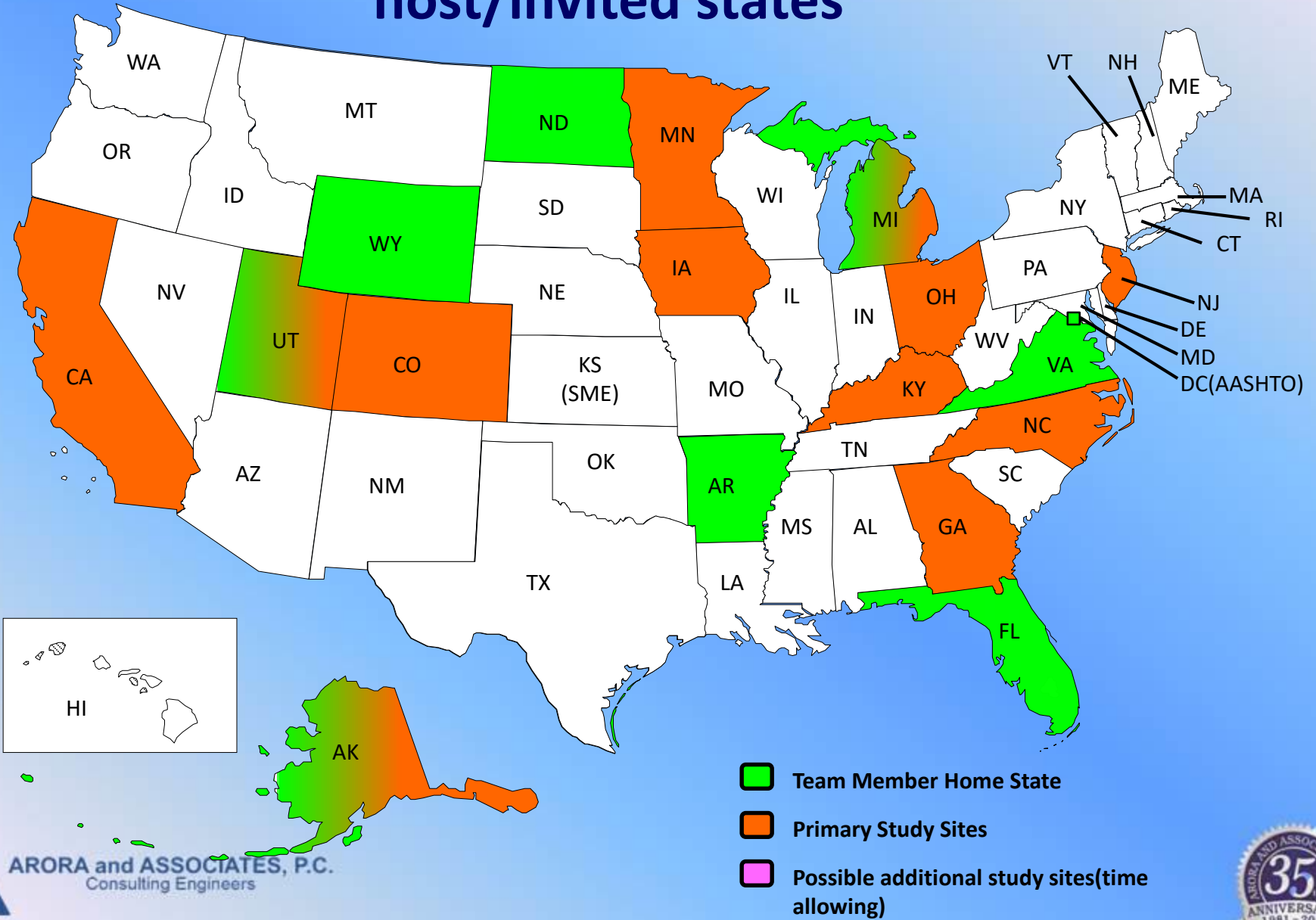


NCHRP 20-68A
“US Domestic Scan Program”
Domestic Scan 17-01

**“Successful Approaches for the Use of
Unmanned Aerial Systems by Surface
Transportation Agencies”**

Findings, Conclusions and Recommendations

Scan 17-01 Team Members Home States and selected host/invited states



NCHRP Panel

General Guidance to Scan Team

- “This scan will visit users of [unmanned aircraft] and document their specific application... Information to be gathered would include but not be limited to:
 - Documenting why, how, and where are they are using this technology for inspection, inventory, survey, etc.
 - How the data is being stored and used
 - What control method is being used (remote control or autonomous).
 - What attached devices are being used (i.e. HD cameras, video cameras, LiDAR, etc.)
 - Who is the Owner/Operator of the UAS: (agencies, Contractors, Consultants, and/or Universities)
 - Costs and realized Benefits
 - Barriers, obstacles and opportunities experienced in deployment”

NCHRP Panel

Anticipated Outcomes

“The scan focus and objectives shall provide a better understanding of the proactive use of this technology as well as the ***return on investment and its benefits*** to the surface transportation community. This scan will ***assist the accelerated national deployment of the technology by providing “Getting Started” guidance and case studies of successful applications of UAS.*** The scan will also provide valuable information concerning where additional development and research might be needed to support the increased use of this technology.”

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Summary of Initial Findings

- Findings presented here were gleaned from four days of presentations, group discussions and participant notes.
- The scan team settled on the seven themes below for “Getting Started with UAS.”
 - 1) Executive Support
 - 2) Organizational Structure
 - 3) Policy and Regulation
 - 4) Safety and Risk Management
 - 5) Training and Crew Qualifications
 - 6) Public Relations
 - 7) Application and Operation

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Final Conclusions

- Invited and host state transportation agencies have collectively developed significant use cases for sUAS which supplement their surface transportation efforts.
- Future sUAS programs among state transportation agencies should...
 - consider further validation of these applications with rigorous cost-benefit analysis as well as
 - investigate whether sUAS data can be suitable for meeting industry standards.