Unmanned aircraft have enormous potential to benefit Alaska and the nation. Such aircraft can map wildfires, scout remote resource development locations, count wildlife and survey oil spills. They go places where manned aircraft cannot, for a fraction of the price. The University of Alaska Fairbanks is on the forefront of this emerging technology and needs state support to continue that momentum.

The Alaska Center for Unmanned Aircraft Systems Integration (ACUASI), part of the UAF Geophysical Institute, is one of only six Federal Aviation Administration (FAA) test centers in the nation. ACUASI, like the other centers, is charged with finding ways to integrate unmanned aircraft into the national airspace system. The university was selected for this role due to its extensive experience with unmanned aircraft and its existing partnerships with agencies, business and communities. A $5 million state investment in 2012, along with several competitive grants and contracts, has provided infrastructure and personnel to get the program off the ground and establish itself as a national leader.

Today, potential users in the oil and gas, mining and forestry industries are clamoring for unmanned aircraft support. The unmanned aircraft industry is eager to continue testing its systems in Alaska’s unique environment. The university is poised to secure a significant portion of the explosive growth in national UAS-related technical jobs, industry, operations and education. An additional $5 million dollar capital investment, along with a $570,000 component in the university’s operating budget, will make that possible. This will leverage an additional $5 million from other sources and an additional $1 million in matching funds for operating.

Details of this request are found in the UA operating budget under “Economic Development Agenda” and in the UA capital budget under “Research for Alaska.”

In addition to providing personnel, education, equipment and facilities to meet growing demand, the funding will allow the program to expand statewide and build more partnerships with the state, local governments and the military.

Unmanned Aircraft Systems in the Arctic
A resource for Alaska’s communities

UAF graduate student Sam Vanderwaal checks the voltage of one of the connections on an unmanned aerial vehicle. The device is built primarily from plastic components generated from a 3-D printer housed in the south Fairbanks lab.

IN SUMMARY
ALASKA CENTER FOR UNMANNED AIRCRAFT SYSTEMS INTEGRATION
State operating budget request: $570,000
State capital budget request: $5 million
First year need: $1.8 million*

*The first year request will leverage $1 million in funding from external sources.

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ACUASI: POISED TO GROW NEW INDUSTRY IN ALASKA

- A close partnership with the FAA’s Alaska regional office provides the Alaska Center for Unmanned Aircraft Systems Integration (ACUASI) with tailored assistance, focused support and the opportunity to explore more challenging and rewarding projects to help Alaska’s aviation community.

- The ACUASI test site generated over $1 million in revenue last year and is currently negotiating with major clients for new work and revenue. Supporting these clients will require some new range infrastructure in the near term.

- According to multiple outside observers, the UAF program and test site are the strongest and most capable of the six FAA test sites and programs around the nation. Recent and serious project inquiries from major Department of Defense aircraft manufacturers, as well as major civilian corporations, confirm this reputation of excellence.

- The Alaska Legislature’s Unmanned Aircraft Systems (UAS) Task Force, of which UAF is a member, has made Alaska an even more attractive place for industry UAS testing and work. By securing passage of balanced legislation, the state ensures the environment welcomes industry and still protects individual privacy rights.

  - Efforts to educate recreational drone operators benefits manned and unmanned aviation, reduces risks caused by untrained UAS pilots, and helps to increase manned aircraft safety.

- Public outreach over the last year to the flying community and the public has resulted in support for the ACUASI program, partnerships to integrate UAS into the national airspace system, and the hiring of qualified private and commercial pilots as part-time UAS pilots.

Opportunity: Center of Excellence

ACUASI is a core member of the Alliance for System Safety of UAS through Research Excellence (ASSURE). This coalition is competing to become the FAA’s designated unmanned aerial systems Center of Excellence, and the ASSURE proposal includes ACUASI projects. The successful bidder is likely to be announced in late April. If the coalition is selected, UAF’s test site will draw FAA research funds for both UAS operations and test activities to support FAA integration efforts.

Technician Michael Cook works on one of the unmanned aerial vehicles in UAF’s Alaska Center for Unmanned Aircraft Systems Integration shop in south Fairbanks.