



Supporting UA's world-class drone program



Beyond the visual line of sight (BVLOS) flights and integration into public airspace open new possible industries and applications.

UA drone program FY24 - \$20M

The UA's Alaska Center for Unmanned Aircraft Systems Integration (ACUASI) will expand to develop the drone test and evaluation capabilities for drone and payload manufacturers across the state; implement workforce development and educational programs for students at all levels across the State; conduct the research required to break the Beyond Visual Line of Sight (BVLOS) barrier keeping Alaskan companies from safely flying drones long distances on missions of import to the State; raise the profile of Alaska's drone industry and capabilities through the annual Governor's Autonomous Systems conference and a public relations campaign; and support the State's agencies' drone efforts.

Alaska possesses the perfect environment for testing the technologies, policies, and procedures needed to conduct real-world drone cargo operations with minimal risk to people on the ground and other aircraft. This is year 2 of a 5-year plan to position ACUASI as the best drone program in North America. The \$10M in the Gov's proposed budget will go toward fully implementing phase 2 of the project.

- 1.) ACUASI will advance the implementation of the three new Emerging Technologies Test Ranges.
 - a. ACUASI will finish the permanent Emerging Technologies Test Range drone facility at Nena Municipal Airport including the permanent hangar and office space. ACUASI will implement infrastructure enabling, attracting, and testing for advanced air mobility. We expect Nena to be a hub for testing drone cargo operations.
 - b. ACUASI also will complete the stand up of the other two Emerging Technologies Test Ranges in Valdez and Palmer. ACUASI will install research and development radars at both sites to further the ability to conduct Beyond Visual Line of Sight (BVLOS) research at each site. ACUASI will also provide access to tools, test and evaluation instrumentation, and chase aircraft support for customers using the ranges to test their novel, prototype systems and sensors.
- 2.) ACUASI and its academic partners will expand the drone and Aerospace Engineering programs to students at all levels across Alaska.
 - a. ACUASI and UAF's College of Engineering and Mines will strengthen the Aerospace Engineering program, including hiring another full-time faculty member, who will create new courses in support of the program. ACUASI will also be hiring full-time graduate students to work for the new faculty member and continue support for the engineering faculty and graduate students hired in year 1 of this effort. It is expected that the Aerospace Engineering courses will be available to students in all engineering programs inside the UA umbrella, including funding for test equipment and drones for both UAF and UAA students.
 - b. ACUASI and UAF's Community & Technical College Support (CTC) will expand the workforce



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development drone operator and mechanic programs being developed as a part of this effort. CTC will be hiring another faculty member, a certified flight instructor, and two educational designers to develop drone certification courses for distance delivery and dual enrollment programs across Alaska. The program will acquire test equipment, drones, educational materials, and other items required to support the new curriculum.

- c. ACUASI and its educational partners will bring in two new remote sensing faculty members to develop instrumentation for and conduct research using drones for surveying, fisheries, methane detection, and other operations in support of Alaskan industry. These faculty members will be supported with startup packages to jump start their research and graduate students.
- d. ACUASI will start a Rural Alaska Honors Institute (RAHI) type program to bring high school students from across Alaska to Fairbanks for a six-week summer drone education program.
- e. ACUASI will also develop a dual enrollment drone education/certification program offering high school students training to enter the workforce upon graduation.
- f. ACUASI will continue to support UAA's drone program, UAA's Institute for Social and Economic Research's drone economic research, and UAS's drone environmental research.

3.) ACUASI and its partners will continue to advance BVLOS operations in the State through the FAA's BEYOND program and the FAA's Alaska UAS Test Site permissions. These efforts will be focused on enabling long-distance cargo operations, medical supply deliveries, and infrastructure monitoring. These efforts will be supported with ACUASI's new large drone systems and pilots, so multiple flight campaigns can occur simultaneously.

ACUASI will establish a footprint in Galena to support research into longer BVLOS cargo operations.

4.) ACUASI will conduct and expand the new, annual Governor's Autonomous Conference. ACUASI also will conduct a public relations campaign to raise the visibility of Alaska's drone ecosystem, highlight Alaska's drone leadership, and encourage companies from across the country to come to Alaska for drone testing and evaluation.

5.) ACUASI will assist the State of Alaska Department of Transportation & Public Facilities in developing, evaluating, and implementing advanced air mobility infrastructure. ACUASI will continue to assist other state agency drone programs through research for public use operations, such as search and rescue, police and fire department support, natural disaster response, and measures that will help the agencies reduce costs and increase safety.

Note: ACUASI is seeking corporate partnerships and sponsorships for buildings, scholarships, and other high-profile infrastructure and programs.

ACUASI looks forward to implementing this next step in creating the new drone economy in Alaska.

