ALASKA STATE LEGISLATURE
SENATE TRANSPORTATION STANDING COMMITTEE
March 14, 2023
1:34 p.m.

MEMBERS PRESENT

Senator James Kaufman, Chair
Senator David Wilson, Vice Chair
Senator Löki Tobin
Senator Jesse Kiehl
Senator Robert Myers

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

PRESENTATION: UNMANNED AIRCRAFT SYSTEMS (UAS) AND ADVANCED AIR MOBILITY (AAM).

- HEARD

PRESENTATION: FLYING TO THE FUTURE: BUILDING THE DRONE INDUSTRY IN ALASKA

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

RYAN MARLOW, Coordinator
Drone Program
Division of Statewide Aviation
Department of Transportation and Public Facilities (DOTPF)
Anchorage, Alaska
POSITION STATEMENT: Delivered a presentation titled "Unmanned Aircraft Systems and Advanced Air Mobility" by the Department of Transportation and Public Facilities (DOTPF).

NICK ADKINS, Deputy Director
Alaska Center for UAS Integration (ACUASI)

University of Alaska Fairbanks
Fairbanks, Alaska
POSITION STATEMENT: Delivered a presentation titled "Building the Drone Industry in Alaska."

ACTION NARRATIVE

1:34:35 PM
CHAIR JAMES KAUFMAN called the Senate Transportation Standing Committee meeting to order at 1:34 p.m. Present at the call to order were Senators Wilson, Tobin, Kiehl, Myers and Chair Kaufman.

PRESENTATION: UNMANNED AIRCRAFT SYSTEMS (UAS) AND ADVANCED AIR MOBILITY (AAM)

1:35:42 PM
CHAIR KAUFMAN announced the consideration of the Advanced Air Mobility presentation.

1:36:06 PM
NICK ADKINS, Deputy Director, Alaska Center for UAS Integration (ACUASI), University of Alaska Fairbanks, Fairbanks, Alaska, introduced himself.

RYAN MARLOW, Coordinator, Drone Program, Division of Statewide Aviation, Department of Transportation and Public Facilities (DOTPF), Anchorage, Alaska, introduced himself and shared a four-minute video about drones in Alaska.

1:39:26 PM
MR. MARLOW delivered a presentation titled, "Unmanned Aircraft Systems (UAS) and Advanced Air Mobility (AAM)." He began with slide 2, "Alaska UAS/AAM Development."

$35.4 Million Programmed for CY 2023 for UAS Research and Development

- Funding Sources
  - U.S. DOT & FAA
  - State of Alaska
  - Private Investments
- Partnerships
  - ACUASI
  - State of Alaska Agencies

- Federal
- Private Industry

1:40:50 PM
MR. MARLOW continued with slide 3, "Alaska UAS Growth for 2022-2023." He reported that Alaska leads the nation with more unmanned aircraft registered than manned aircraft. He stated that the industry averaged 20-30 percent growth each year in the unmanned sector. He remarked on the registration of one unmanned aircraft per 81 people. The technology is utilized for change detection, wildlife monitoring, surveying, inspection and cinematography.

SENATOR KAUFMAN appreciated the desire to improve technology and communication related to air travel.

1:42:26 PM
MR. MARLOW moved to slide 4, "AAM Gap Analysis and Transportation System." He spoke about unmanned transportation advantages. He highlighted the advantages of an initiative-taking approach to multimodal transportation.

1:43:10 PM
MR. MARLOW moved to slide 5, "FAA Alaska Aviation Safety Initiative (FAASI)." He shared strategies developed with the Federal Aviation Administration (FAA). He highlighted the priority of weather reporting enhancement. He mentioned the Automated Weather Observing System (AWOS) and Automated Surface Observing Systems (ASOS), which are required for many scheduled operations. He included the priorities of aeronautical charting, navigation strategy development, surveillance and safety outreach. The priorities build the foundation for the group to proceed with an airspace integration.

1:43:57 PM
SENATOR KIEHL asked about terms like AWOS and surveillance.

1:44:13 PM
MR. MARLOW responded that AWOS involves automated weather observing stations. The FAA currently manages the program. He explained that weather is reported prior to flights. He remarked that the program is difficult to maintain in Alaska. He pointed to system transparency with surveillance technology. He noted that the surveillance monitors unmanned systems and scheduled flights. He explained that some people are not using radios or filing weather plans, so a surveillance system is necessary to detect noncompliant individuals.

1:46:13 PM
MR. MARLOW continued with slide 7, "AAM Infrastructure Monitoring and Geographic Information Systems (GIS)." He pointed to the dashboard displayed on the slide, which highlights funding utilized, airfield maintenance and resurfacing in a digital map.

MR. MARLOW commented on slide 8, which depicts a digital image of Sand Point Airport. He shared that the department received a report that the runway at Sand Point Airport dropped after an earthquake. The department scanned the airport with a drone equipped with Light Detection and Ranging (LIDAR) in 30 minutes to show that the airport runway had indeed dropped by 10 feet. The department made recommendations for the volume required to bring the runway back up to grade.

1:47:32 PM
MR. MARLOW continued with slide 9, "AAM Existing Infrastructure." He pointed to the department's gap analysis with the Advanced Air Mobility (AAM) outline. He stated that the Distance Measuring Equipment (DME), Voice Comm Coverage and Next Generation Weather Radar (NEXRAD) compile products that can be visualized by all assets of aviation.

MR. MARLOW moved to slide 10, "Automated Weather Observing Systems (AWOS) Dashboard." He informed the committee that the department currently has 65 stations in a status of disrepair following the typhoon. The stations are awaiting FAA service. The dashboards allow the department to highlight the problems and arrive at collaborative solutions.

1:48:26 PM
MR. MARLOW continued with slide 11, "Alaska Continuously Operating Reference Network (ACORN)." He stated that next generation technologies provide essential items required for livestream video, communications and control in rural environments. Currently the department utilizes satellite based C2.

MR. MARLOW moved to slide 12, "Alaska Continuously Operating Reference Network (ACORN). He noted that the DOTPF works with the Department of Natural Resources (DNR) to ensure that the statewide network allows for autonomous and next generation vehicles including unmanned systems. The technology enables precision guidance in mountainous areas.

1:49:29 PM
MR. MARLOW moved to slide 13, AAM Technology Deployment." He mentioned the gap analysis and the communities of Bethel and Deadhorse. The department collaborates with planners and the United Stated Department of Defense (DoD) to expand the communities' airports and include remote towers allowing accessibility to unmanned aircraft. He explained that additional information is found on the Unmanned Aircraft Systems (UAS) website.

PRESENTATION: FLYING TO THE FUTURE: BUILDING THE DRONE INDUSTRY IN ALASKA

1:50:33 PM
CHAIR KAUFMAN announced the consideration of a presentation titled "Flying to the Future: Building the Drone Industry."

MR. ADKINS provided the presentation, "Flying to the Future: Building the Drone Industry in Alaska." He began with the slide titled "ACUSI."

- ACUASI is the University of Alaska's drone Center of Excellence
- Our missions include:
  - Assisting the FAA in the safe integration of drones into the National Airspace System
  - Supporting Alaskan drone users and industry
  - Conducting scientific research

MR. ADKINS continued with the next slide, "Goal – Complete Integration of Drones Systems with Traditional Aircraft in the National Airspace System." He stated that the group hopes to function within the airport system.

Goal – Complete Integration of Drones Systems with Traditional Aircraft in the National Airspace System

1:51:21 PM
SENATOR WILSON asked about the ACUASI slide. He asked what type of drones the university and others are using. He wondered if the drones were battery-powered. He queried technology basics related to unmanned aircraft.

MR. ADKINS replied that drones are often thought of as small quadcopters, however, the Cessna Grand Caravan shown on the ACUASI slide is technically an optionally piloted drone. He pointed out that there is a pilot on board during system evaluation. He noted that drones with ACUASI are massive and

developed to deliver cargo to the villages. He highlighted requests from village children for chips and soda.

1:52:55 PM
SENATOR WILSON requested clarification about the state spending money to deliver chips and soda.

MR. ATKINS replied that the deliveries include diapers, milk and all other necessary supplies. He clarified that the villages receive all supplies via air traffic.

1:53:14 PM
CHAIR KAUFMAN analyzed the technical limitations. He acknowledged that the appropriate airstrip, aircraft and public acceptance decrease the limitations.

MR. ATKINS responded that the airstrip requirements are temporary limitations because technology is advancing to vertical take-off options. The runway will instead be utilized as a vertiport. He explained that systems on the ground will exist to guide the drone precisely into the vertiport.

1:54:01 PM
SENATOR WILSON asked how Artificial Intelligence (AI) technology is utilized for drones.

MR. ATKINS replied that AI is utilized in drone development. He stated that the AI is built for payload centers. He mentioned AI built at the University of Alaska Fairbanks (UAF) to spot whales. He added that Merlin Labs utilizes computers to collect route information during air travel. He added that a voice system is in the development stages.

1:54:40 PM
MR. ATKINS moved to slide 4 titled "Who are We?"

We are a combination of:

- Veterans and former defense contractors
- Science and engineering faculty, staff, and students
- Pilots (all pilots are manned aircraft pilots)
- Airframe and Powerplant mechanic (IA)
- Retired FAA Air Traffic Control Flight Service Specialist
- Business developer
- Embedded contractors

1:55:15 PM
MR. ATKINS moved to slide 5 labeled "ACUASI's Military Experience."

- Approximately 124 years of combined military service on the ACUASI team
- Over 24,750 combined hours flying and operating military aircraft, approximately 7,100 of those hours are in combat
- The ACUASI team includes crewmembers qualified on over 28 different manned and unmanned military aircraft
- ACUASI is a place that military skills are a direct transfer to civilian employment

SENATOR MYERS asked about the FAA regulations. He wondered about licensing changes proposed for drone pilots and regular pilots.

MR. ATKINS replied that the program works with the Alliance for System Safety of UAS through Research Excellence (ASSURE), which is a safety organization with 15 core schools. He stated that UAF is one of the ASSURE core schools and works to help the FAA draft the licensing regulations. He spoke about the process of training a pilot to operate a machine. He spoke about the standards related to the aircraft, specifically safety standards. He provided the example of seat belts, a safety precaution that is not indicated for a drone. Another standard involves battery replacement, which requires classification as a maintenance action or a rebuild.

1:56:28 PM
MR. ATKINS detailed slides 6 and 7 titled "FAA Recognition of ACUASI's Expertise." He explained that ACUASI encompasses the Center of Excellence, ASSURE, Beyond (a small aircraft initiative), a designated test site, Next Generation COSTA and Next Generation UAMD.

1:58:23 PM
MR. ATKINS moved to slide 8 titled "BVLOS Aviation Rulemaking Committee."

- We fought to protect Alaska's unique airspace environment for both drones and traditional aircraft
  - There are a lot of planes flying under 500'across Alaska

- Natural GPS-degraded and no cell phone coverage areas so services are hard/impossible to get
- Gained friends in AOPA, Alaskan Airman's Association, and other pilot organizations

1:58:55 PM
MR. ATKINS displayed slide 9 labeled "Partners."

- Alyeska Pipeline Service Company
- Anduril
- Cherokee Nation
- Doyon Limited
- DRONERESPONDERS
- Echodyne
- Fairbanks International Airport
- Fairbanks North Star Borough
- Furie
- Griffon Aerospace
- Insitu
- Iris Automation
- Merck
- Merlin Labs
- North Slope Borough
- Parallel Flight Technologies
- Phenix Solutions
- Pierce Aerospace
- Raytheon (Intelligence & Space)
- Reliable Robotics
- Skyfront
- State of Alaska Department of Transportation and Public Facilities
- Tanana Chiefs Conference
- Turnagain Arm Heavy Lift
- Unmanned Systems Alaska
- Vanilla
- Vigilant Aerospace Systems
- Xwing

1:59:26 PM
MR. ATKINS advanced to slide 10 titled "ACUASI Strategic Planning" and spoke to the following.

- Stakeholder Charrette

- August 16-17, 2022 at UAA
- 16 stakeholders plus members of ACUASI's Strategic Planning Advisory Board
- Document maps out ACUASI's future efforts to support the safe integration of drones into the airspace and the creation of a drone economy in Alaska

1:59:31 PM
SENATOR WILSON asked if Cessna aircraft were gas-powered.

MR. ATKINS replied in the affirmative.

SENATOR WILSON asked what speed drones can be expected to fly.

MR. ATKINS replied that the physical limitations of drones are similar to those of the Cessna Grand Caravan. One major difference involves the airfield; a drone can navigate with zero visibility, whereas a manned aircraft requires visibility to land.

SENATOR WILSON asked about drone regulations for the pilots.

MR. ATKINS replied that the FAA is currently working on unmanned aircraft regulations.

2:01:15 PM
MR. ATKINS continued to slide 11 labeled "What Really Makes us Different."

- Real-world use cases
  - Diapers and milk to the villages
- Agnostic about what technology we use
  - We just want something that works
- Beyond Visual Line Of Sight (BVLOS) is a requirement for most of our use cases
- We don't fly a box

CHAIR KAUFMAN asked about the bullet "We don't fly a box."

MR. ATKINS responded that the group routinely submits requests in the Concept of Operations (CONOPS) format to the FAA for advanced procedures. He explained that a trained person on the ground uses radar to visualize the drone. The advanced practice requires permission and disclosure to the FAA for safety mitigation reasons.

2:03:01 PM

MR. ATKINS moved to slide 12 labeled "Advanced Air Mobility."

- ACUASI is participating in several Advanced Air Mobility (Large UAS Cargo and Urban Air Mobility) efforts
- Flights and project safety oversight in:
  - Alaska – FAA Test Site and Center of Excellence funding - Merlin Labs (autonomous Cessna Grand Caravan), UAF's SeaHunter, + …
  - California – FAA NextGen funding – 2 projects Xwing (remotely piloted Cessna Grand Caravan), Reliable Robotics (remotely piloted Cessna Grand Caravan), Aurora Flight Sciences (optionally-piloted Centaur), UAF's SeaHunter

MR. ATKINS continued to slide 13 labeled "Cargo Delivery."

- Goal – To deliver cargo including medical supplies more frequently to remote communities via large drone
- Alaska's last 'hundreds of miles' problem
- Can fly when traditional aircraft cannot
- Partnership with local air carriers
- Requires a Part 135 certification
- Extended careers for pilots

2:04:15 PM
SENATOR MYERS wondered about the inherent safety of a drone. He asked if the lack of a live pilot is the only safety aspect.

MR. ATKINS replied yes and added that drones are utilized for volcano research. He added that a drone is a tool to trigger an avalanche for safety reasons. He noted that human error is the greatest problem in most aviation accidents. He opined that unmanned aircraft will be far safer than human-piloted aircraft.

2:05:23 PM
CHAIR KAUFMAN added that drones remain neutral in high-stress circumstances.

MR. ATKINS moved to slide 14 titled "Fairbanks International Airport."

- ACUASI now has a hangar at Fairbanks International Airport (FAI) and will be conducting flights from FAI GA runways

MR. ATKINS moved to slide 15 titled "Large Drones (DRS Sentry) at Fairbanks International Airport." He explained that the Sea Hunter is a twin engine airplane that weighs approximately 280 pounds. He added that the Sentry drone weighs approximately 330 pounds. He furthered that the two drones were used for concept proving at the Fairbanks International Airport.

2:06:09 PM
SENATOR WILSON asked what the cost is for each drone.

MR. ATKINS replied that UAF has 10 of the Sentry single-engine drones. The drones were formerly utilized by the military and sold for approximately $10 thousand plus shipping. He didn't recall the original purchase price of the two Sea Hunter drones. He highlighted the improvements the certified mechanics at UAF made to the fuel and electrical systems.

2:07:36 PM
CHAIR KAUFMAN asked about the purpose of the aircraft design with the delta wing configuration.

MR. ATKINS responded that the aircraft was designed for a Navy contract. The aircraft was built for observation purposes.

2:08:16 PM
MR. ATKINS moved to slide 16 titled "Large Drone (DRS Sentry) at Fairbanks International Airport." He expounded that on May 22, 2022, permission was granted to fly the Sentry from Fairbanks International Airport. He spoke to the affirming nature of the flight as it required collaboration with DOTPF, the airport control tower and FAA.

2:09:16 PM
MR. ATKINS moved to slide 16 titled "Next Step: Fairbanks to Nenana." The slide displayed a representation of a Certificate of Authorization (COA) permitting flight plans from Fairbanks International Airport to Nenana. The flight plan enables the use of drones for delivery purposes. He added that flights from Fairbanks International Airport to and from Nenana are scheduled throughout the summer. The control tower and FAA established requirements for the test flights.

2:10:07 PM
MR. ATKINS moved to slide 17 titled "Emerging Technology Test Ranges."

- ACUASI has started setting up three Emerging Technology Test Ranges:
  - Nenana Municipal Airport (ENN)
  - Palmer Municipal Airport (PAQ)
  - Valdez Airport (VDZ)

- Purpose – To assist companies with testing prototype systems and payloads under Alaskan conditions

- Each range will include an on-site range manager, hangar space, and test and evaluation equipment

2:11:01 PM
MR. ATKINS moved to slide 18 titled "Nenana Municipal Airport."

- University of Alaska just signed a 50-year lease with Nenana Municipal Airport (ENN)
- The design for a hangar with office space at ENN is being approved before going out to bid
- ACUASI partnership with Raytheon Intelligence & Space Division is resulting in the addition of a research radar for meteorology information and BVLOS testing being set up at ENN

2:11:48 PM
MR. ATKINS moved to slide 19 titled "Important News."

- On February 6th ACUASI received a waiver from the FAA that greatly expanded our ability to help drone manufacturers get their aircraft approved for use in the National Airspace System
- This is the first such waiver ever granted by the FAA

2:13:00 PM
SENATOR KIEHL asked about the weight of the two types of drones.

MR. ATKINS replied that the Sentry weighs approximately 340 pounds, and the Sea Hunter weighs 299 pounds. He explained that the Sentry was included on the COA.

2:13:29 PM
MR. ATKINS moved to slide 20 titled "DAA System: User Interface." He explained that the university employed multiple systems monitoring the airspace to collect information and improve the Detect and Avoid (DAA) systems. He added that the

university plans to utilize the data for counter-drone work later.

2:13:56 PM
MR. ATKINS moved slide 21 "Pipeline Monitoring."

- FAA granted ACUASI a Part 107 waiver for operations along a 20-mile stretch of TAPS for conducting BVLOS pipeline monitoring testing
- We will be using this area to test DAA and larger Vertical Takeoff and Landing (VTOL) aircraft for surveillance

2:14:23 PM
SENATOR WILSON asked about anti-drone technology. He wondered if the Department of Corrections (DOC) might utilize anti-drone technology if drones were used to drop packages to incarcerated prisoners. He asked if the university studied anti-drone technology.

MR. ATKINS affirmed that the university studies counter-drone technology. He acknowledged the legal ramifications of removing a craft from the airspace. A drone is protected in the airspace. Fines and prison time are consequences for shooting a drone. When a drone is shot, it is uncontrolled, which complicates public safety efforts. He stated that counter-drone technology is also developing quickly.

2:15:53 PM
CHAIR KAUFMAN recalled learning that drone parachutes allow for safe use above crowds. He asked how a drone is safely managed when it is no longer working effectively.

MR. ATKINS stated that ACUASI collaborates with an Alaskan company designing drone parachutes. He asserted that the local company was well-suited for the state and will open up tech jobs for Alaskans.

2:16:44 PM
MR. ATKINS moved to slide 22 titled "Experience Flying Large Drones BVLOS - Transport Canada Operations."

- >30,000 nautical miles of BVLOS flights
- North Atlantic right whales, Gaspé, Canada
- Infrastructure monitoring

He directed attention to the picture on the lower right and then to the picture of a water body on slide 23. He asked the committee members whether they could find the whale in that water body. He stated that the university's AI was able to spot the whale from 2000 feet. He stated that the drone imaged a North Atlantic Right Whale, an endangered species. He moved to slide 24 that shows the whale and explained that a camera on the drone and the 42 megapixel picture is fed into a computer that searches the image and locates the whale. The information is sent to the ground crew and the whale is located in real-time. The process saves whales because ships are alerted about the whale's location and they reduce speed in that area.

2:17:53 PM
SENATOR WILSON asked if the technology was relevant to fish and game counts. He spoke specifically about caribou counts.

MR. ATKINS replied that trained biologists preform the animal counts. He revealed that unmanned aircraft might provide more accurate data, eventually. He remarked that ACUASI partnered with the Department of Fish and Game to slowly initiate the use of drones for game counts.

2:18:59 PM
CHAIR KAUFMAN recalled the US Coast Guard utilizing pigeons but imagined that drones have even greater potential to visualize objects from the air.

MR. ATKINS agreed and added that search and rescue attempts are greatly enhanced by drone use. He explained that a drone has the ability to scan an area and take multiple photographs that are then analyzed with AI. He mentioned the infrared (IR) capability and shared a story about utilizing a drone in a missing child case.

2:20:20 PM
MR. ATKINS moved to slide 25 titled "Disaster Response."

- ACUASI is part of an FAA project that aims to develop a concept of operations for how different federal, state, and local governments, civil operators, and others can deploy drone cooperatively after disasters, such as earthquakes, volcanoes, ice jams, river flooding, and oil spills
- ACUASI and the Alaska Department of Transportation and Public Facilities (DOT&PF) is

using drones to identify areas with high avalanche potential

2:20:37 PM
MR. ATKINS moved to slide 26 titled "Counter-drone (FAA, DOJ, DOD ...)."

The ACUASI team has entered the realm of counter-drone (C-UAS):

- FAA - ASSURE – Effect of detection and mitigation systems on first responder communications, navigational aids, and other systems critical to the safety of the NAS
- DOJ – The use of passive radiofrequency drone detection systems to support local law enforcement agencies
- Army – The development of a mobile prototype system for detection of drones near a column of troops under motion

2:21:01 PM
MR. ATKINS moved to slide 27 titled "Education."

- UAA, UAF, and UAS are all developing drone courses
  - UAA: Remote Pilot w/operations over people
  - UAF: Certificate in UAS operations and additional degrees in aerospace engineering
  - UAS: Drones in environmental studies
- ACUASI conducts STEM outreach events

CHAIR KAUFMAN shared the committee's interest in unmanned aircraft.

MR. ATKINS remarked on ACUASI's focus on science, technology, engineering, and mathematics (STEM) outreach events.

2:22:33 PM
MR. ATKINS moved to slides 28-29 titled "What's Next?"

In the next six months we will:

- Assist partners in flying the first converted Cessna Grand Caravans in Alaska (with safety pilots on board)

- Fly our first drone mission between Fairbanks and Nenana
- Fly numerous drone missions between Fairbanks and Nenana for DAA testing
- Conduct several counter-drone flight campaigns in Alaska and other locations
- Develop metrics for evaluating the success of ACUASI's efforts to spur economic development in the drone industry
- Continue our work with the State of Alaska DOT&PF
- Conduct STEM outreach across Alaska

2:23:57 PM
CHAIR KAUFMAN asked if ACUASI has a mailing list.

MR. ATKINS replied yes, ACUASI was building a mailing list. He offered to collect committee members' emails.

CHAIR KAUFMAN offered to distribute the information to committee members.

2:24:26 PM
MR. ATKINS continued to slides 30-31 titled "Update on FY 23 Funding."

We received $10 M in the State of Alaska FY 23 budget. We have used/will use it to:

- Hire faculty and instructors to support drone/aerospace curricula delivery across UA
- Engage UAA's Institute of Social and Economic Research to evaluate the economics of drones in Alaska
- Identify locations for and begin establishing the three emerging technology test ranges
  - Nenana Municipal Airport received the bulk of the infrastructure money this year
- Accelerate the DAA testing and pioneering flights needed to prove the safety of BVLOS operations in Alaska through the FAA's BEYOND program
- Purchase a large Vertical Takeoff and Landing drone for testing drone deliveries that do not require runways

- Conduct the Global Autonomous Systems Conference in Anchorage August 9-11th – Theme: Trailblazing Autonomous Paths for a New World Economy

2:25:56 PM
MR. ATKINS moved to slides 32-33 "FY 24 Funding Request."

The Governor put $10 M in the FY 24 budget for ACUASI. If the funding survives the budget process, we will use it to:

- Hire faculty, a certified flight instructor, and curriculum developers to create a workforce-focused drone certification program for delivery across Alaska
- Initiate drone-focused, dual enrollment programs for high school students
- Conduct the 2nd Annual Global Autonomous Systems Conference
- Implement the three emerging technology test ranges
- Hire additional pilots and engineers to help emerging technology test range users test and refine their prototype systems
- Accelerate the DAA testing and pioneering flights needed to prove the safety of BVLOS operations in Alaska

2:26:43 PM
MR. ATKINS continued to slide 34 titled "ACUASI's Future Impact on Alaska's Drone Economy."

- ACUASI will be flying large drones from Alaskan airports to test and evaluate drone capabilities and evaluate business cases
- ACUASI and its partners will be developing the technology and processes for monitoring essential infrastructure and other BVLOS missions
- ACUASI will be transferring commercial operations it pioneered to Alaskan companies
- ACUASI's partners are planning to set up branches in Alaska
- The University of Alaska will create workforce development opportunities across Alaska

SENATOR WILSON expressed appreciation for the presentation.

SENATOR TOBIN asked about AI and the issue of control. She wondered about the safety of AI-controlled drones and asked if public safety mechanisms were developed and employed.

2:27:50 PM
MR. ATKINS responded that AI and drones can be used for bad or good. He furthered that the AI developed at UAF was used to search for a whale or understand cross winds. He agreed that both AI and drone use should be developed safely.

CHAIR KAUFMAN expressed appreciation for the presentation and future mailing list information.

2:28:56 PM
SENATOR MYERS asked about drone use to transport commercial cargo.

MR. ATKINS replied that the permissions required present the greatest hurdle. He clarified that ACUASI must prove that the system is capable by first traveling without cargo. The process will allow ACUASI to meet future regulations. He explained ACUASI's commitment to moving toward the goal of transporting cargo with caution.

2:31:08 PM
CHAIR KAUFMAN referenced an old interview with David Bowie related to the internet's influence on society. He compared the influence of the internet to the potential influence of drones on our lives.

2:33:53 PM
There being no further business to come before the committee, Chair Kaufman adjourned the Senate Transportation Standing Committee meeting at 2:33 p.m.