

Date of Last Update (edit each time): **11/3/2020**

<b>UTC Project Information</b>	
Project Title	Evaluation Tools for Automated Shuttle Transit Readiness of the Area
University	Virginia Polytechnic Institute and State University
Principal Investigator	Dr. Charlie Klauer
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Funding Source(s) and Amounts Provided (by each agency or organization)	Safe-D (Federal) \$30,388 VDOT (Matching) \$30,000 Both of these numbers could be revised as VDOT is looking into providing additional funding)
Total Project Cost	\$60,388 (this could increase if VDOT provides additional funding)
Agency ID or Contract Number	Grant No: 69A3551747115 Project: Safe-D Project 05-113
Start and End Dates	01/01/2021 to 12/31/2021
Brief Description of Research Project	This project aims to develop a general evaluation protocol for transit readiness in the area for Automated shuttle implementation. Using the data gathered from the EasyMile shuttle implemented in Fairfax County, Virginia, the research team will perform risk assessments and safety analysis for the automated shuttle to understand the risks associated with the interactions between the automated shuttle and other road users, roadway infrastructure, and traffic conditions. Protocols for future deployment planning and evaluation of pilot programs will be developed by the research team based on the data analysis results. The project is related to transportation safety as it explores the risk associated with the automated shuttles, and the shuttles service serves as a last-mile solution for several areas in the United States and will likely expand in the near future. The automated shuttle's safety will increase significantly after the project as the traffic planners now have a deeper understanding of its safety limits and can plan its routes and deployment process accordingly.
Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	Based on the risk assessment of the automated shuttle system already implemented (performed during the project), the research team will develop a set of protocols for planning future shuttle deployments. This protocol will list and rank the baseline requirements of infrastructures and traffic conditions for the automated shuttle to operate safely. Additionally, the planning protocols will also provide a structure for evaluating the pilot projects' safety and effectiveness as they move forward.

<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>If successfully implemented, the future deployment of automated shuttle programs will have a route selection protocol to follow. This process will potentially make future deployment of automated shuttle programs safer as the protocol is developed based on system safety analysis. This study could also potentially be the first naturalistic driving safety analysis for automated shuttles. Thus it can provide some insight into developing more efficient research plans for future projects under the same scope.</p>
<p>Web Links</p> <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<p><a href="https://safed.vtti.vt.edu/projects/evaluation-tools-for-automated-shuttle-transit-readiness-of-the-area/">https://safed.vtti.vt.edu/projects/evaluation-tools-for-automated-shuttle-transit-readiness-of-the-area/</a></p>