

Flying toward Alaska's Technological and Economic Future

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Alaska – The Perfect Place for Drones

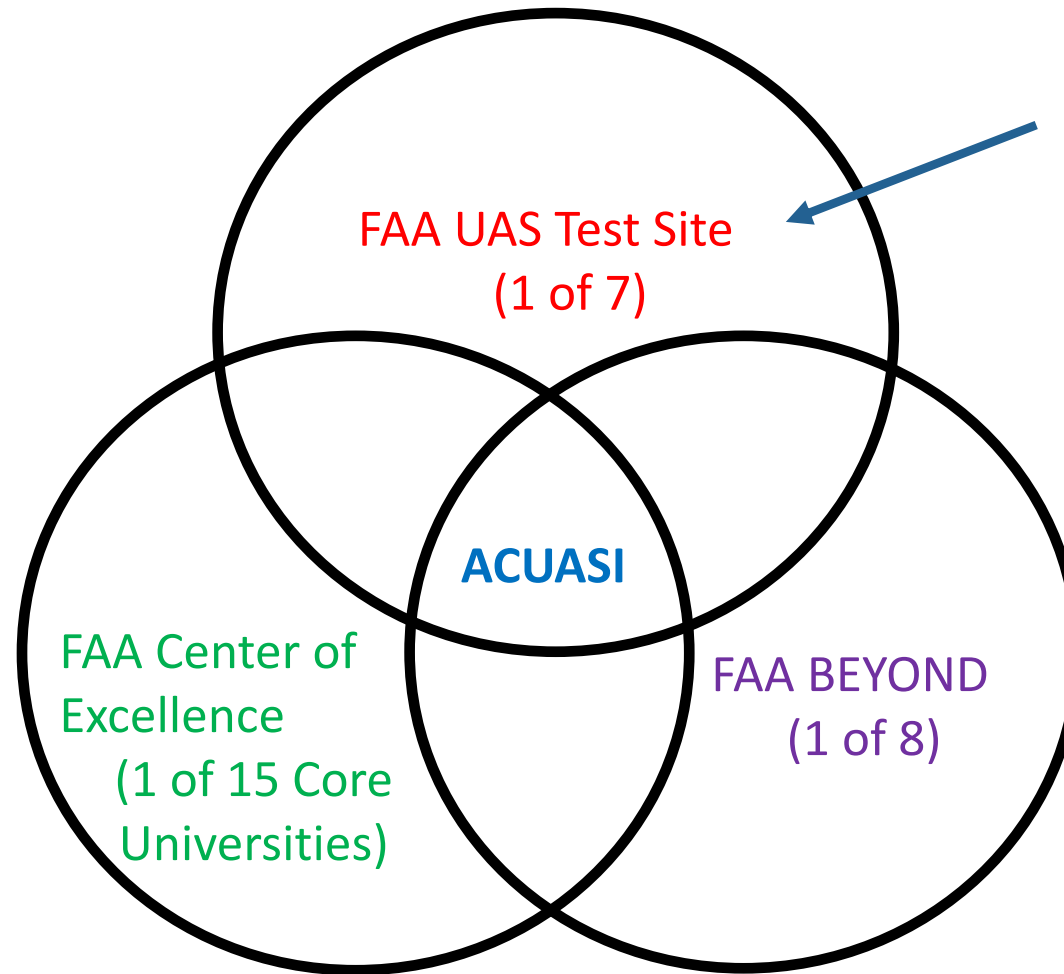
- Environment – A wide variety of climate zones and weather
- Airspace – A large expanse of uncongested airspace
- Aviation Community – More pilots and airplanes per capita than in the rest of the nation
- Critical Needs – Potential drone missions that are critical to the safety and quality of life of Alaskans across the state
- University of Alaska – A world-class university system for educating the workforce needed to grow a drone economy in Alaska
- ACUASI – A Federal Aviation Administration (FAA) recognized leader in drone research, development, test, and evaluation



ACUASI's FAA Recognition

Dec.2020 – Cahill
appointed to the
Drone Advisory
Committee

June 2021 – ACUASI
invited to the Beyond
Visual Line of Sight
(BVLOS) Aviation
Rulemaking
Committee



Ranges in AK,
AZ, CA, HI,
KS, MS, OR, ...



Why Is This FAA Recognition Important?

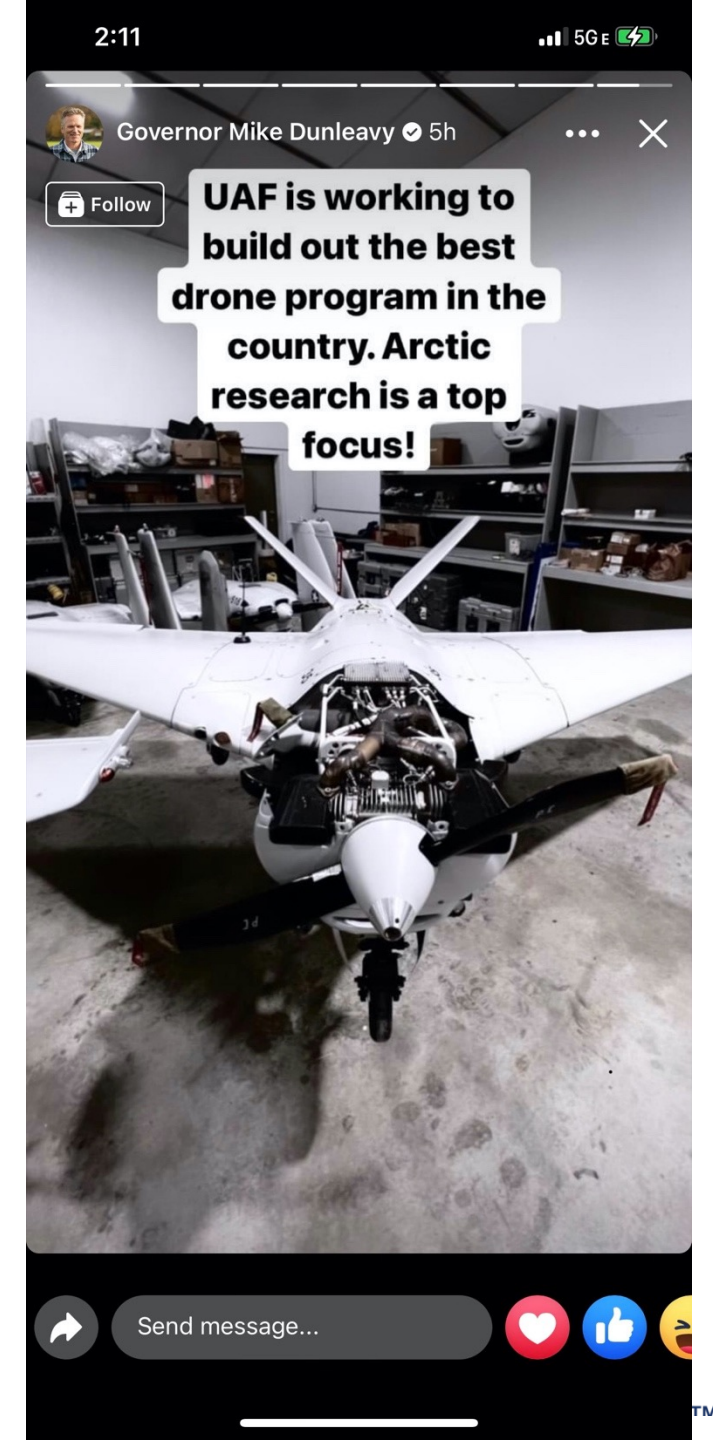


- Drones are on the cusp of flying BVLOS of their pilots in the National Airspace System
- The ability of drones to safely fly long distances from their pilots will allow Alaskan pilots to conduct a wide variety of commercial operations
 - Cargo to rural communities
 - Medical supply deliveries
 - Wildfire response
 - Land surveying and mapping
 - Pipeline monitoring and inspection
 - And many more...
- We want Alaska to be the first place in the country to routinely conduct these commercial operations
- Our participation in these FAA programs is going to help us make this happen



The University of Alaska Drone Program Budget Request

- Governor Dunleavy highlighted unmanned aircraft systems (drones) as a place where Alaska can be a worldwide leader in technology during the unveiling of his budget and his State of the State address
- Governor Dunleavy put \$10M of ARPA funds into his budget for the 'University of Alaska Drone Program' as a 'first step' toward that goal



What Do We Need to Do to Achieve this Goal?

As the first steps to achieving this goal, we need to:

- Develop and test the aircraft and technologies required to safely fly BVLOS
- Work with the FAA to pioneer BVLOS operations to collect the data needed to prove that these missions can be conducted safely
- Develop a workforce that includes everyone from drone operators to business owners, aerospace engineers to cargo handlers, and many others, that can support the explosion in drone operations that is forecast to occur when routine BVLOS flights can occur



Where Will We Invest this Funding?

Alaska Emerging Technologies Test Ranges

- We will develop and instrument three specified areas in Alaska for collecting data on the effectiveness of diverse aircraft and technologies under a wide variety of environmental conditions
- These test ranges will bring drone manufacturers, technology providers, and others to Alaska to prove their technologies under real-world conditions, and not the sterilized test ranges offered in other states
 - The FAA does not consider operations in an area where additional information, such as supplemental radar data, is provided to operators as representative of real-world operations
 - The Alaska Emerging Technologies Test Ranges will not provide supplemental information to the operators, but will only collect information on the systems' responses during real-world operations



Where Will We Invest this Funding?

Increased testing and evaluation of novel operations under the FAA's BEYOND program

- The FAA's four-year long BEYOND program is designed to pioneer and identify the social and economic benefits of routine, commercial BVLOS operations, such as cargo delivery, medical supply delivery, and linear infrastructure monitoring
- ACUASI currently does not have the capacity to conduct all of the operations or collect all of the data for the economic and societal metrics we would like to measure while we have the intensive FAA support offered under BEYOND
- This funding would support increased staffing for ACUASI, the engagement of UAA's Institute of Social and Economic Research, and the utilization of the BEYOND program to advance the drone economy in Alaska



Where Will We Invest this Funding?

Preparation of the future drone industry workforce

- We will work with educational programs across the UA System to develop:
 - Workforce and aerospace engineering courses and curricula
 - Certificates, occupational endorsements, minors, majors, and graduate degrees
 - Hands-on short courses for first responders, government employees, the public, scientists, and industry drone operators
- Hire appropriate teaching faculty and instructors for the courses
- Engage with Alaskan companies to ensure graduates meet industry needs



For Alaska

The goal of these efforts is to:

- Lay the foundation for a vibrant new drone industry in Alaska
- Ensure that Alaska is the place that drone manufacturers, technology developers, and others come to test their systems, conduct flight operations, and invest in Alaskan businesses
- Ensure that Alaska's communities, people, and industry benefit from this emerging technology



Thank you for your attention!



Questions?

