

HII Breaks Ground on Unmanned Systems Center of Excellence



Hampton Mayor Donnie Tuck, Virginia Gov. Ralph Northam and HII Executive Vice President and President, HII Technical Solutions Andy Green break ground on HII's Unmanned Systems Center of Excellence. HII

NEWPORT NEWS, Va. – Huntington Ingalls Industries has broken ground on a new Unmanned Systems Center of Excellence in Hampton, Virginia, the company said in a Sept. 22 release. Two buildings totaling over 150,000 square feet will be constructed on the 20-acre campus and will be purpose-built for unmanned systems prototyping, production and testing.

“With U.S. Navy’s increasing demand for UUVs and USVs, we are committed to investing in and expanding our unmanned systems capabilities,” said Andy Green, HII executive vice president and president of Technical Solutions. “Our new Unmanned Systems Center of Excellence will ensure we can continue to provide our customers with the most advanced autonomous systems across all class sizes.”

The HII Unmanned Systems Center of Excellence, located on the Hampton Roads Center – North Campus, will be a state-of-the-art facility with a high-tech digital manufacturing infrastructure. This agile space will be reconfigurable for different production and systems integration projects and have precision machining capabilities, a surface finishing area and a dedicated welding space.

“Virginia is proud to be home to the largest military shipbuilder in the country,” said Gov. Ralph Northam. “Huntington Ingalls Industries is a national leader in advanced manufacturing, and this investment is a powerful testament to Virginia’s workers and business environment. The company’s new unmanned systems facility in Hampton will

support America's national security and play a key role in strengthening our economic recovery as we continue working to rebound from this health crisis."

HII partnered with the Virginia Economic Development Partnership, the city of Hampton and the Hampton Roads Alliance to secure the project for Virginia. More than 250 jobs will be created and will enable collaboration with HII's Newport News Shipbuilding division, which has advanced undersea system engineering capabilities.

"The new campus complements our current facilities in Massachusetts, Florida and Washington that have been delivering marine robotics to the Navy for nearly 20 years," said Duane Fotheringham, president, Technical Solutions' Unmanned Systems business group. "In order to manufacture and support large and extra-large UUVs, the size of the manufacturing operation needs to increase significantly. This new facility will give us the space and infrastructure we need to scale our operations to meet the needs of our customers now and into the future."

The groundbreaking ceremony was also attended by Virginia Secretary of Commerce and Trade Brian Ball; Hampton Mayor Donnie R. Tuck; Hampton Economic Development Director Chuck Rigney Sr., and Rob Brown, president of Robert Brown & Associates.

The first 22,000-square-foot building will be completed by the end of this year. The main 135,000 square-foot-facility is planned to be completed in the fourth quarter of 2021.

Helicopter Sea Combat Squadron 22 gets first MQ-8C Fire Scout UAS



An MQ-8C Fire Scout on the flight deck of the Independence variant littoral combat ship USS Coronado (LCS 4) in 2018. U.S. Navy / Ens. Jalen Robinson

NORFOLK, Va. – Helicopter Sea Combat Squadron 22 received its first MQ-8C Fire Scout unmanned helicopter on Sept. 15 aboard Naval Station Norfolk, the squadron announced.

HSC-22 marks the first East Coast squadron to operate the MH-60S Knighthawk, MQ-8B Fire Scout and MQ-8C Fire Scout. The new added capability of the MQ-8C combines the capabilities of the MQ-8B with the MH-60S Knighthawk to improve the Navy's ability to investigate and target hostile surface contacts, the squadron said. Both Fire Scouts are built by Northrop Grumman.

“Incorporating the MQ-8C will represent a significant improvement in our unmanned air vehicle mission capability,” said Cmdr. Matthew Wright, HSC-22's commanding officer. “The ‘Charlie’ is bigger, faster, can carry more mission equipment, and remain airborne over twice as long as our already-proven MQ-8Bs.”

MQ-8B and C Fire Scout variants can be operated from ships or land, extending the ability to support distributed maritime operations. Most of the software is similar across both systems, but the crew must adapt to the C's new capabilities and obtain additional qualifications to operate it.

“The MQ-8C Firescout is the latest step toward increasing the duration that UAS has on the battlefield as well as the impact,” said Lt. Ryan Jaenke, an MH-60s and MQ-8B/C pilot.

“It advances the reliability of UAS as well as leaves a larger impact on the battlefield in missions that are not new to today’s warfighter.”

HSC-22’s mission is to provide manned and unmanned maritime attack and combat support capabilities to the fleet. HSC-22’s inherent versatility provides full-spectrum warfighting support across multiple mission sets and diverse and distributed platforms.

AI, Machine Learning, seen revolutionizing undersea activities



A Sail Drone of the type recently used by NOAA to monitor fisheries in Alaska. This one is transiting the southern Chukchi Sea in 2017. U.S. Coast Guard / Petty Officer 3rd Class Amanda Norcross

Artificial intelligence, machine learning and unmanned systems are enabling surface and undersea activities even while COVID-19 hampers the ability to put humans on ships, maritime leaders said during a webinar on Sept. 17.

Retired Rear Adm. Tim Gallaudet, deputy administrator of the National Oceanic and Atmospheric Administration and the former Oceanographer of the Navy, said COVID has put ship deployments on hold for months, but the agency has leveraged autonomous systems to keep the work going.

For instance, NOAA sent Sail Drones to Alaska to perform a critical fishery survey and for coastal mapping.

“We were able to map in pretty shallow areas that would have been hazardous for ships,” Gallaudet said in the webinar, hosted by the Marine Technology Society’s Washington section and the company Oceaneering.

NOAA was also able to use underwater gliders to measure water temperatures, which helped accurately predict the track of Hurricane Laura. This was done with the deployment of just a few operators on small boats in the Caribbean and Gulf of Mexico.

The agency is leveraging artificial intelligence, machine learning, autonomous systems, data management and other advances and “applying those technologies in everything we do,” he said, including setting up a NOAA AI center.

The U.S. Navy is also leaning into these technologies, said Adm. Bill Houston, director of the Undersea Warfare Division in the Office of the Chief of Naval Operations (N97).

His unmanned underwater vehicle portfolio alone is worth \$2.8 billion, he said, including the MK18 and the Knifefish, as well as the larger Orca, Razorback and Snakehead UUVs that are being developed. AI and machine learning are going to be key in using these systems and maintaining U.S. overmatch against adversaries, he said.

“We’re not going to be a leader in AI, industry is, [and] we need to go ahead to be able to leverage that with academia,” he said.