NAWCAD Commander Rear Adm. Shane Gahagan and Executive Director Leslie Taylor open the command’s new Innovation Hub (iHUB) for business during a ribbon cutting ceremony at Patuxent River Naval Air Station on Aug. 1. The iHUB is the command’s new innovation maker space offering the entire workforce access to a fabrication lab, rapid prototype machinery and work space, collaboration space and more. (U.S. Navy photo)

NAVAL AIR WARFARE COMMAND AIRCRAFT DIVISION, PATUXENT RIVER, Md. — NAWCAD Commander, Rear Adm. Shane Gahagan and Executive Director Leslie Taylor, opened the command’s new Innovation Hub (iHUB) during a ribbon cutting ceremony, Aug. 1.

The iHUB is a new makerspace created to foster and enhance the command’s organic talent in rapid response to Fleet process and technical problems. The facility features prototyping equipment, materials, technical support and training. It is also home to the FabLab, NAWCAD’s mobile suite of digital fabrication and rapid prototype machines.

The iHUB’S mission is to empower the workforce to deliver warfighting capabilities faster by providing modernized tools on-site and an environment to innovate and collaborate. The space includes digital fabrication and prototype machinery, laser cutters and milling machinery, 3-D printers, programming software and electronics, work benches and hand tools, data and application development software and high-tech collaboration space. The facility is available to all NAVAIR and NAWCAD military personnel, civilians and
contractors.

Brought to life by NAWCAD’s Strategic Operations and Initiatives group, the iHUB and FabLab are direct responses from Gahagan and Taylor following a command climate survey where the workforce requested modernized resources to keep up with a rapidly changing tech and defense industry. The team also included support from the Information Technology and Cyber Security group, Naval Facilities Engineering Command, the Army Corps of Engineers and industry partners who took the project from concept to ribbon cutting in just over 18 months—a true testament of the command’s charge for "speed to Fleet."

“The iHUB is part of the NAWCAD innovation initiative to establish an environment in which the workforce can fashion the future,” said Denise Cifone, director of NAWCAD’s Strategic Operations and Initiatives group, “Aided by disruptive leadership, these resources help the command focus on creativity, technological advancement, process improvements, information sharing and networking.”

To date, the iHUB and FabLab have facilitated over 50 projects ranging from printing engine exhaust nozzles to optical lens fixtures. Its latest success story comes from NAWCAD’s Propulsion and Power division. The engineering group was tasked with supporting the F/A-18 and EA-18G program office on the redesign of a Super Hornet engine exhaust actuator. The engineers realized they needed special tooling that was uneasy to procure. The program office’s business partners offered to produce a new set for $100,000 with a delivery date 10 months later. Instead, the engineers did it themselves.

Leveraging the resources at the iHUB, the engineers designed and prototyped the tool within 24 hours using Computer Aided Design (CAD). The item worked as intended on first attempt costing the Navy less than $5 in material and was pivotal in keeping the actuator project on schedule and budget.

“Engineers have an innate desire to engineer, to design and innovate” said Propulsion and Power engineer Chuck Stouffer, “Employees are not realizing their full potential project managing industry’s solutions to our Navy’s problems from afar.” Stouffer says the iHUB is a leap in the right direction. “Command innovators need no longer wish they had more capability because it’s here. The facility is fully funded and readily available. There is no roadblock holding you back—get up and go make it.”

Stouffer now instructs prototyping courses at the iHUB, which also offers a number of design and fabrication courses expanding the skillset of NAWCAD employees. The iHUB’s most requested classes are introductory, intermediate and operator 3-D printing courses. The facility is on track to train over 400 employees at NAS Patuxent River by end of FY2018—a number hugely surpassing initial attendance goals.
Innovation Hub Opens at Patuxent River

Other innovation spaces at NAWCAD include command huddle spaces, a Software Sandbox focusing on cyber and app development, the Innovation Garage at NAS Webster Field, and a future Logistics Immersive Virtual Environment Lab dedicated to digitizing logistics at NAS Patuxent River.

With facilities in Patuxent River, Maryland; Lakehurst, New Jersey; and Orlando, Florida, NAWCAD supports the research and development, engineering, test and evaluation of all Navy and Marine Corps air vehicle systems and trainers.

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