



UAS INTEGRATION PILOT PROGRAM



U.S. Department of Transportation
Federal Aviation Administration

Talking Freight



From the President



Evaluate
involvement of
state, local,
tribal
governments

Inform future
guidelines and
regulations

Develop and
test innovative
UAS concepts



IPP Success Planning Areas

**Safely Integrate UAS
into the NAS**

**Societal and
Community Impacts**

**Inform FAA Policy and
Decision Making**

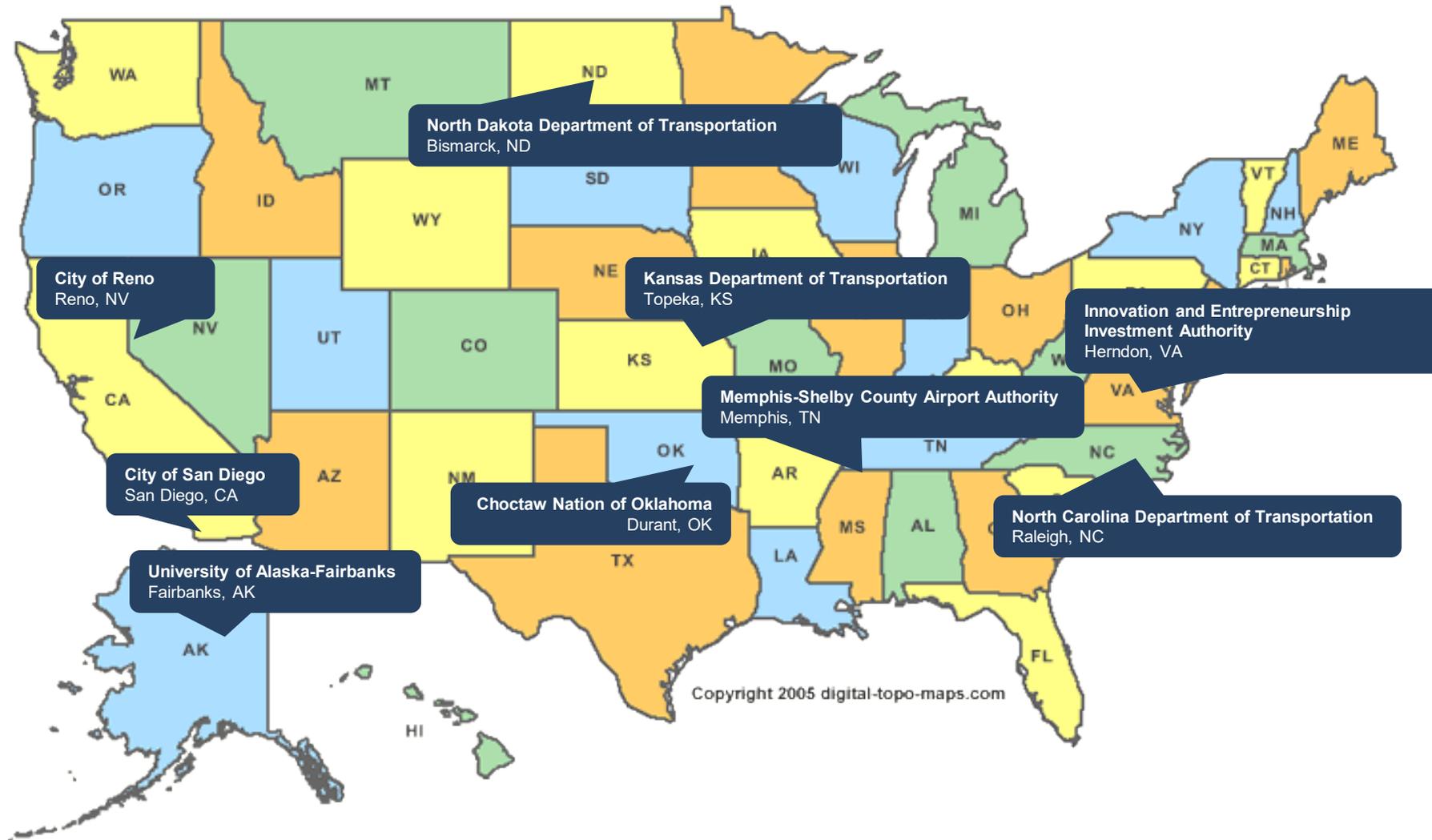
IPP Lead Participant Objectives



Working together to get to the finish line!



UAS IPP Participants





Major Accomplishments from the IPP

- **Google Wing (VA Innovation & Entrepreneurship Investment Authority)** - Obtained the first Part 135 Air Carrier Certification to conduct drone package delivery. (for compensation)
- **Matternet/UPS (North Carolina DOT)** - Conducting routine medical package delivery in Raleigh, NC under part 107, pursuing part 135 air carrier certification.
- **City of Reno** - Recently received multi/night/BVLOS with VOs waiver. Representative of end state package AED/delivery CONOPs. Symbolizes true spirit of NAS integration.
- **State Farm (North Dakota DOT)** - Obtained a nationwide waiver to conduct drone operations over people and beyond visual line of site with the use of a visual observer.





Major Accomplishments from the IPP (con't)

- **Choctaw Nation of Oklahoma** - First U.S. tribal nation to be approved for public aircraft operations after 2018 FAA Re-Authorization
- **Chula Vista PD (City of San Diego)** - Using UASs for emergency response, as part of the San Diego team, under public aircraft rules.
- **North Carolina DOT** - Used UASs to assess damage after the 2018 hurricanes, as a public aircraft operator.
- **North Dakota DOT** - Conducted UAS flights to support flooding response efforts under FAA's UAS part 107 rules.
- **University of Alaska** - Conducted pipeline surveillance flying under UAS part 107 rules.





Package Delivery Under IPP

- North Carolina Flytrex/Causey received a part 107 waiver for food delivery within visual line of site.





Delivery by Drone: Benefits and Impacts

- **Saving Lives**
- **Efficiency**
- **Convenience**
- **Cost Savings**
- **And More....**





Saving Lives

- Life Saving medical deliveries
- Assess threats
- Taking vehicles off the road





Efficiency

- Locate People
- Survey damage
- Increase speed



Convenience/Cost Savings

<https://www.youtube.com/watch?v=m2aHAgGjliQ>



Regulation

- Informing new regulations, guidance, and decision making.
- Developing performances based rules
- Issuing waivers, authorizations and exemptions
- Part 107 vs Part 135
 - Part 107 waivers are available on the following site:
https://www.faa.gov/uas/request_waiver/waivers_granted/
 - Wing, Uber and Amazon and UPS 135 exemption requests are available on the following site: <https://www.regulations.gov/docket?D=FAA-2018-0835>



Regulation

- **Part 107 - Rules for non-hobbyist UAS Operations**
 - Small (less than 55 pounds) Unmanned aircraft regulations
 - Transportation of property for compensation or hire allowed only within state boundaries.
 - Visual Line of site deliveries. (VLOS)
 - Remote pilot certificate required
 - Registration of aircraft required
 - Must be within unaided visual line of site of the remote pilot
 - One pilot to one aircraft
 - No night operations
 - 3 miles visibility
 - Maximum altitude 400 ft above ground or within 400 feet of a structure
 - Maximum Speed 100 mph (87 knots)
 - No operations over people or moving vehicles
 - Airspace approval needed for operations outside of Class “G” airspace



Regulation

- **Part 135 – Air Carrier and Operator Certification**
 - Transportation of property for compensation or hire.
 - Beyond Visual Line of Site deliveries (BVLOS).
 - Type Certification and registration required for UAS
 - Airman Certification Considerations
 - Airspace Waiver to CFR 91.113
 - Safety Risk Assessment
 - Economic Authority



Part 135 Certificate Request- 8 Lines of Effort

•Petition for Exemption – AFS

•Air Carrier Certification – AFS

•Airman Certification – AFS

•44807 Air Worthiness – AEG

•Type Certification – LAACO

•Safety Risk Assessment – AUS/AFS

•Economic Authority – DOT

•91.113 Airspace Request – ATO

