generation and stability needed to operate modern avionics. Even if the airframe is fine, supporting, maintaining, transporting, and converting to remote operation all take time and cost money. Transporting the undead aircraft is likely the biggest opportunity cost, since they may be quite large. Replacing an F-35 on an aircraft carrier with an old McDonnell FH-1 Phantom does not make much sense. Perhaps undead aircraft could be stationed abroad. Or perhaps the military could plan to use allied military or civilian graveyards already in regions of interest. Likewise, the costs and benefits need to be compared against building and fielding traditional drones. Traditional drones could be cheaper but also carry much smaller payloads, and production supply might not meet demand in a large-scale war. Analyses of alternatives will also need to consider specific roles and alternatives: ADM-160 miniature air-launched decoys can also trigger air defenses and carry electronic warfare equipment, but an undead aircraft may carry big explosives and serve as a backfill if decoy supplies run short.

The long-term challenge is that if this approach proves successful, the United States may end up running out of old, useable aircraft. But presumably other aircraft will be phased out over time, which would increase stocks — perhaps a squadron of undead A-10 Warthogs? Some might see the value in pillaging military boneyards and suggest looking to civilian ones next for simple concepts like kamikaze attacks. A Boeing 747 converted into a gigantic missile could crash into a port or a bridge, or distract from other bomber formations. Aircraft owners would no doubt appreciate making money from otherwise worthless scrap. However, this might create risks in blending civil and military craft — if an adversary is taught a Boeing 747 is a threat, they may be more likely to shoot down civilian craft. Civilian boneyards might still be useful as sources for spare parts though.

Unmanned Means Mass

If unmanned systems are the future of war, then developing and sustaining mass is too. Unmanned systems have high attrition rates, so stocks can be depleted quickly. As the United States prepares for the possibility of massive great power war, the country should think creatively about how to source mass in an extended conflict. Undead aircraft raised for combat may be a useful supplement to expensive, smart munitions. Big dumb planes packed with explosives flown into a target might be just fine for some missions, leaving smart bombs for when they are needed. But successful necro-aeronautics will require an initial effort to inventory and assess aircraft graveyards for viable undead aircraft, and that process can begin now. These aircraft will then need to be repaired as needed, converted to autonomous or unmanned controls, and packed with explosives — with pilots or controllers needing to be trained to operate them. Given that undead aircraft will typically be more of a plan B than a plan A, the emphasis should be on preparing for conversion rather than immediate, mass resurrection. A squadron of undead aircraft is a useful adjunct to conventional air power, especially in protracted wars when more conventional munitions run dry. The U.S. military, in short, should raise its arms and bring forth a shambling mass of undead aircraft to overwhelm adversaries.

[Necro-Aeronautics: Raising Undead Aircraft for War - War on the Rocks](#)

[Return to Index](#)



AM Manufacturers Don't Really Have an Understanding of the Operating Needs & Operating Environment of the Military

(TCT 15 Aug 22)

In the latest episode of our Innovators on Innovators series, the focus is on additive manufacturing in the military.

Tali Rosman [TR], who spent a couple of years with the Israeli Air Force as part of her national service and is now the Elem Additive General Manager at Xerox, sits down with Michael Pecota [MP], a Contract Support subject matter expert for the Department of Defence (DoD), where he specialises in additive manufacturing.

The pair convene just weeks after the installation of an ElemX liquid metal 3D printing system on a U.S. naval vessel and 18 months after the deployment of a machine at the **Naval Postgraduate School** in California.

In the past couple of years, there have been several other announcements that point to an increasing application of 3D printing in the defence sector.

Across an hour of conversation, Rosman and Pecota explore the opportunities for AM in this space, touch on the considerations that are needed to implement AM in military organisations, and discuss the need for baseline quality standards in 3D printing.

<https://www.tctmagazine.com/additive-manufacturing-3d-printing-industry-insights/technology-insights/tali-rosman-x-mike-pecota-innovators-3d-printing-military/>

[Return to Index](#)

FACULTY:

China Seizes on Pelosi Visit to Set 'New Normal' for Taiwan

(Bloomberg 8 Aug 22) ... Rebecca Choong Wilkins, Iain Marlow and Cindy Wang

From the South China Sea to the Himalayas, Beijing has shown a willingness to seize on perceived missteps by its rivals to tighten its grip over disputed territory. That's now playing out around Taiwan.

In recent days, the People's Liberation Army has sought to establish a new status quo on Taiwan with a series of exercises in the wake of US House Speaker Nancy Pelosi's visit. The moves, including frequent trips across the US-defined median line in the Taiwan Strait and likely firing missiles over Taipei, have shrunk a vaguely defined buffer zone that has kept the peace for decades.

While the most provocative exercise areas closest to Taiwan had expired by Monday, Chinese President Xi Jinping has laid out a template for operating ever closer to the democratically governed island. The Taiwanese Defense Ministry again reported spotting Chinese warships and warplanes nearby Monday, after more than 120 aircraft crossed the median line from Wednesday to Sunday.

"We will probably see different elements of what China has been doing this week become a much more regular occurrence," said M. Taylor Fravel, professor and director of the Massachusetts Institute of Technology's Security Studies Program. "There is a new normal, or a new status quo, in terms of kind of the military presence that China will have around Taiwan."

The strategy places greater pressure on the US to craft a response that encourages China to pull back without escalating tensions further, like when then-President Bill Clinton sent two aircraft carrier groups into the area during the last Taiwan Strait crisis. These days, President Joe Biden faces a China that commands the world's largest navy and a vast arsenal of anti-ship missiles, increasing the risk to American vessels operating close to its coasts.

Beijing's message is that Washington needs to stop boosting ties with Taiwan, and restore the diplomatic understanding that discouraged any House speaker from visiting for the past 25 years. If not, China could start to restrict Taiwan's freedom to operate off its shores in the same way that it has restricted the island's ability to participate in global organizations since Taiwanese President Tsai Ing-wen's election in 2016.



“The Chinese are certainly ratcheting up their response and subsequent crises will take this as a new baseline,” said Christopher Twomey, an associate professor at the **Naval Postgraduate School**. “Their next signal to a perceived or real provocation will have to be more intense.”

In recent years, China has repeatedly exploited its rivals’ reluctance to risk open war to assert clearer control over contested territory. In 2012, after Washington declined to intervene when it effectively occupied the Scarborough Shoal, China remained on the reef and began to construct a vast network of military facilities on reclaimed land in the South China Sea. More recently, in 2020, China gained control over disputed territory in border clashes with India.

China Drills Surround Taiwan

China’s drills last week were larger and closer to Taiwan than a similar show of force in the mid-1990s. Prior to Pelosi’s arrival, the PLA conducted operations that suggested its planes were ready to “escort” her flight, if it had taken the typical route into Taipei, Bonny Lin and other analysts with the Washington-based Center for Strategic and International Studies said in a [report](#) updated Monday.

The six exclusion zones appeared carefully chosen by China to test out its operations during a blockade or invasion scenario, the report said. For the area farthest east from the mainland, the PLA could “launch attacks on Taiwan’s eastern shores and bases and help deny the United States and other countries from flowing forces into Taiwan from the east,” it added. Zones in the north and southwest could be launching points for future blockades of key ports, the analysts noted.

“China’s attempt to deny the strait as an international waterway by sending warships into the area and crossing the median line represents another attempt to change the status quo,” said [Kuo Yu-jen](#), director of Taiwan’s Institute for National Policy Research. “It will have a grave impact that the international community will find hard to tolerate.”

The latest in global politics

Official Chinese statements on the drills illustrate Beijing’s desire to portray them as a strategic victory by demonstrating its ability to curb the movement of its rivals. The missile tests confirmed the PLA’s “precision strike and area-denial capabilities,” Eastern Theater Command spokesman Senior Colonel Shi Yi said in a statement, echoing language used by the US and its allies to describe China’s strategy to deny an adversary’s freedom of movement in contested regions.

China “deterred Taiwan independence forces and completely shattered the so-called strait median line,” Meng Xiangqing, a professor at the PLA’s National Defense University in Beijing, told state broadcaster China Central Television. “The drills created conditions for realizing national reunification at an earlier date.”

Taiwan’s Defense Ministry said the drills had given the military the chance to do “practical training against combat scenes.” It added that no Chinese warships or military planes entered Taiwan’s air space or territorial sea since Pelosi’s visit, even though China’s exclusion zones partly crossed into those areas.

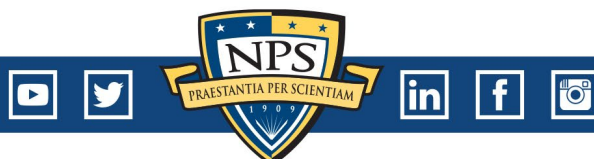
How the Biden administration will respond remains unclear. John Kirby, spokesman for the US National Security Council, said last week that the US would keep the aircraft carrier USS Ronald Reagan and its strike group “on station in the general area to monitor the situation,” and “we will also undertake standard air and maritime transits through the Taiwan Strait in the next few weeks.”

Regional Risk

On Monday, Biden expressed confidence China would not escalate tensions further with Taiwan after a confidence series of military exercises that shook the region. “I’m not worried, but I’m concerned that they’re moving as much as they are,” he said. “But I don’t think they’re going to do anything more.”

China’s exercises also demonstrated the risk that any conflict over Taiwan could quickly escalate and shake global supply chains. Besides disrupting air traffic and shipping, the drills also covered waters claimed as exclusive economic zones by the Philippines and Japan, with missiles landing in an area claimed by Tokyo.

“If the US doesn’t ‘learn its lesson’ and does more to challenge China’s sovereignty, then I think we’ll see more of these operations,” said Bonnie Glaser, director of the Asia Program at the German



Marshall Fund of the United States. “They may seek to enforce here a new status quo in the Taiwan Strait.”

[China Seizes on Pelosi Visit to Set ‘New Normal’ for Taiwan - Bloomberg](#)

[Return to Index](#)

End of an Era? Retiring the GWOT Medal for All

(Responsible Statecraft 8 Aug 22) ... Tevah Gevelber

Experts say narrowing the recipients for this award signals a symbolic as well as practical shift away from counterterrorism and towards China.

Despite the recent drone attack on Al Qaeda leader Ayman al-Zawahiri in Afghanistan, the U.S. military seems to be looking to put a formal capstone on the broader Global War on Terror.

Starting on Sept. 11 — for the first time since its inception in 2003 — the Global War on Terrorism Service Medal will only be awarded to service members directly serving in counterterrorism efforts. Experts argue this could signify a new era in the GWOT.

“The shift in limiting who is eligible for the Global War on Terrorism Medal suggests that military policy makers may finally be moving away from classifying almost all types of war as ‘the fight against terrorism,’” Noah Coburn, political anthropologist and Middle East specialist, told RS in an email.

Under the new regulations set by the DoD, a service member must have “directly served in a designated military [counter-terrorism] operation” for a minimum of 30 days to be eligible for the award.

Up until now, the award was considered by many to be pretty much automatic. Nearly every active-duty, Reserve, and National Guard service member who served since 2003 has received the award, according to Military.com. And in 2004 the Army authorized all troops who served after Sept. 11 2001 to get the award.

“Certainly, there is a symbolic component here,” Jenni Walkup, a researcher at Brown University’s Costs of War Project, told RS. “Choosing to award the Global War on Terrorism Medal to a smaller portion of U.S. Military personnel suggests a shift in focus away from counterterrorism.”

Erik Dahl, Associate Professor of National Security Affairs at the **Naval Postgraduate School** agrees that this change in eligibility reflects a larger reprioritization within the military.

“This change is well timed,” Dahl said in response to questions from RS. “The main focus of our military has moved away from counterterrorism, and toward concerns about Russia and China.”

The CIA’s No. 2 concurs. According to the Associated Press on Monday, CIA deputy director David Cohen told fellow counterterrorism officials in a closed-door intelligence meeting last week that while fighting extremist groups remains a priority, his agency’s resources will be increasingly funneled elsewhere — mainly to China.

So how will the U.S. approach the GWOT moving forward? Does this indicate the end of a war which has cost the U.S. eight trillion dollars and led to 900,000 deaths?

Perhaps. “At the same time, the targeted killing of Ayman Al-Zawahiri, in downtown Kabul, is a worrying step back towards policies of assassination over relying on diplomacy, courts and the rule of law,” Coburn added.

[End of an era? Retiring the GWOT medal for all - Responsible Statecraft](#)

[Return to Index](#)

How is China Trying to Redefine Power Balance in Taiwan Strait?

(DW 13 Aug 22)

Beijing's pledge to conduct "regular patrols" near Taiwan after large-scale military drills points to a worrisome and dangerous development, according to analysts.

The military drills represent some of Beijing's most provocative action toward Taiwan in decades



After seven days of large-scale military exercises around Taiwan, the Chinese People's Liberation Army announced on Wednesday that the drills — held in response to a recent visit to the island by US House Speaker Nancy Pelosi — had concluded.

Beijing, however, pledged to continue "regular combat readiness patrols" in the area, raising the possibility of frequent Chinese military operations near the self-governed democratic island.

"I believe the Chinese are trying to change the status quo and create a new normal in the Taiwan Strait," said Bonnie Glaser, director of the Asia program at the German Marshall Fund.

"China decided they wanted to do something unprecedented and they wanted to demonstrate the development in their military capabilities and show their resolve," she added. "I'm concerned about the fact that they were explicitly demonstrating they can implement a blockade."

In a white paper published on Wednesday, China said it had zero tolerance for "separatist activities" in Taiwan.

While underlining its goal to achieve the "peaceful reunification" of Taiwan and China, Beijing also stressed that it "will not renounce the use of force, and we reserve the option of taking all necessary measures."

China also went on to threaten to use force against "interference by external forces or radical action by separatist elements."

US 'will not allow' isolation of Taiwan

The drills held in the wake of Pelosi's visit represent some of China's most provocative action toward Taiwan in decades.

During the exercises, the Eastern Theater command of the Chinese People's Liberation Army dispatched ships and fighter jets that regularly crossed the median line — an unofficial demarcation between China and Taiwan that the former does not recognize.

It also held anti-submarine drills, aimed at enhancing the ability of air and sea units to work together while hunting submarines.

The People's Liberation Army also test-fired 11 missiles into the surrounding seas, with four likely launched over Taiwan's capital, Taipei.

Taiwan has accused China of rehearsing possible invasion scenarios.

In Washington, Pelosi said on Wednesday that she was "very proud" of her delegation and believed China had used her visit as a "pretext" to launch its military exercises.

"We will not allow China to isolate Taiwan," she told reporters.

As part of the drills, the PLA test-fired missiles into the surrounding seas — and probably including four over Taipei

She also said the US could not allow Beijing to standardize a new level of pressure on Taiwan. "What we saw with China is that they were trying to establish sort of a new normal. And we just can't let that happen."

Beijing, however, retaliated by saying that Washington was the one that broke promises and violated China's sovereignty. "The US took the initiative to make provocations and then China responded with countermeasures, which are legitimate, justified, necessary and proper," Chinese Foreign Ministry Spokesperson Wang Wenbin said during Wednesday's daily press briefing.

'A new baseline for crisis protestation'

The ratcheting up of tensions between China and the US, and Beijing's pledge to conduct "regular patrols" near Taiwan, point to a worrisome and dangerous development, said Christopher Twomey, an expert on security affairs at the US **Naval Postgraduate School** in California.

"We could see the continued operation of Taiwanese forces and occasional transits of US forces in international waterways, and the more Chinese forces are routinely operating there, the more dangerous that is," he stressed.

"One of the real worries here is that the next time there is a political or diplomatic move that China feels that it needs to respond to, the Chinese may have to do even more next time. The idea that this being the new baseline for crisis protestation is also important to note."



While analysts have expressed concerns about China's aggressive military moves, the US said recent events had not changed its assessment that Beijing would not launch an invasion of Taiwan in the next two years.

Brian Hart, a fellow at the Center for Strategic and International Studies in the US, said Washington was trying to de-escalate the situation while not giving the impression that it was backing down in the face of Chinese pressure.

"The Biden administration also has to make sure that the US is not simply caving in to China's actions and the focus is on de-escalating while insisting that the US will continue to operate within international waters and within international law and continue to work with its allies and partners in the region," he said.

Hart stressed that Washington should continue its cooperation with Taipei in accordance with its longstanding official policy. "Instead of being loud and highly visible, do it in a way that's quieter while still making real substantial gains for Taiwan and US-Taiwan relations," he suggested.

The United States is Taiwan's primary military backer, selling Taipei much-needed weapons and defense tech. For decades, Washington has sold arms to the island under the Taiwan Relations Act, which allows for the supply of "defensive" weapons.

Since 2019, Taiwan has ordered at least \$17 billion (€16.65 billion) worth of US military equipment, according to Defense News. This includes an \$8 billion order of 66 F-16 fighter jets under former President Donald Trump, one of the largest single orders ever.

Preparing for the new status quo?

Twomey, from the US **Naval Postgraduate School**, said one of the outcomes that he hoped to see from China's recent military exercises was a more serious adoption of asymmetric or "porcupine" capabilities and strategies by Taiwan, and less emphasis on expensive hardware such as fighter jets or large-scale naval platforms.

"They should focus more on enhancing the reserves and building up stockpiles of anti-ship cruise missiles that can be launched from coastal areas," he said.

To better prepare for the new status quo that Beijing is pushing for, Tzu-yun Su, an analyst at the Institute for National Defense and Security Research in Taiwan, said Taipei needed to show the rest of the world that it was not only relying on other countries to ensure its own security.

"Taiwan should also increase its defense budget, which Germany did earlier this year following the Russia-Ukraine war," he pointed out. "Additionally, Taiwan should prioritize military investment for ground-based air-defense missiles or ground-based anti-ship missiles, which form a more effective defense force quickly."

[How is China trying to redefine power balance in Taiwan Strait? | Asia | An in-depth look at news from across the continent | DW | 13.08.2022](#)

[Return to Index](#)

Analyzing Turkey's latest incursion into the Eastern Mediterranean (Audio Interview) (ekathimerini 12 Aug 22)

Ryan Gingeras, professor in the Department of National Security Affairs at the Naval Postgraduate School, and HALC Executive Director discuss Turkey sending a new drill ship to eastern Mediterranean, what motivates Erdogan, Turkey's approach to maritime issues, and the "Blue Homeland" concept taking hold in Turkey.

[Analyzing Turkey's latest incursion into the Eastern Mediterranean | eKathimerini.com](#)

[Return to Index](#)



Ex-Afghan President Ghani Refused Questioning About ‘Stolen’ Cash

(*NY Post* 15 Aug 22) ... Isabel Vincent

Ashraf Ghani is still acting like the president of Afghanistan, at least on Facebook.

From his exile in the United Arab Emirates — where he landed after fleeing the presidential palace as Taliban forces swarmed Kabul on August 15, 2021 — Ghani gives interviews on democracy and doles out diplomatic greetings to his more than 2.8 million social media followers.

While the 73-year-old has bemoaned Afghanistan’s “very bad situation in history,” he has done little to set the record straight about his own controversial flight from his homeland, according to a congressional oversight panel.

The Office of the Special Inspector General for Afghanistan Reconstruction (SIGAR) has spent the last year investigating allegations that more than \$160 million was loaded onto helicopters that carried Ghani, his wife and some of his aides to an Uzbekistan town on the Afghan border as his government collapsed.

The allegations were first made by the Russian embassy in Kabul and the Afghan ambassador to Tajikistan, who accused the former leader of spiriting \$169 million in cash out of the country.

While investigators did not find evidence that the cash was loaded onto the helicopters during the chaotic flights from Kabul, it has raised other questions about the alleged plunder of tens of millions of dollars from Afghan government coffers.

Ghani, who has repeatedly denied stealing any cash, refused a request to be interviewed by SIGAR officials during the probe, and would only answer questions through his Washington, DC, attorney, according to “Theft of Funds from Afghanistan: An Assessment of Allegations Concerning President Ghani and Former Senior Afghan Officials.” The report was released Tuesday, August 9.

Investigators sent 56 written questions to Ghani through Reid Weingarten, a former federal prosecutor who specializes in white-collar criminal defense, in March. On July 28, SIGAR received answers to only six of those questions, the report says.

“Ghani doesn’t come off too well, having stonewalled SIGAR,” said Michael Rubin, a senior fellow at the American Enterprise Institute and an expert on the Middle East. “That doesn’t smell right, and basically it’s not a good look.”

The former president’s lawyer in Washington, DC, did not return requests for comment.

Investigators also note that they were hamstrung in their probe because they had to rely heavily on eyewitness testimony rather than on documentary evidence “because undeclared cash leaves no paper trail.” To make matters even more difficult, all of their sources requested anonymity, and some former senior government officials refused to answer any questions.

“Many of the officials in a position to witness the alleged theft of money were alleged by others to have stolen it,” the report says.

Still, after interviewing more than 30 Afghan officials who worked in the office of the president, and Afghanistan’s security services, SIGAR found that some cash was removed from the presidential palace on August 15, 2021, and loaded onto three helicopters that spirited Ghani and members of his entourage out of Kabul. But investigators believe that the amount was not more than \$1 million and “may have been closer in value to \$500,000.”

In October 2021, a former bodyguard to Ghani claimed that CCTV footage existed showing an “individual at the Afghan Bank brought a lot of money to Ghani before he left. Hundreds of millions, perhaps billions of dollars ... This money was supposed to be for the currency exchange market,” Brig. Gen. Piraz Ata Sharifi alleged to the *Daily Mail*. “Each Thursday, the dollars were brought for that purpose. Instead, it was taken by the president” before he left.

Before becoming president, Ghani worked for the World Bank and received up to \$360,000 a year from the Institute for State Effectiveness, a nonprofit funded in part by billionaire George Soros.

The report notes that \$5 million was allegedly left behind in the president’s residence — funds that Ghani said he and his wife had amassed from the sale of properties in Lebanon and the US before he first became president in September 2014, his lawyer told SIGAR. The cash was destined for a nonprofit to help Afghans.



During his chaotic departure from Kabul, unnamed sources told investigators that Ghani barely had time to collect himself. “The departure was so sudden that the president was barefoot, forcing [General Qaher] Kochai to find the president’s shoes,” said the report, referring to the head of the Afghan President’s Protective Service. “The president did not have time to get his passport.”

“The chaos had become so intense that every minute we would hear that a certain district of Kabul had fallen to the Taliban,” a former senior official told investigators about the Sunday in August that signaled the end of Ghani’s rule.

National security adviser Hamdullah Mohib and Kochai “feared that the PPS [President’s Protective Service] guards — sensing the tide turning — might execute Ghani, so Mohib, Kochai and a driver tried to discreetly take the president to the landing zone in a single car. The president’s motorcade accompanied them anyway.”

Ghani and his wife, Rula, were bundled into a helicopter with three others, according to a source. The first lady had two suitcases “as she had time to pack for a trip to the UAE.” Witnesses told investigators that the former first lady’s suitcases contained clothes, not cash.

“The issue of what he carried with him on his final flight misses the mark,” Rubin told The Post. “He [Ghani] likely squirreled away lots of money in advance for a rainy day. Presumably, he’s also a silent investor in some businesses and continues to collect those dividends.”

Corruption has long been rampant in Afghanistan, with allegations of government officials spending lavishly from government-controlled “slush funds” and spiriting cash from foreign development and military aid out of the country.

SIGAR focused on two government contingency budgets — “slush funds disbursed with minimal oversight,” known as Code 91 and Code 92, which the president “typically controlled.” SIGAR noted that the funds totaled nearly \$200 million in 2021.

“According to Integrity Watch Afghanistan, abuse of these funds started under the administration of former president Hamid Karzai but worsened under Ghani,” the report says. When asked about the funds, Ghani’s attorney said that, in February 2020, Ghani had established a committee “to enhance oversight and transparency of funds used from Code 91 and Code 92.”

Ghani, a finance minister in Afghanistan from 2002 to 2004, told SIGAR through his lawyer that he did not recall any bulk cash transfers and that “the possibility of such transfers seems implausible.”

But for years, bulk cash transfers were spirited out of the country by corrupt government officials, according to reports. In 2010, four years before Ghani became president, the Washington Post, citing US and Afghan officials, estimated that cash totaling more than \$1 billion a year “flow[ed] mostly to the Persian Gulf emirate of Dubai, where many wealthy Afghans now park their families and funds.”

“One million dollars a day was leaving Kabul international airport for Dubai,” said Thomas Johnson, a research professor at the National Security Affairs Department at the **Naval Postgraduate School** in Monterey who has more than 30 years’ experience in Afghanistan. “Anyone who knows Ghani and Afghanistan knows he was a fraud and extremely corrupt.”

Johnson, who told The Post he had spoken to senior Afghan government officials who were present during the fall of Ghani’s government, said that shortly after Ghani took power in Afghanistan he surrounded himself with “yes men” who wouldn’t dare question anything he did.

Now, Johnson believes that Ghani is “living a millionaire’s life in Dubai” where leaders allowed him to enter on humanitarian grounds.

He told CNN in a Sunday interview that he “very much” hoped to return to Afghanistan at some point.

Ghani, who has a PhD in anthropology from Columbia University and co-wrote the 2008 book “Fixing Failed States: A Framework for Rebuilding a Fractured World,” also posted an “exclusive” interview in Persian on Facebook last week, entitled “The fall of democracy, its reasons and consequences.”

“The UAE initially accepted Ghani on the condition he remain silent,” said Rubin. “Ghani, however, has always relished attention. Silence is difficult for him. He has a tendency to say increasingly outlandish things to get attention, and this will eventually be embarrassing for the Emiratis.”



<https://nypost.com/2022/08/15/ex-afghan-president-ghani-refused-questions-about-stolen-cash/>

[Return to Index](#)

Innovation: People Are More Important than Technology

(USNI 10 Aug 22) ... Mic Augier, Gen. Anthony Zinni (Ret.) and Maj. Sean Barrett

Innovation lies at the heart of American security. Now, huge advances in AI and edge computing and nanotechnology are already underway in America. . . . Nobody innovates better than the United States of America. But we can't take that for granted.

Today's strategic environment features rapid technological change coupled with the increasing accessibility of cutting-edge technologies to more and more actors. These changes, and the threats they pose to U.S. national security, span presidential administrations and cross party lines. The 2018 National Defense Strategy, for example, notes that maintaining U.S. technological advantage requires significant changes across the "National Security Innovation Base" and calls on the Department of Defense (DoD) to "organize for innovation" and "out-innovate revisionist powers." In his Interim National Security Guidance, President Joe Biden pledges to "sustain America's innovation edge" and encourages "the culture of innovation required to address today's complex challenges." Over the past several years, DoD has attempted to adapt to this dynamic technological landscape by establishing organizations and concepts such as the Defense Innovation Unit, the Chief Digital and AI Office, Joint All-Domain Command and Control, Project Convergence, Project Overmatch, the Rapid Defense Experimentation Reserve fund, and a network of "tech bridges" focused on leveraging artificial intelligence, machine learning, and other advancements to develop sensor networks and shorten kill chains.

The 2018 National Defense Strategy specifically mentions China's military modernization, which has been so massive in scale and rapid in speed, that it threatens the U.S. military's technological edge. Innovation, therefore, is a must. Since before the Spanish-American War, innovation has been a key "way" of U.S. military strategy. Out-innovating our adversaries has been a hallmark of the U.S. military—think stealth, high-bandwidth communications, space-based intelligence, surveillance, and reconnaissance, and precision-guided munitions. But just as sea power was taken for granted after the end of the Cold War, the Pentagon's ability to innovate faster than its adversaries became a given—one that is no longer. Witness China's antiship ballistic missiles, hypersonic weapons program, informationized warfare, and military space capabilities. The imperative to innovate is back.

Integrating new technologies into U.S. warfighting capabilities is vital to national security. However, in today's security discourse, innovation is often conflated with new technology and disruptive change, which leads to misunderstanding and misconceptions regarding innovation and a certain degree of "technologitis," or overreliance on technology. In addition, there is an inclination to view new or big ideas as innovative by their very nature, although innovations often evolve from the accumulation of little ideas and combinations that are tested and refined over time. The iPhone, for example, was not a big new thing but rather a recombinant innovation. This tendency also overlooks the importance of people and the organizations in which they operate. Steve Jobs reminds us, "Technology is nothing. What's important is that you have a faith in people, that they're basically good and smart, and if you give them tools, they'll do wonderful things with them. It's not the tools that you have faith in—tools are just tools."

Often a new idea, concept, invention, or process deemed "innovative" is assumed to be indicative of progress or a "good" thing. People forget that Fortune named Enron "America's most innovative company" six years in a row before its epic failure. Simply adding technology also is not always the right solution, and innovation should never be viewed as an end in itself. For militaries in particular, an overemphasis on technology can lead people to conclude that technological innovation matters more than tactical and organizational capabilities and competencies. It undervalues warfighters' ability to think creatively and critically and act and lead decisively. The German military's defeat of a technologically



superior French military in a matter of six weeks in 1940 is a sobering reminder of the folly of this assumption.

New technology is important, but it is not a silver bullet solution that can be added at random when an organization confronts a challenge. Rather, it must be built into an organization's capabilities, resources, and processes by collaborative, charismatic leaders who can think strategically, critically, and creatively but also encourage, lead, and manage teams to adopt, integrate, and maintain technologies over time. Military leaders must move beyond using "innovation" merely as a buzzword and establish a better understanding of what innovation is and is not, the organizational characteristics and features of innovation, what it takes to lead innovative organizations, and the traits and skills of innovative leaders.

An Organizational Process, Not a Buzzword

"Our infatuation with technology was a reflection of our own mirror imaging and an unrealistic desire to dictate the conduct of war on our own terms."

– **James N. Mattis and Frank Hoffman**
"Future Warfare: The Rise of Hybrid Wars,"

An organization's ability to innovate, adapt, learn, lead change, and ultimately survive depends on how well it balances "the exploration of new possibilities and the exploitation of old certainties." Exploration entails discovery, experimentation, innovation, and play, whereas exploitation is more focused on efficiency, refinement, and executing existing processes. Steadily improving existing capabilities or products while exploring new opportunities and achieving breakthrough innovations is the hallmark of an "ambidextrous organization." Today's U.S. military service chiefs tend to frame this balancing act as one between maintaining military power and "legacy capabilities" that are available today and building the modern capabilities needed for the future competition. It often involves divesting "outdated" capabilities to invest in modernization efforts and "accelerate change."

Overemphasizing innovation, however, can blur the distinction between actual innovation and "innovation-speak." Real innovation is managing the adaptive dilemma, adding value to organizations and society, and giving proper consideration to the processes and capabilities that are needed.

Innovation-speak has created a market for easy recipes and checklist-style shortcuts that promise to help organizations innovate. Even if this were possible, it does not necessarily help with long-term adaptation or agility and can even work against it. It also can conceal some of the downsides or tradeoffs and, in the military, can lead to assumptions that ignore the fact that the enemy gets a vote in any fight. For example, a hyperfocus on "newness" or novelty can lead to the belief that most novel ideas are good or lead to good outcomes and thus overestimating the probability of success. DoD is littered with programs that have failed spectacularly due to this predisposition. Innovation-speak also can lead to the erroneous assumption that novelty is easy to implement. Former Defense Secretary Robert M. Gates, who laments the bureaucratic wars he constantly fought in the Pentagon, begs to differ.

Real innovation is not simply an idea, but rather a process built into an organization. It is driven by the organization's strategy and the need to address an empirical problem. It is led and implemented with an eye toward developing and exploring synergies with the organization's capabilities, as well as for maintaining a balance between exploration and exploitation, even though each has the tendency to extinguish the other. It requires free and open inquiry and feedback mechanisms for learning and adapting, to help identify new strategies and organizational structures. Organizations must create new knowledge through a "continual dialogue between explicit and tacit knowledge" that "drives the creation of new ideas and concepts."

Tacit knowledge is created through socialization and bringing together shared experiences. This might include informal discussions immediately following an operation or exercise or discussions over beers after work. Tacit knowledge must be articulated into explicit knowledge in the form of a presentation, information paper, or article so it can be shared with others. Such forms of explicit knowledge are then collected, combined, and disseminated so they can be edited, tested, and promulgated by those in authority.



This vetted, explicit knowledge takes the form of doctrine, field manuals, and other training and instructional materials, which are then internalized by members of the organization to inform training. Their subsequent learning-by-doing embodies this knowledge in action and practice. This is an ongoing process, facilitated by activities such as gaming, scenarios, exercises, and experiments that emphasize free play and explore new paths to the future. The process prepares an organization to innovate and implement by building buy-in from the participants. It cultivates critical and innovative thinking skills and attitudes as members participate in “the gentle art of re-perceiving” reality.

Seemingly disruptive and revolutionary changes are often incremental, evolutionary, and organizational. The development of the Marine Corps’ Advanced Base Force, for example, took decades of agitation on the part of junior and midgrade officers in the Navy to repurpose Marine ships’ guard detachments for the advanced base mission. Similarly, the rise of U.S. special operations forces into the force of choice during the war on terrorism was a gradual evolution and uphill battle during the first 75 years of their existence. Incremental innovations might undermine the idea that innovation can be big and fast, but small steps ensure continuing strategic fit not only between the organization and its environment, but also between the resources and capabilities in the organization. Leaders who can sense and perceive changes in the environment also are needed to ensure this strategic fit and cultivate, build, and lead innovation in organizations.

Leading Innovation and Innovative Leaders

Given the rapid change in, and complexity of, today’s security environment, leaders must be able to sense the strategic environment, think creatively and critically, and transfer knowledge or skills from one domain or experience to a new and possibly unforeseen one. Leading innovative organizations thus requires involved leaders who are themselves learners who constantly seek feedback and collect ideas. This desire to learn necessitates a certain amount of humility, which should also inform how we think of leadership. While traditional notions of leadership focus on the role of the individual building and motivating a team, broadening the concept to include the leader, the followers, and the organization might prove more fruitful. Such “we-leadership” is selfless and is centered on nurturing collectivity, strengthening commitment to the organization, and inspiring and motivating people. As a result, leaders and followers become less concerned with their careers. We-leaders lead by intent and are less hierarchical in their thinking. They attract innovative thinkers and doers because they emphasize ideas over rank.

Former Marine Corps Commandant General Alfred Gray embraced we-leadership. He took a bottom-up approach to explaining his rationale for, winning converts to, and teaching the core tenets of maneuver warfare to change the Marine Corps’ approach to warfare. Members of an organization need to feel part of what it is doing and be excited about the change. Otherwise, they will tend to respond with apprehension and resistance. As Commanding General, 2d Marine Division, Gray established the Maneuver Warfare Board to collect, codify, and spread ideas on maneuver warfare. The board consolidated relevant material for Marines to read and established professional study groups. At these sessions—which often took place after working hours—maneuver ideas were debated, and the tacit knowledge of the participants was pooled to inform and improve the organization. These debates spilled over into the pages of the Marine Corps Gazette, where they took explicit form. The ideas were then vetted in experiments before ultimately being incorporated into tactics, techniques, and procedures, doctrine, and service manuals.

General Gray sought to balance exploitation and exploration by making exercises “free-play” or “force-on-force” to make training environments more realistic. Exercises thus served as experiments rather than scripted or “canned” scenarios that simply validated concepts and desired capabilities or tested a unit’s ability to perform a list of tasks. To mitigate a “box-checking” mentality that is prone to risk aversion and doing just enough, commanders were forced to try to outwit their peers, since there were definite winners and losers. The competition remained open-ended, spurring innovative ideas and approaches as opposed to playing it safe and settling for accomplishing the minimum.

Seeking to mitigate risk aversion and fear of failure, General Gray emphasized process over result. During after-action reviews, he was always more concerned about why Marines did what they did (i.e.,



what they were thinking) rather than with what they did. He challenged and empowered his leaders to think through alternative outcomes, learn from their mistakes, and experience the merits of the maneuver philosophy firsthand. In doing so, he won converts who took ownership of the new warfighting philosophy. Marines also became more likely to think outside the box and take chances because they were given the grace to fail and had a collective commitment to improving the organization.

Implicit in learning from failure is the humility to admit one is wrong or that one's ideas can improve with the ideas and input of others. General Gray embraced this humility by democratizing the after-action review process, breaking down traditional notions of hierarchy and nurturing an open and collaborative environment. Marines removed their rank insignia before gathering to reinforce the importance of ideas over rank, foster the free exchange of ideas, and empower junior Marines to speak up, trust their instincts, and correct those more senior. This helped build support for change throughout the organization because everyone was involved. It was the opposite of a select brain trust, so it cultivated a stronger sense of organizational belonging and identity.

General Gray also welcomed the input of outsiders, including notably retired Air Force Colonel John Boyd, a maverick who had been largely ostracized by his own service, and Bill Lind, a brash and outspoken legislative aide to Senators Robert Taft Jr. and Gary Hart. General Gray and other maneuverists considered even the most ardent critics useful in the knowledge-generation process and in improving their concepts and arguments. Thus, at the individual level, the freedom to learn from failure, encouraged by we-leadership, improves the cognitive skills of future leaders. At the organizational level, it empowers the organization to explore new possibilities, adapt, and innovate.

Build and Maintain Competitive Advantage

Innovation is an organizational process, central to developing and maintaining competitive advantages. Real innovation differs from innovation-speak along many important dimensions that would be helpful to remember the next time DoD announces another Hacking 4 Defense competition or small business outreach event that seemingly encourages innovation as an end in itself or as a niche undertaking that contributes tangentially to the mission. Real innovation entails more than untested ideas or helping new capabilities navigate the "valley of death." Rather, real innovation must be tied to a strategy and focused on a particular problem or challenge. The possibility of peer-level conflict against China's People's Liberation Army should serve as that focusing function today.

To successfully innovate, all of DoD, not simply a small cadre of experts, must feel part of the effort, or change will inevitably be met with resistance. This requires leaders to articulate the rationale for change and develop and implement innovations. They must be able to blend new technology and capabilities with existing ones. Innovation inevitably involves failures along the way and requires continued evaluation and refinement.

Innovation is not something that can be planned or achieved quickly or by following prescribed checklists. Enduring organizational changes take significant time and effort. The road to progress is often messy, lengthy, meandering, and unpredictable, which is why everyone in the organization must understand the goal and why people are more important than technology.

Mie Augier

Dr. Augier is a professor in the Departments of Defense Management and Defense Analysis at the **Naval Postgraduate School**. She is a founding member of the Naval Warfare Studies Institute and is interested in strategy, organizations, leadership, innovation, and how to educate strategic thinkers and learning leaders.

[Innovation: People Are More Important than Technology | Proceedings - August 2022 Vol. 148/8/1,434 \(usni.org\)](#)

[Return to Index](#)



ALUMNI:

JBAB Master Sergeant Wins 12 Outstanding Airmen of the Year Award

(meriTalk 9 Aug 22) ... Mark Hakun

Mark Hakun, Deputy CISO at the Department of Defense (DoD), retired late last month after 34 years of working in both military and Federal civilian capacities, according to a LinkedIn posting by John Sherman, chief information officer at DoD.

“It was my privilege today to honor Deputy DoD CISO Mark Hakun, who is retiring after 34 years of combined military and civilian service,” said Sherman. “Mark is a top cybersecurity professional who has made great impacts in the IC and DoD, and I can’t wait to see what he’s going to accomplish in the next phase of his career.”

According to his LinkedIn account, Hakun “oversaw the coordination of cybersecurity standards, policies and procedures with other federal agencies, coalition partners and industry.”

Prior to working at the DoD, Hakun served at the National Security Agency where he worked as the Deputy Chief Information Officer for two years, as well as a project manager for 10 years.

He also worked as a program director at the Defense Information Systems Agency, where he had overseen developing National Background Investigation Services capabilities to replace legacy systems.

Hakun has a Bachelor of Science from the United States Naval Academy and a Master of Science from the **Naval Postgraduate School**.

[Mark Hakun Retires From DoD Deputy CISO Post – MeriTalk](#)

[Return to Index](#)

Wakeman Retires from Marine Corps

(Eagle Herald 9 Aug 22)

Major Clifford C. Wakeman, born in Menominee, retired from the United States Marine Corps on July 1, after 20 years of honorable military service to his country.

Wakeman was commissioned on April 27, 2002, as a Second Lieutenant after graduating from the University of Michigan, Ann Arbor. After his initial officer training in Quantico, Virginia, and naval aviator training in Pensacola, Florida, and Jacksonville, North Carolina, he was designated as a CH-53E Super Stallion helicopter pilot in May 2005. From June 2005 to April 2010, he was stationed at Marine Corps Air Station Miramar, San Diego, with Marine Heavy Helicopter Squadron 361, during this time, his accomplishments included: Completing a Western Pacific deployment onboard the USS Peleliu as part of the 11th Marine Expeditionary Unit; deploying twice to Al Asad, Iraq, in support of Operation Iraqi Freedom; attaining various flight designations to include aircraft commander, section leader and division leader; and being promoted to captain.

Following his second deployment to Iraq, Wakeman was selected to attend the **Naval Postgraduate School**, Monterey, California, to study operations research analysis. In June 2012, he was awarded a Master of Science degree in Operations Research, and his follow-on tour was at Headquarters Marine Corps, Manpower & Reserve Affairs, Quantico, where he served until June 2015 as an Operations Research Analyst. He was promoted to his current rank of major in 2013.

Wakeman returned to MCAS Miramar for another three years, first spending time with Marine Heavy Helicopter Squadron 465 as the Aircraft Maintenance Officer followed by the Executive Officer. After a year and half, he transferred to Marine Aircraft Group 16, serving in the Headquarters Operations Department and deploying to the Joint United States Military Advisory Group, Manila, Philippines, as an air liaison officer.

In June 2018, Wakeman traveled back to Quantico, where he spent his final years at Headquarters Marine Corps, Combat Development & Integration, Operations Analysis Directorate. He once again put his operations research education and skills to work by serving as an analytic advisor and senior



operations research analyst, and culminating his career serving as a supervisory operations research analyst and branch head.

Wakeman's personal awards include two Meritorious Service Medals, six Air Medals (Strike/Flight Awards), and one Navy and Marine Corps Achievement Medal.

Wakeman has been married for 19 years to his wife, Linda, and he has two children, Lilyana (14) and Levi (11). Upon retiring, he and his family relocated to Merritt Island, Florida. His parents, Danny and Elizabeth Wakeman, currently reside in Birch Creek.

[Wakeman retires from Marine Corps | Community | ehextra.com](#)

[Return to Index](#)

Naval Air Warfare Center Changes Command

(Southern Maryland Chronicle 15 Aug 22)

Rear Adm. John E. Dougherty IV took command of Naval Air Warfare Center Aircraft Division (NAWCAD), the largest warfare center in the Navy, from Rear Adm. John S. Lemmon during a ceremony at Naval Air Station Patuxent River, Aug. 12.

Vice Adm. Carl Chebi, commander of Naval Air Systems Command, presided over the ceremony.

"NAWCAD sets the standard in delivering naval aviation the capability our fleet needs to win at a cost we can afford," said Chebi. "This command's hard-earned successes are [Lemmon's] legacy, and there is no one more qualified than Rear Adm. Dougherty to take over."

Dougherty previously served as program manager for the Next Generation Air Dominance Program Office (PMA-230), established in 2020 to develop the next evolution of the Navy's carrier-based power projection capabilities.

"We are in a great power competition and the outcome of that fight depends on this team," said Dougherty. "Our Navy is the world's most lethal because of our people – I am honored to stand with you in this fight."

The Pennsylvania native and F/A-18 pilot also served as program manager for the Navy's Precision Strike Weapons Program (PMA-201). Dougherty had various operational tours in Afghanistan, flew with Strike Fighter Squadrons (VFA) 147 and 125, and accumulated more than 1,200 flight hours in the F/A-18C with over 300 carrier landings. Dougherty earned a bachelor's degree in political science from the United States Naval Academy and a master's degree in business administration and systems engineering from the **Naval Postgraduate School**.

"There is no way to summarize four years leading a command of more than 10,000 strong across three different locations," said Lemmon. "So I'll share what I'm most proud of: our shared resilience delivering warfighting capability effects and readiness on time and at an affordable cost."

Lemmon assumed command of NAWCAD in September 2018 and led the warfare center through the COVID-19 pandemic and the command's largest reorganization in more than 30 years. The Illinois native and E-2 Hawkeye pilot previously served as program manager for both the E-2/C-2 Airborne Tactical Data System Program (PMA-231) and the Air Warfare Mission Area; from the Air Program Office (PMA-298) among other acquisition roles. Over his career, Lemmon completed various operational tours, including commanding Task Group 67.8 in Africa and Air Test and Evaluation Squadron (VX) 20 ashore, accumulating more than 3,400 flight hours with over 300 carrier landings. Lemmon earned a bachelor's degree from the United States Naval Academy, a master's degree in systems engineering from the **Naval Postgraduate School**, and is a graduate from the U.S. Naval Test Pilot School.

Lemmon was recently promoted to rear admiral (upper half) and moves on to lead the Program Executive Office for Tactical Aircraft Programs.

[Naval Air Warfare Center changes command - The Southern Maryland Chronicle](#)

[Return to Index](#)

