

Navy Digital Director: 'Resist the Urge for Complexity' in Combat Systems



The Navy at first did not pay sufficient attention to the network for its unmanned systems, according to Kelly McCool, acting director of the Digital Warfare Office. She said Nov. 19 the service needs to resist the urge to “drive up complexity” and focus on interoperability. U.S. Navy / Anthony Powers

ARLINGTON, Va. – The official in the Office of the Chief of Naval Operations in charge of coordinating interoperability of the combat systems between the Navy’s ships, submarines, aircraft and their sensors said the service needs to “resist the urge to drive up complexity.”

Kelly McCool, acting director, Digital Warfare Office (DWO), in the Office of the Chief of Naval Operations, speaking Nov. 19 in the Virtual Combat Systems Symposium sponsored by the American Society of Naval Engineers, was addressing the Navy’s Fully Integrated Combat Force concept.

“We’re not focused on a single integrated combat system on a single platform. We need a force that’s fully integrated and distributed,” McCool said.

“The first challenge I see is that we don’t write requirements to buy a fully integrated force,” she said. “We write requirements and develop systems [with] interoperability as a second thought, as an after-thought, as a fall-out. We’re learning some of those lessons with our unmanned systems where we did not pay enough attention to the networking, and now we’re doing the corrective actions to make sure the network can support our unmanned systems.

"We're going to fight on the network, so we have got to value and resource and set requirements that are associated with the networks and the data that is needed to make the timely decisions and the tools that are needed to make those timely decisions," she said.

She said that with the surface, subsurface, aviation and expeditionary resource sponsors, the information warfare/intelligence sponsor, and all of their stakeholders "there's the potential to drive up the complexity."

McCool said "the second challenge we all are faced with here is we really need to resist the urge to drive up the complexity in this problem so that we are not faced with another ForceNet or some effort that just becomes too complex, [with] too many stakeholders. In my experience, when you have a lot of stakeholders, we sometimes don't make those hard decisions about what is the most important. We add everybody's voice in and then you have some competing requirements. This drives complexity. It drives to the frustration that the acquisition timelines become long."

McCool, who spent most of her career so far on the acquisition side but now works on the resourcing side, said that she has strong interest in wanting to make sure we approach the requirements in a way that allows us to grow and evolve with the technology, and not be so complex and so prescriptive that we lock ourselves in too early and force some major acquisition development program. That said, there definitely is this space a need for the government to set some parameters."

She said that she was "really doubling down on the networks, getting the requirements right for our Naval Tactical Grid, getting the requirements right for the data, the decision support tools and the architectures we're going to need across the board and doing that in parallel with the Integrated Combat System development so that we're loosely coupled but

we're not creating this development upon development that becomes a snowball that's unachievable.

"So, there's some black art there and we're going to have to work through that," she added.