

NPS Annual Workshop Goes Mostly Virtual, Seeks to Prepare Military for Future Conflicts



The 2020 WIC annual workshop was largely virtual but tackled real-world issues focusing on future conflict scenarios. Naval Postgraduate School

The Warfare Innovation Continuum (WIC) at the Naval Postgraduate School (NPS) in Monterey, California, conducts an annual workshop to better understand a major issue that will be the subject of study for the year to follow.

In 2020, the school examined “Resurrecting War Plan Blue,” which refers to an examination conducted by the War Department between the first and second world wars about the nation’s ability to support and sustain a major conflict.

The September 2020 Workshop, the 13th in the series, tasked participants to consider a conflict scenario in the year 2035 requiring the U.S. to quickly mobilize forces and assets in response to a rapidly deteriorating global security environment.

The three-and-a-half-day experience allowed NPS students focused interaction with faculty, staff, fleet officers, and guest engineers from Navy labs, system commands and industry. The workshop tasked participants to apply emerging technologies to shape the way we fight in a 2035 global conflict. Concept generation teams were given a design challenge: How might emerging technologies and concepts and joint, combined and coalition forces contribute to enhancing the resiliency of naval forces, logistics, and support

facilities in an extended campaign against a peer adversary?

The intent was to explore technologies and policies to undertake now to increase the nation's resiliency for an extended conflict.

The 2020 WIC workshop included 157 registered participants in the roles of concept generation team members, facilitators, panelists, mentors and observers. The full participant pool included representatives from 72 different organizations, most participating virtually. Half of the workshop participants were NPS students drawn from all naval warfare domains, as well as from the full range of armed services on campus.

Prof. Jeff Kline, Director of the Naval Warfare Studies Institute and Professor of Practice in Operations Research, said the proposed topics each year were narrowed down by employing selection criteria.

"Is the concept feasible, either physically or fiscally; is the concept unique; does the concept solve a key problem or fill a key gap; and is the concept testable?" he asked.

The issues examined for War Plan Blue are relevant today, Kline said. "We want to investigate our vulnerabilities in mobilization and industrialization, and potentially in our ability to operate forward with our infrastructure as it currently exists."

"Our junior officers are focused on their course of study at NPS, and early career engineers at the labs or with industry are focused on their particular project work ... mixing them together in this way to work within these problem spaces is a really rich environment to not only explore what's in the realm of the possible, but understand what that exploration can be.

"We want our own students to have an appreciation for operational challenges that are going to be emerging over the

next 10 years, and [we are] teaching them how to do critical thinking to find solutions for them.”

Trending topics

In addition to supplying topics for further NPS research, past WIC Workshops have informed senior leadership and provided information and concept ideas to Naval Warfare Development Command (NWDC) and the Marine Corps Warfighting Lab (MCWL). The September 2017 workshop tasked participants to apply emerging “Distributed Maritime Operations” technologies within a near-future conflict in an urban littoral environment, and the 2018 “Cross Domain Operations” workshop looked at integration of assets. The September 2019 workshop “Logistics in Contested Environments” asked teams to focus on how to maintain forces in a sustained conflict.

Kline said the workshop brings together a mix of faculty and students with the field, fleet, academia and industry.

“We examine the issues, and take the best ideas to inspire research and prototyping for the whole academic year. By taking on these topics suggested by senior leadership, and by socializing the results with our stakeholders, we are maintaining NPS as a thought leader, both in emerging technologies and developing concepts,” Kline said.

“Our officer students bring the tactical operational experience of this environment, and they walk away with a broadened experience in order to be able to tackle the unknown in the future,” Kline said. “We also hope to build informal networks among the junior engineers of the nation and the operating naval officers here at NPS and those that participate, so that they start to maintain contact across both industry and the services to know how to find some of these solutions to complex problems.”

NPS students have completed several tours of duty before coming to Monterey. “They have tactical experience, and they

have operational experience, although not at a senior level,” said another facilitator, Matt Largent, head of forecasting, assessment and transition at Naval Information Warfare Center Atlantic in Charleston, South Carolina. “This workshop invites them to be part of the higher-level conversation.”

Another facilitator, retired Marine Col. Todd Lyons, vice president for the NPS Alumni Association and Foundation, said the workshop was as much about problem framing as problem solving.

Prof. Lyla Englehorn was the workshop facilitator.

“My biggest goal in any of these workshops is to introduce a new toolbox to approach a complex problem space – what we call ‘wicked problems,’” she said. “You can’t propose a solution or solve a problem until you understand the status quo.”

“When we present these emerging technologies in this forum, it gives our concept generation team members a sense of what’s just outside of the box, what’s the adjacent possible,” she said. “We hear ‘thinking outside the box’ all the time. But stand on the edge of that box, what can you touch? What’s within the potential 2035 time-frame?”

Following panel discussions and presentations from leading technical experts, the teams and their embedded facilitators had seven hours of scheduled concept generation time to meet that challenge, and presented their best concepts on the final morning of the workshop.

According to Englehorn, this applied approach ensures that NPS provides defense-focused graduate education, including classified studies and interdisciplinary research, to advance the operational effectiveness, technological leadership and warfighting advantage of the naval service.

Avoiding Cost, Time, Jetlag

While the coronavirus presented challenges, there were also opportunities. The COVID-19 pandemic pushed all resident work at the Monterey campus to a remote environment, so WIC workshop became a mostly virtual affair.

Englehorn said in spite of the pandemic, the workshop was able to include a greater breadth of participants around the world this year.

“We broadened our participation quite extensively. Technology allowed us to do that. We had students participating remotely from Singapore and Romania, and a U.S. Marine Corps officer who is on an exchange program at the Colombian Naval Academy.”

The NPS Virtual Campus employs a combination of remote learning tools, including Microsoft Teams for plenary session and concept generation team breakout rooms. The NPS distance learning platform, Sakai, supported all materials for the workshop which allowed for participants to review materials in advance, reference them throughout the workshop as well after the results have been posted. The teams also used the MURAL3 collaboration tool for concept generation work in an unclassified remote environment.

“We normally conduct this as a resident activity. Most of the teams were working at unclassified levels because of the way we executed the event. However, one team of select NPS students was able to gather in person on campus (following strict COVID 19 protocols) working on technologies related to informational warfare at the classified level. They brainstormed the old-fashioned way, with whiteboards, Post-it notes and Sharpies,” Englehorn said.

Even if Covid-19 restrictions are removed next year, Englehorn said NPS may keep some of its newly learned best practices.

“Having hybrid events using these online tools allows us to involve many more people working on these problems,” he said. “We’re not looking at the ‘new normal,’ but the ‘new next.’”