

Mountain West Unmanned Systems Alliance (MWUSA)



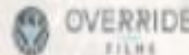
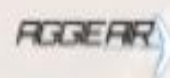
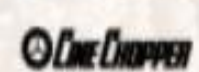
**Utah State Senate
Transportation Interim Committee
May 18, 2016**



MWUSA

- Partnership of Industry, Academia and Government
- [MWUSA Video](#)

Establishing Utah as a viable hub for responsible commercial and civil use of Unmanned Aerial Systems



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Our Message

- UAS / UAV is a developing industry
 - Key part of Utah's aerospace industry's future
 - Approximately 2,000 Utahns Aerospace & Defense employment is related to UAS (2013 est.)
 - Economic value to many other industry sectors
- Economic development opportunities for Utah
 - Projection: \$859M and 1,085 jobs in first decade of UAS integration
- Utah has a great legacy in the UAS / UAV industry
 - Academic Leadership
 - BYU, USU (Aggie Air)
 - Industry Technology Advancements
 - Sensors, Communication Systems, Flight Control, Applications

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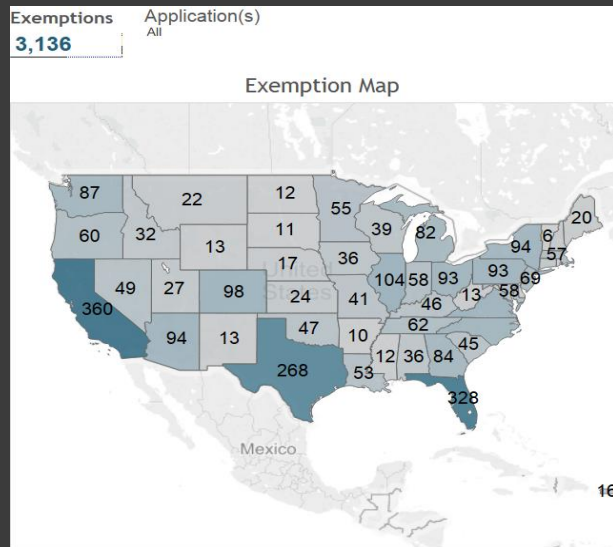
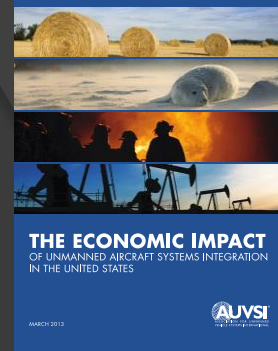
⦿ Challenges for the Industry

- FAA's Rules and Regulations
- Evolution of the Regulatory Environment
 - Federal
 - State
 - Municipal
- Differentiation between hobbyist, commercial and civil users
 - Safety
 - Responsibility
 - Air Space Management
 - Controlled Airspace
 - Regulated Airspace

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● National Economic Impact

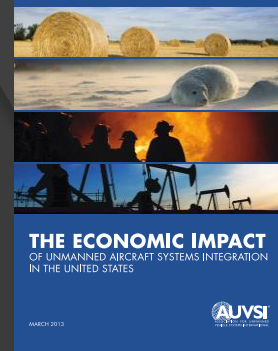
- First 3 years of integration more than 70,000 jobs will be created in the US
- Economic impact of more than \$13.6 billion
- This benefit will grow through 2025 when we foresee more than 100,000 jobs created and economic impact of \$82 billion



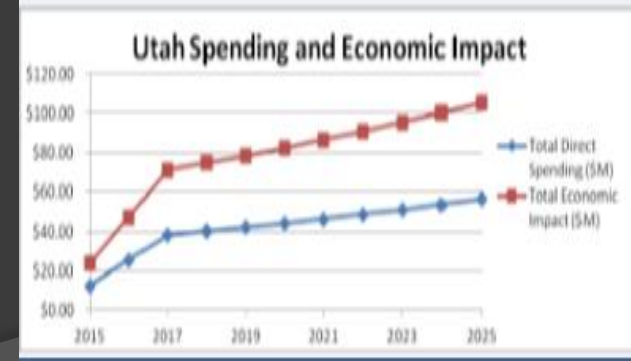
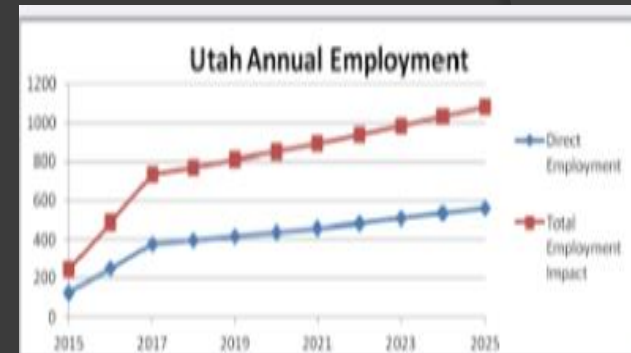
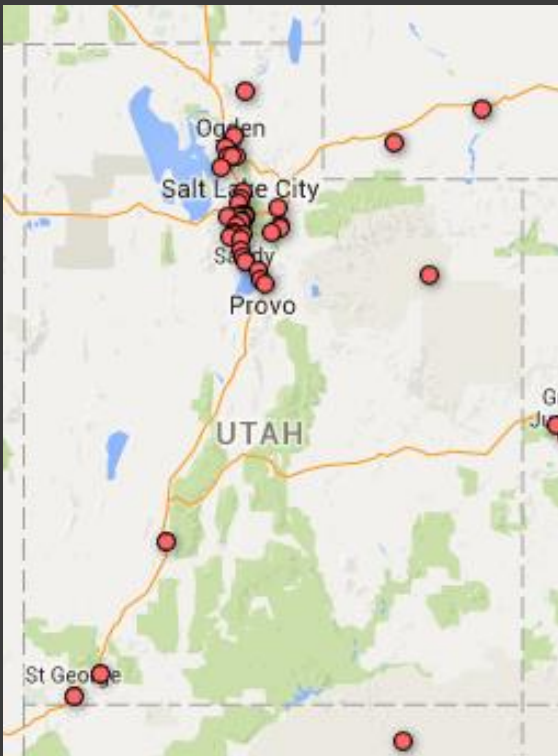
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Utah Economic Impact

- To date, there are 39 entities in Utah that have Section 333 exemptions.



THE ECONOMIC IMPACT
OF UNMANNED AIRCRAFT SYSTEMS INTEGRATION
IN THE UNITED STATES
MARCH 2015
AUVSI



Projection: \$859M and 1,085 jobs in the first decade of UAS integration

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◎ State of Utah UAS / UAV Academia Activities

- **Utah State University (USU):**

- Aggie Air - surveys of watersheds, other agricultural lands, and environmental monitoring
- UAS research at the Space Dynamics Laboratory

- **University of Utah (UofU):**

- UAS robotics technology
- Launched companies such as Sarcos (now a Raytheon Company).
- UAS research on UAS Command and Control (C2) and Sense and Avoid technologies

- **Brigham Young University (BYU):**

- Only National Science Foundation-sponsored unmanned aircraft research center
- Spun off UAS technology companies such as Lockheed Martin's Procerus and ImSAR
- UAS research on UAS Command and Control (C2) and Sense and Avoid technologies

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● State of Utah UAS / UAV Academia Activities

- **Weber State University's (WSU):**
 - Utah Center for Aviation Innovation and Design is developing UAS platforms with broad domestic applications
- **Utah Valley University (UVU):**
 - Proposed Certificate of Proficiency in UAS
 - Holder of a Certificate of Authorization (COA) for operation of UAS at Elberta
 - Proposing UAS courses in film production, survey data collection and analysis, and fire and rescue
- **Southern Utah University (SUU):**
 - UA basics course within an A.A.S., Aviation degree & pursuing an UA specialization for the A.A.S., Aviation degree
 - The Criminal Justice program introduced the use of UAS in its Advanced Criminal Justice course
 - Applying for an FAA 333 Exemption
- **Utah ATC's:**
 - Growing course curriculum to support UAS workforce pipeline

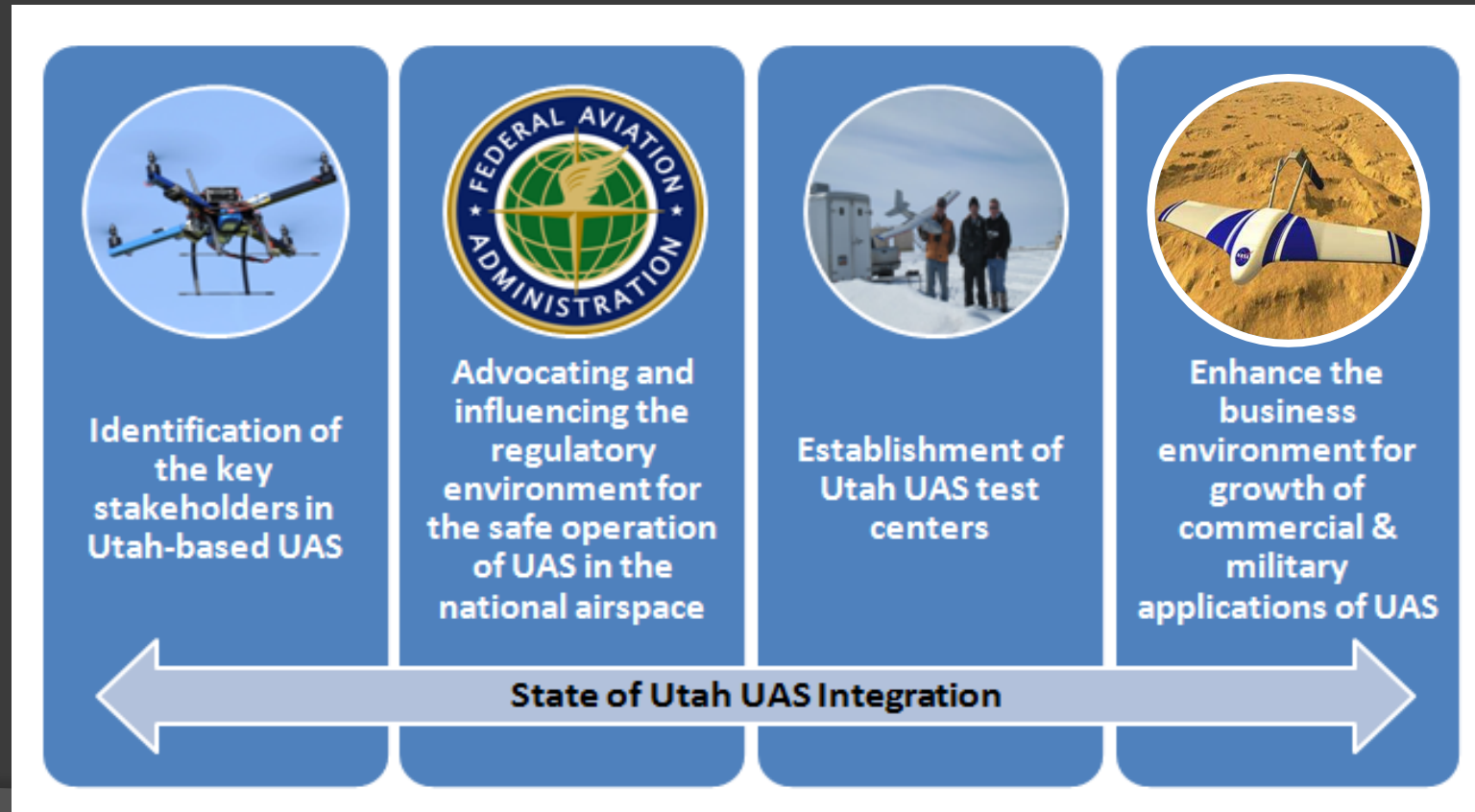
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- ◎ Utah's Role in the Advancement of UAS
 - Proposal for FAA UAS Test Sites
 - Utah UAS Test Sites
 - Box Elder Public Private Partnership
 - UVU Test Site in Elberta
 - Development of GOED Statewide Business Plan for UAS Integration

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Utah's UAS Integration Plan

- The emphasis of the state's UAS Business Plan is to create an environment conducive to the development and growth of Utah's UAS industry. This endeavor involves:



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◎ Take-a-ways

- Develop an awareness campaign for responsible and safe UAS operations (“Know Before You Fly”)
- Ensure passage of state legislation such that only the State of Utah can prohibit, restrict or regulate the testing or operating of UAS
- Continue to engage the Utah UAS Stakeholders in the legislative process