MDOT AAM Challenge FAQ Document

Scope

- **What data deliverables are expected from a UAS platforms?**
  Specific deliverables are not predefined. The purpose of the challenge is to identify what types of data can be generated by UAS platforms, how that data can be collected, and how it can be applied to infrastructure and mobility use cases. Participants are encouraged to propose the data outputs they can provide—such as orthomosaics, live video feeds, or other relevant datasets—and to clearly demonstrate these capabilities within their submissions. The challenge is designed to explore and learn what data can be produced by aerial mobility solutions and tools across various use cases. Submissions should suggest potential data outputs for these use cases.

- **Does participation require drone deployment, or can alternative sensing modalities be proposed?**
  The focus of the challenge is on air mobility solutions. Alternative sensing approaches may be considered if they align with the air mobility scope, but proposals should clarify how they meet this requirement.

- **Is MDOT only concerned about intersections?**
  No. While some use cases involve intersections, many do not. Examples include freeway ramps, freeways, weather-related scenarios, transit, and work zones. The focus is on addressing needs and capabilities holistically across air mobility solutions, not just intersection-based applications.

- **Has MDOT identified specific intersections like the other opportunities have?**
  Not yet. Focus on the use cases and then MDOT will work with you to identify the specific intersections; some intersections will have multiple use cases that apply and some may not be at an intersection depending on the needs for that use case.

- **What use cases should be included in the application?**
  Applicants are encouraged to address as many use cases as possible. The examples listed in the application are intended as suggestions and represent areas of interest, but they are not exhaustive. If the proposed technology can support additional use cases or be applied to intersection types not listed, applicants should include that information. For reference, potential use cases mentioned during information sessions include: rural, urban, non-motorized, freeway, non-freeway, wrong-way driving (WWD), disabilities, weather, transit, wildlife, high-crash areas, borders, and work zones.

- **Does the pilot need to span the entire proposal? Or can we include development time in the grant?**
  Development directly related to technology solutions should not be a part of the proposal timeline. Development related to pilot locations or program elements should be completed within the proposal timeline as they will depend on direct coordination with MDOT and other partners. Any development activities should be within the first three to six months on the proposal timeline and before the first milestone. Proposals must include a clear outline of proposed timeframes and phases.

- **Do you have pilots who are trained and certified to fly?**
  Applicants are expected to plan for and provide trained and certified pilots as part of their proposal. MDOT does have Part 107-certified pilots who could assist with training if the program includes transitioning operations to MDOT or another state agency. In some cases, proposals may include proof of concept followed by integration into a regular workflow, which could involve MDOT pilots for training purposes. However, the primary responsibility for flight operations rests with the grantee.

- **Can you expand on the need for BVLOS (Beyond Visual Line of Sight)?**
  BVLOS allows more efficiency; If a waiver for BVLOS is a part of the pilot solution, it would allow for data collection without on-site operators as well as other efficiencies and further scalability.

- **Has MDOT conducted any pilots using drones?**
  Yes. MDOT has conducted several pilot programs involving drones. The department has a fleet of approximately 30–40 drones and more than 40 Part 107-certified pilots. Most drone-related work has been performed in aviation, such as airport inspection programs. Additional pilots have included bridge inspections, traffic monitoring, and emergency response applications.

Budget & Funding

- **What is the approximate target budget amount, excluding cost share?**
  There is no set budget range for this challenge. Applicants should create a budget based on the two-week operating cycle and include a financial or in-kind match from their organization. Proposals should highlight as many relevant use cases as possible.

Award and Contract

- **Who will the contract be between?**
  The contract will be between the company, the applicant, and NextEnergy.

- **Which organizations will score the proposals?**
  For eligibility, the scoring will be conducted by OFME and NextEnergy.

- **Who generally serves on the review committee?**
  The review committee typically includes experts in the AAM space from both public and private sector entities across the state.

- **Can MDOT select more than one applicant?**
  Yes. If multiple applicants are needed to cover all desired use cases, MDOT may select more than one. However, applications that address multiple use cases are strongly encouraged.

- **When do you intend to award the contract? What is the term of the contract?**
  Companies will be notified of grant awards on February 23, as stated on the program website. After notification, awardees will work with NextEnergy to finalize and sign the contract. The timeline for contract execution can vary—some agreements are completed quickly, while others take longer. Once the contract is signed, the expected term is 12 to 24 months.

Eligibility & Partnerships

- **Is this opportunity open to universities and university professors?**
  Yes. The application is open to any entity or individual that meets the minimum eligibility requirements outlined in the program scope and scoring criteria. Universities and university professors are eligible to apply. Applicants may also submit proposals in partnership with other organizations, and partnerships should be documented through letters of support or letters of commitment, depending on the partner’s role in the project.

- **Can studies, pro forma documents, or MOUs be used as deliverables?**
  Studies, pro forma documents, and MOUs can be included in the application as supporting materials to demonstrate credibility or prior work. However, the challenge is focused on implementing use cases and demonstrating the benefits and value of the proposed technology for safety and mobility—not on producing studies alone. If applicants have studies or MOUs that showcase relevant outcomes, they may include them, but the proposal should emphasize practical deployment and measurable impact.

Technology

- **Are AI/ML applications currently being used to detect crashes or near misses?**
  No, AI/ML applications are not being used broadly for this purpose at present. There are limited use cases, such as a pilot project in Detroit that has been active since 2018 and focuses on intersections. Another initiative is being developed along the Woodward corridor from Jefferson to approximately 7 Mile. Outside of these pilots, AI/ML is not widely implemented.

- **Is there interest in AI/ML applications that can provide traffic volume on a road or intersection?**
  Yes, traffic volume data is of interest. It is assumed that solutions designed for crash or near-miss detection should also be capable of collecting traffic volume data, along with other relevant information for various use cases.

- **What data is ultimately being sought for collection?**
  The data requirements vary by use case and location. In some locations, multiple use cases may exist, requiring a detailed analysis of specific data needs. The primary focus is on identifying challenges related to safety and mobility applications. Data should help pinpoint where these challenges occur and provide actionable insights. Near-term goals include leveraging data to make safety improvements, while long-term objectives involve integrating this information into connected and automated vehicle systems. The vision includes enabling near real-time data transmission to vehicles to prevent crashes and improve awareness of issues such as wrong-way driving.

- **Is MDOT looking for an intelligence platform ready to deploy at the start of the project, or can development occur during the performance period?**
  MDOT expects proposals to clearly state any development needs and timelines. While there is some flexibility, projects should ensure sufficient time to demonstrate use cases and deliver value by mid-project milestones.

- **Are you looking at real-time data that would be useful for First Responders? Or is your data required for MDOT planning?**
  Both. The goal includes leveraging data for near-term improvements and exploring the benefits of real-time or near real-time data. While true real-time data would be ideal, it is recognized as difficult to achieve in practice. The initiative will continue working with first responders to ensure the data supports their needs, as well as MDOT's planning and decision-making processes. Ultimately, the data is intended to improve safety and mobility through both operational and strategic applications.

- **How are you currently gathering this data today?**
  Currently, data collection is limited to a few projects and relies heavily on police crash reports, which often take six months to a year to process. This creates a reactive approach common among transportation agencies. The goal is to move toward proactive data gathering for real-time insights, enabling quick fixes like addressing blocked signs or incorrect markings. Long-term plans include transmitting this information directly to vehicles so drivers or autonomous systems can respond immediately.

- **Is it a requirement / favorable for the platform to be NDAA or Blue compliant**
  We are requesting Blue compliant drones, but please specify what your solution meets in that section of the application.

- **Is MDOT more interested in UAS capabilities or infrastructure solutions that enable real-time communication with MDOT?**
  MDOT prioritizes technology that delivers clear value for core use cases such as safety and mobility, rather than adopting technology for its own sake. The focus is on solutions that demonstrate practical benefits and fit within a broader toolbox. This challenge aims to identify where UAS and supporting infrastructure can provide measurable improvements and integrate effectively with other systems.

- **Is MDOT looking for an intelligence platform ready to deploy at the start of the project, or can development occur during the performance period?**
  MDOT expects proposals to clearly state any development needs and timelines. While there is some flexibility within the performance period, projects should ensure sufficient time to demonstrate use cases and deliver value by mid-project milestones. Developing a platform entirely from scratch may not be feasible within the timeframe, so submissions should outline realistic capabilities and schedules.