

CHALLENGE: MEETING MISSION NEEDS

Rapid increases in the availability and sophistication of small, unmanned aircraft systems (sUAS) represent a significant challenge as their capabilities progress faster than the ability to detect, track, identify, and potentially mitigate any potential threats. The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) Counter Unmanned Aircraft Systems (C-UAS) program is assessing C-UAS technologies and guiding the development of new capabilities for the homeland security enterprise (HSE). The program supports requirements documentation, rapid development, system integration, and specification and performance testing based on the C-UAS needs and requirements of U.S. Customs and Border Protection (CBP), Federal Protective Service (FPS), Transportation Security Administration (TSA), U.S. Secret Service (USSS), and U.S. Coast Guard (USCG).

PROGRAM GOALS

The S&T C-UAS program aims to:

- Advise the HSE on the performance and capabilities of state-of-the-art technology solutions in the C-UAS space
- Ensure a quick reaction capability exists for DHS components to address urgent needs
- Transition C-UAS capabilities to DHS components by researching, developing, testing, and evaluating various C-UAS technologies against their requirements

CAPTURING TECHNOLOGICAL ADVANCES

Given the sUAS market's rise in sales and increase in capabilities, they have become a security concern due to the ease with which they can aid in intelligence gathering and/or can be used as a malicious delivery platform. This has created a need to identify available C-UAS technologies, evaluate the state of the market, monitor emerging threats, and support efforts to select and pilot suitable C-UAS technologies for a range of DHS missions.

In addition, S&T is collaborating with partners such as the U.S. Department of Justice and Department of Defense (DOD) to share test and evaluation results of best-in-class C-UAS technologies in operationally relevant environments. S&T also has an open Long-Range Broad Agency Announcement to engage traditional and non-traditional solution providers in various C-UAS technologies and solutions.



MISSION IMPACT

This program assists DHS components in defending the nation from UAS threats by providing research, development, test, and evaluation of C-UAS technologies.

C-UAS ACCOMPLISHMENTS

- Worked hand-in-hand with DHS components to pilot the C-UAS capabilities approved under U.S.C. Title 6 Section 124n at a USCG operational site, in between ports of entry along the Southern U.S. border, a site within the national capital region, and at an international airport
- Transitioned prototype C-UAS capabilities to CBP, FPS, USCG, USSS, and TSA
- Established a C-UAS Testbed in Richmond, VA, which will assist DHS components, state, and local agencies by providing research, development, test, and evaluation of C-UAS technologies in the very difficult urban environment

UPCOMING MILESTONES

- Test and assess C-UAS capabilities against multiple sUAS simultaneously
- Transition pilot capabilities to DHS components for operational use
- Modify and test existing DHS prototype systems for DHS interoperability with another partner agency

PERFORMERS AND PARTNERS

The C-UAS team is comprised of national labs, industry, federally funded research and development centers, DHS and DOD technical labs, and other interagency partners.