



FACT SHEET

Development of an Unmanned Aircraft Systems (UAS) Program 43272B

RESEARCH PROJECT TITLE

Development of an Unmanned Aircraft Systems (UAS) Program 43272B Conducted by New Hampshire Department of Transportation (NHDOT)

STUDY TIMELINE

May 2022–September 2023

PRINCIPAL INVESTIGATOR

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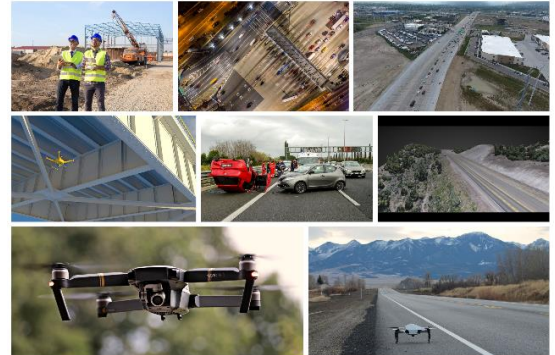
Introduction

Unmanned aircraft systems (UAS) have seen increased adoption by State Departments of Transportation (DOTs). UAS have proven to be an additional data collection tool that can increase safety, efficiency, and cost savings while meeting robust data quality standards. New Hampshire Department of Transportation (NHDOT) requested an evaluation of the maturity level of its existing UAS program, analysis of use cases ideal for UAS integration, and the development of an implementation plan to increase internal UAS capabilities.

Methodology

The report evaluated and provided recommendations based on the current national state of practice regarding program organizational structure, Federal Aviation Administration (FAA) rules for operations, and UAS technologies. The report also provided a thorough evaluation of NHDOT’s UAS program using a Capability Maturity Model, a Business Case analysis, and detailed analysis for the following use cases ripe for UAS implementation:

- Surveying and Mapping
- Construction Monitoring
- Structural Inspection
- Traffic Systems Management & Operations
- Emergency Response
- Asset Maintenance and Operations



Conclusion

The research team presented its findings to NHDOT in the final report, which provides an implementation plan or roadmap to advance the maturity of its UAS program. The implementation plan is separated into three phases and outlines specific activities such as creating a UAS Stakeholder Committee, formally adopting UAS program governance documents, maintaining ongoing leadership support and funding, developing a UAS training program, tracking the Return on Investment of the program, and other key activities. The final report also provides order of priority and specific activities for UAS integration into the identified use cases.

NHDOT has a solid foundation for maturing its internal UAS capabilities. The additional recommendations outlined in the report can assist with implementing UAS as a supplemental tool in daily operations across various use cases through NHDOT.

What are the potential impacts?

The recommendations for NHDOT will assist it in establishing robust internal UAS capabilities. By using UAS as a supplemental tool NHDOT can leverage the technology across its operations to increase safety, cost savings and efficiencies.