

The iHub story

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The iHub gives the workforce an environment where they can quickly generate innovative solutions to operational challenges. Its collaboration spaces are designed to be used as one main room or four separate ones.

U.S. Navy photo by Gerard Wallis

Start with feedback from the Naval Air Warfare Center Aircraft Division's (NAWCAD) most recent Command Climate Survey that the workplace lacked innovation, add visits to tech incubators in government and industry, infuse tenacity, determination and plain, old elbow grease, and there you have it—the iHub.

Short for “Innovation Hub,” NAWCAD's iHub opened for business at Naval Air Station Patuxent River, Maryland, last August after taking a little more than 18 months from concept to ribbon cutting.

“The iHub serves as a visual symbol that leadership heard the workforce from the Command Climate Survey,” said Denise Cifone, NAWCAD's director of strategic operations and initiatives. “It also says we are not the same old bureaucratic organization of yesterday.”

With a command mandate to improve innovation, Cifone formed a team that called itself ‘NAWCmADe’ and hit the road to learn more from other government agencies using creative and unique ways to innovate.

“We visited various innovation cells in the Washington, D.C., area and around other warfare centers,” Cifone said. “The biggest inspiration came from SOFWERX in Tampa, Florida, which was the vision of Mr. James ‘Hondo’ Geurts. He wanted a venue where industry and other partners could collaborate and deliver capabilities to the fleet quickly. This vision was instrumental in the development of our strategy.”

Now Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RD&A)), Guerts launched SOFWERX when he was an acquisition executive for U.S. Special Operations Command (USSOCOM). Housed in a former tattoo parlor, SOFWERX is a tech incubator and rapid prototyping facility where the government can utilize the faster cycle times of industry to better respond to the shrinking technology gap between the U.S. and its adversaries.

It's this shrinking gap that led NAWCAD to launch not only the iHub, but several other facilities and initiatives such as huddle rooms, maker spaces, an Innovation Garage at Naval Outlying Field Webster in St. Inigoes, Maryland, and its mobile digital fabrication laboratory, or FabLab. There are mentoring pulses, innovation sprints and an innovation challenge-like program for non-developmental employees.

“Our hope is to change the way the workforce approaches a problem and even change some of the command processes that could benefit from an agile work environment, ultimately lessening the need for NAWCAD to outsource,” Cifone said.

Tony Schmidt, NAWCAD's director of rapid prototyping, experimentation and demonstration (RPED), emphasized the iHub's effectiveness.

“We can walk out with something completed,” he said. “The iHub gave us the chance to get out of the environment we were used to, and innovative thinking opened up. We brought people together from different homerooms, competencies and locations. It was ‘controlled chaos,’ which was good, because you see a different energy as opposed to a conference room. People have the ability to move around, go off into smaller groups and then come back as one team. While you still need conference rooms, the iHub is more of a workshop space. It has a ‘no need to wait, let's go’ atmosphere. Some of the team had arrived early, and they got right to work.”

The iHub's maker spaces have been humming with small but significant projects. For example, Austin Brouillard, an engineer with the turboprop and turboshaft design branch in NAWCAD's Propulsion and Power Department, created a tool that saved more than 60 hours on a project that will help redefine pass/fail criteria for damage on T56 engine compressor blades and determine which ones will make ideal test subjects during engine frequency testing.

Prior to Brouillard's innovation, inspecting the blades for corrosion, pitting along the edges, foreign object damage and other signs of wear required holding them under a microscope using a small lump of clay that needed to be remolded and positioned for roughly 19 test points per blade, a process Brouillard estimated took about 30 minutes.

With 132 total blades to inspect—33 for each of the four engines under review—the time spent reshaping clay added up fast.

So Brouillard, after taking a 3-D printing class, designed and printed an interlocking holder and stand for the compressor blade that easily fits under a microscope. All-in-all, it took about two weeks from conception to finished product, and now instead of spending 30 minutes per blade on set-up and positioning, Brouillard estimates he spends a few seconds. Add up the savings across 132 inspected blades, and Brouillard's ingenuity saved at least 60 hours.

Best of all, Brouillard's tool can be used across the fleet. The blades he was inspecting came from E-2C Hawkeyes, but several other platforms use the T56 engine. In addition, because the blade holder is removable and can be swapped out from the base of its stand, Brouillard's design can easily be adapted for blades from different compressor stages or even other engines.

Since it's opening in August, there have been almost 250 workshops, technical interchanges, 3-D printing classes and printing, brainstorming or training sessions held in the iHub, with more than 90 projects printed to meet fleet needs.

For more information and to register for the collaboration spaces or 3-D classes and training, visit <https://myteam2.navair.navy.mil/ad/nawcmade/Pages/homepage.aspx>.



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