

Development and Implementation of Unmanned Aerial Vehicle Initiatives in the State of Nevada

*May 3, 2017 Briefing for Nevada
Transportation Conference*

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Nevada: DoD's Birthplace of the Unmanned Vehicle Systems Industry

- First UAV/RPA Center of Excellence at NAS Fallon
- Leading development center at Creech Air Force Base
- First State National Guard force integrated into Active Duty UAV program
- Las Vegas 3rd in Top American Cities to fly Drones
<http://www.vocativ.com/350441/drones-zone-the-5-best-cities-to-for-fliers/>



UAS Operations

- 2011, Brookings Institute report identifies UAV/Drones as an industry Nevada is uniquely situated to grow.
- Goal of GOED – Grow the UAV Industry
- December 30, 2013. State of Nevada’s successful designation as FAA UAS Test Site.
 - Other sites: NuAir (NY/MA), MAAP (MD/VA/NJ), Lone Star (TX), ND, Pan-Pacific (AK, OR, HI)
 - MI joined NuAir
 - NM added under the 2016 AIRRA
- Initial airspace access thru COA Process
- Sec 333 viewed as viable alternative for SUAS
- NV performed more test flights in Restricted Airspace than in the NAS

UAS Operations

- Aviation Innovation, Reform and Reauthorization Act of 2016 [7/15/2016]
- Sec. 1102. Extension of Expiring Authorities
 - (i) Section 332(c)(1) of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note) is amended by striking “5 years after the date of enactment of this Act” and inserting “on September 30, 2019”.

UAS Operations

- Nevada built to accommodate both large and small UAS.
- Nevada incorporates non-profit NV Inst Auto Systems (NIAS)
- SUAS dominated 2014-2015 development era.
- Fall, 2016 – Part 107 made available for commercial ops.
- August, 2015, Test Sites received Broad Area COA (a/k/a Test Site COA).
 - Comprises a “blanket” permission to fly public aircraft operations anywhere in the National Airspace System.
 - at or below 200’ (NV: up to 1200’)
 - SUAS < 55 lbs. (NV flies large systems)
 - Daylight ops (NV approved for night ops)
 - within the line of sight of the operator
 - can fly anywhere in the National Air Space
 - > 5 miles from towered airport (w/o tower permission)
 - no need for new COA for each different aircraft (uses 333 approval list)

UAS Operations

- At the end of 2016, Nevada UAS Test Site had flown 804+ flights in CY.
- August 2015, Test Sites become locations for NASA UTM ops.
 - April 2016, Nevada opens NASA-sponsored NUANCE Lab for LVC ops
 - April 2016, Nevada Test Site one of six locations for NASA's National Campaign
 - October 2-20, Nevada hosts NASA's first UTM flights using BVLOS scenarios.
 - May, 2017, next round of NASA tests.



UAS Operations

- April 2016, Conducted U.S.'s first drone delivery to urban area (Hawthorne, NV)
 - GOED, UNR, Flirtey
 - July 11, 2016, Conducted U.S.'s first commercial drone delivery (Reno, NV)
 - GOED, UNR, Flirtey, 7-Eleven
 - Performing U.S.'s first UAV Cloud seeding program
 - November cUAS test at Denver Int'l Airport (FAA)
 - MOU with Ehang for testing of drone taxi
 - MOU with RoK and Alberta for drone testing
 - NV utilities using evaluating drones for power line inspections
 - All flight data collected and reported to FAA for evaluation
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Nevada UAS Legislation

- AB 239
 - Prohibits UAV flights within 500 feet of critical infrastructure
 - 2017 Legislation to include CRC.
 - Action for civil trespass if flown less than 250'. Property owner permission needed.
 - Certain restrictions on law enforcement for use in gathering evidence
 - Exceptions include: exigent circumstance, imminent danger, commission of crime, state of emergency
 - DPS to maintain registry of Public UAS/issue annual report.
 - A public agency shall, for each UAV, submit to DPS, on a form provided by DPS, for inclusion in the registry: (a) The name of the public agency; (b) The name and contact information of each operator of the unmanned aerial vehicle; (c) Sufficient information to identify the unmanned aerial vehicle; and (d) A statement describing the use of the unmanned aerial vehicle by the public agency.
 - “Public agency” means an agency, office, bureau, board, commission, department or division of this State or a political subdivision of this State other than a law enforcement agency.
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UAS Legislation

- AB 239 - Nevada Administrative Code (NAC)
 - LCB File No. R016-16A , effective June 28, 2016 - prescribing the public purposes
 - LCB File No. R016-16I , effective February 2, 2016 - prescribing the public purposes
 - LCB File No. R016-16P, effective June 28, 2016 - prescribing the public purposes
- AB 161
 - Allows for partial abatement of PPT and S&U tax on personal property or property used to own, operate, manufacture, service, maintain, test, repair, overhaul, or assemble an aircraft or component of an aircraft.
 - “Aircraft” includes UAV

Nevada Successful Collaboration

Nevada's Center for Advanced Mobility (CAM)

Nevada Governor's Office of Economic Development (GOED)

Nevada Department of Motor Vehicles

Nevada Department of Transportation



Nevada Governor's Office of
Economic Development
Empowering Success



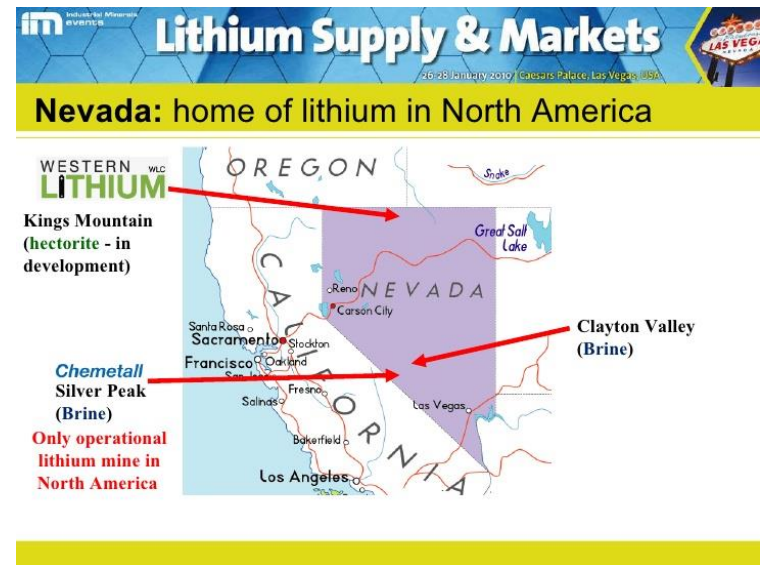
- Full collaboration
- Strong partnerships with MPOs and Municipalities
- Political support and buy-in across all state levels
- Flexibility and willingness to work with private sector partners
- Strong relationships with university partners

UAS Future

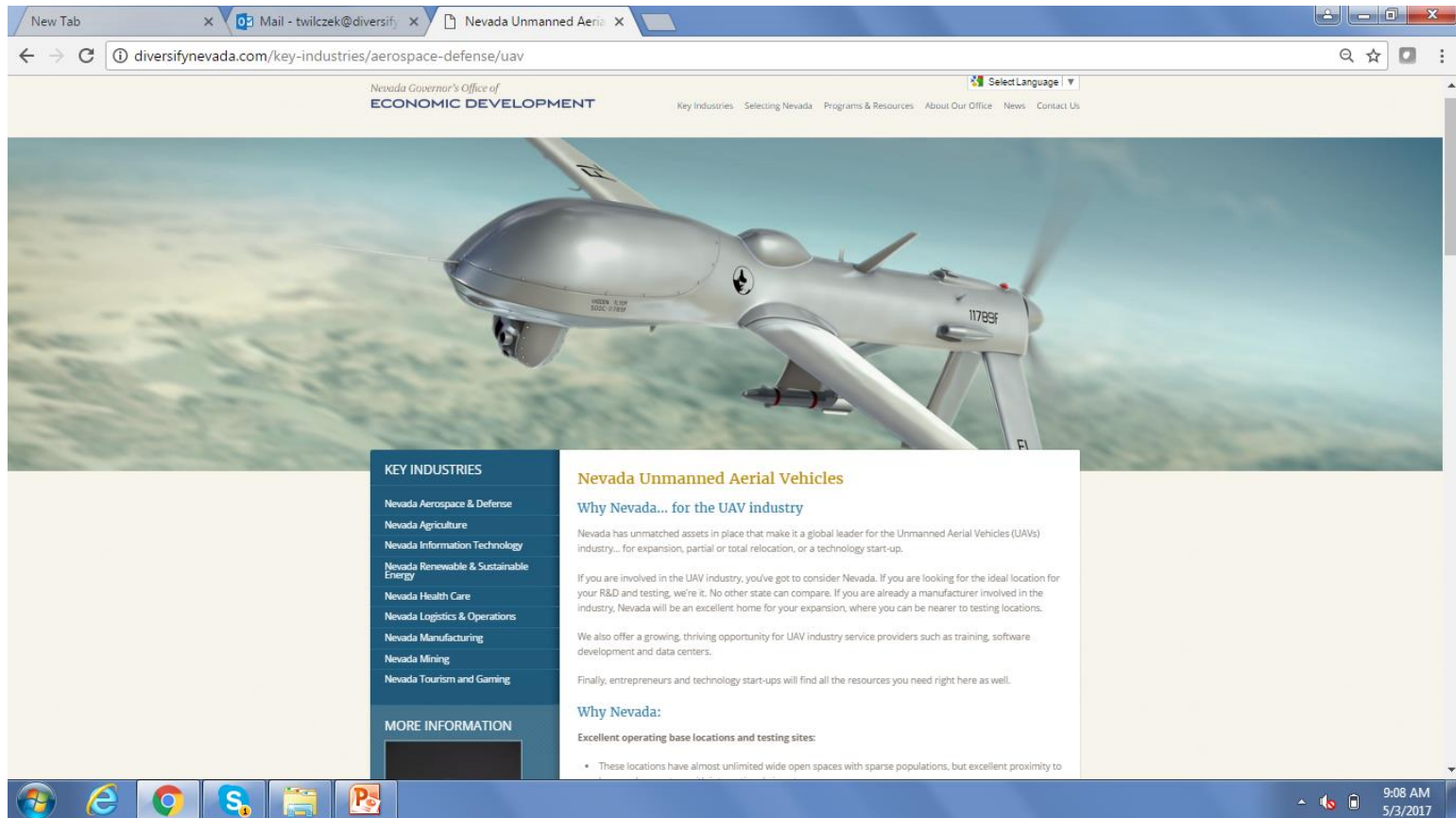
- Continued BVLOS tests/ops. BVLOS: “Holy Grail” of industry
 - Applications:
 - Transmission lines
 - Deliveries
 - Pivot to large <55 lb. systems
 - Capture the data collection/management/storage
 - Nevada only state that can test/operate AUV/driverless vehicle interface
 - Drone Taxis
 - “DaaS” Drones as a service
 - “cUAS” Counter-UAS technologies
 - Policy – greater involvement of State/county/muni governments in airspace mgmt?
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Other Tangibles

- Tesla GigaFactory building world largest manufacturing facility
- Switch Communication (world's largest data centers)
- Faraday Future grading for manufacturing facility
- Hyperloop testing and manufacturing facility
- North America's largest lithium reserves.



Additional Sources



For Additional Information

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