

Chair Sinema, Ranking Member Cruz, and members of the subcommittee, thank you for this opportunity to testify today about uncrewed aircraft systems (UAS).

I will speak today from my seven years' experience, as the Executive Director of ASSURE, a Mississippi State University led alliance of 26 research universities and over 100 industry and government partners that serve as the FAA's Center of Excellence. I also served 30 years in the US Air Force, where I was fortunate to play a leadership role in the integration of UAS. From this perspective, I have to say it is mostly a good news story of innovation, growth, development, and safety.

In 2014, Congress called on the FAA to establish a UAS Center of Excellence to provide the academic research, data, and support necessary to inform the FAA in its regulatory responsibilities to integrate uncrewed aircraft safely and efficiently into the National Airspace System. In 2015, the FAA awarded ASSURE that responsibility through a competitive process.

A lot has happened in the seven years since ASSURE was established.

With the tremendous support of Congress, ASSURE has grown from the original half a million appropriation to \$14 million in matched funding annually. To date, congressional support for the FAA through ASSURE is approximately \$91 million. These funds have supported more than 60 projects, including advanced air mobility, cyber security, and the integration of UAS for disaster response, just to name a few. ASSURE's research has supported FAA rulemaking, and the development of industry consensus standards.

Additionally, ASSURE continues to develop a network of worldwide affiliations to harmonize rulemaking and standards globally. Canada, the United Kingdom, Israel, and Singapore now have affiliate universities in the ASSURE consortium. Currently, ASSURE is in discussions with Australia and New Zealand to develop affiliations there.

The COE's work supporting the FAA has led to other developments. We are engaged in nine studies for NASA, which investigate the technologies to support uncrewed aircraft traffic management critical to beyond-visual-line-of-sight operations, multi-UAS control, and improved aviation weather forecasting below 500 feet.

Congress has also supported ASSURE (through FEMA and NIST) in the integration of UAS technology into public safety and disaster response. ASSURE is leading the development of "ASSUREd Safe," a federated ecosystem that will provide standards, education, training, testing, certification, and credentialing of first responders' use of UAS and the systems themselves.

Although progress is being made on integration, there are two areas, that, I believe, need attention. First, there is need for a National UAS Roadmap. From the COE perspective, I see the FAA waiting on signals and investment from industry to tell it where to focus regulatory efforts. But industry is waiting for the FAA to develop pathways to certification

and operations to help reduce their regulatory risk. The FAA should produce a detailed regulatory roadmap that includes identification of specific regulations and standards to support industry and public safety, an office of primary responsibility for each, and the research necessary to inform their development. It is critical that this roadmap have milestones and actual dates. The FAA should involve key stakeholders including industry, academia, and standard committee leadership, in the development of this plan. A detailed roadmap would help all stakeholders, including Congress, to provide appropriate resources, measure success, and make adjustments, as required.

Second, ASSURE requests that Congress suspend the cost-share policy to help improve diversity and inclusion, and also increase the amount of research needed to speed rulemaking and standards development. As we have looked to grow our capability and capacity, and include more partners, we have found that cost-share requirements are an obstacle to participation for Minority Serving Institutions. Moreover, during the pandemic, ASSURE and the FAA demonstrated that reduced cost-share

requirements led to greater participation and research. A trial period of relief would increase participation of Minority Serving Institutions in research, and eliminate the financial burden and risk across all COE universities. Increased regulatory progress would also incentivize industry to stay actively engaged.

Thank you for your recent efforts to help secure the FAA's extension of ASSURE as its UAS COE through May 2025. I look forward to your questions and collaborating with you and your staffs in the future.