

INSIDE DEFENSE**DAILY NEWS**

Army Research Lab opens regional partnership in Boston

April 09, 2018 | **Courtney McBride**

The Army Research Laboratory has established a new outpost designed to leverage academic and private-sector resources to advance the service's science and technology priorities.

ARL Northeast, headquartered in Boston, will enable Army scientists to work alongside their counterparts from academia and industry in a bid to narrow the gap between basic and applied research and the provision of capabilities for soldiers.

In an April 6 interview, Melissa Flagg, ARL Northeast site lead, described the initiative as a recognition that despite historical successes, the Army needed to make "some challenging cultural changes and structural changes" to account for global shifts in science and technology and innovation.

The new organization is part of ARL's Open Campus Initiative, and joins existing sites in Austin, Chicago and Los Angeles.

Its primary office is at the Kostas Research Institute for Homeland Security at Northeastern University, within which the Army has "access to several partner companies that are already located here," Flagg said.

Flagg, a former deputy assistant secretary of defense for research, told *Inside the Army* the new location provides "unique opportunities," highlighting the "dense intellectual environment" in and around Boston. In addition to an array of colleges and universities, the region is home to federally funded research and development centers such as MIT Lincoln Laboratory, the MITRE Corporation and Draper Labs. Adding in the Natick Soldier Research, Development and Engineering Center and the Naval Undersea Warfare Command fosters "an environment that both stimulates incredible innovation, has a foundation in real intellectual rigor, but also knows how to do business with [the Defense Department]," she said.

"Forward-deploying [Army] scientists into this mix" of university labs and manufacturing sites rather than having each group working in isolation is intended to generate more varied and creative solutions.

Flagg emphasized Army senior leaders' focus on bringing S&T and requirements closer together as part of the drive to modernize the force.

"I see places like Boston that anchor in this sort of intellectual density and history with DOD as critical to making that happen," she said.

The ARL headquarters at Aberdeen Proving Ground and Adelphi, MD, functions as the liaison to the modernization cross-functional teams, while the extended sites are meant to "amplify and articulate how the work that's happening in the slightly outer regions . . . can be sucked in and used very rapidly by those teams."

That said, Flagg said "there are clearly some topical areas that we see as directly relevant to the modernization priorities that we're starting with." Materials and manufacturing sciences is "an area that matters to almost every single modernization priority. You want to be lighter, you want to be more sustainable, you want to have lower maintenance regimes and have a longer endurance."

She cited Future Vertical Lift aircraft and Next Generation Combat Vehicle as requiring such materials to provide greater lethality and survivability.

While not a modernization priority in itself, materials and manufacturing science "is truly an essential area that has to be developed" in order to achieve these objectives, she said.

Other technologies with potential applications to Army modernization priorities include "artificial intelligence and intelligent systems," Flagg said, citing the service's plans for autonomous capability for aviation and ground platforms. AI also can prove critical for the Army network, she added.

"We have capability in the region that is well demonstrated, and modernization priorities that are in need of foundational research that will allow us to push our capabilities forward as aggressively and quickly as possible in those areas," Flagg said.

The Boston region has "been extremely good at physics-based approaches . . . has a really solid foundation in materials, a great history in manufacturing, states that have leaned forward in supporting incredible infrastructure for modernizing in those areas," she continued. Additionally, the region "hasn't just focused on innovation and software; they've also kept alive this commitment to hard tech. So innovation that you see here is really bringing hardware and software together and ensuring that we really do have innovation in the hardware space -- which is critical to the Department of Defense."

Flagg cited her belief that service leaders recognize "you can't just silo everything into a methodical relay race . . . if you want to move fast, you actually have to compress the space between concept and capability, you have to have people working more in a soup than in a linear sort of marching order."

Ultimately, Flagg told *ITA*, the focus is on the science rather than prescribed applications for it.

"This is about tapping world-class minds where they are, leveraging world-class facilities that they've built up over decades, and applying those back to the big Army challenges," she said. "This is all about the work. It starts with the idea, and it starts with the work. While we want to be focused on the modernization priorities as the outcomes, we don't want to limit people in how they solve those problems by giving them a list that they have to fit into."

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