

<b>UTC Project Information</b>	
Project Title	<b>E-Scooter Safety Assessment and Campus Deployment Planning</b>
University	Virginia Tech
Principal Investigator	Mike Mollenhauer
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Funding Source(s) and Amounts Provided (by each agency or organization)	Safe-D (Federal): \$209,992 Spin match source (Non-Federal): \$257,134
Total Project Cost	\$467,126
Agency ID or Contract Number	Grant No: 69A3551747115 Project: VTTI-00-023
Start and End Dates	6/3/19 – 3/3/21
Brief Description of Research Project	VTTI will team with Spin to deploy a fleet of e-scooters on the Virginia Tech campus through an exclusive, controlled research program. VTTI will add a data acquisition system to a subset of scooters that will collect data to assess safety impact, what behaviors are exhibited that may be beneficial or problematic, and ways in which kinematic and/or other data may be used to predict risky behavior and develop subsequent countermeasures. In addition, fixed cameras will be deployed to evaluate a variety of behavioral measures through a classification system that will be developed as part of the project. The resulting data will be used to assess impacts on safety, nuisance, and mobility, identify unique countermeasures to problems associated with e-scooter deployments where possible, and generate deployment requirements and guidelines for future open competition
Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	<ol style="list-style-type: none"> <li>1) Deliverables of final report and data per DMP</li> <li>2) EWD plan <ul style="list-style-type: none"> <li>• Graduate student assistance with the project</li> <li>• Student involvement includes involvement in planning stages of this project, especially with the development and testing of the scooter instrumentation and fixed observation system, the development of rider and pedestrian survey instruments, and the planning stages of data collection and analysis.</li> <li>• The project team may engage one or two undergraduate research students to assist with</li> </ul> </li> </ol>

	<p>project tasks throughout the life of data collection, analysis, and reporting</p> <p>3) T2 plan</p> <ul style="list-style-type: none"> <li>• Publish general findings and suggestions for deployment on campuses nationwide to reduce safety concerns and nuisance issues</li> <li>• May target transportation magazines and websites relating to innovation in transportation</li> </ul>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<ul style="list-style-type: none"> <li>• Improved safety procedures for scooter users</li> <li>• Improved safety procedures for nearby vehicles and pedestrians</li> <li>• Travel alternative to conventional automotive transportation options</li> <li>• Clean energy solution to transportation</li> <li>• Enhanced understanding of SPIN scooter operations on college campuses</li> <li>• Enhanced understanding of SPIN scooter deployment strategy</li> <li>• Understanding of user motivation behind every SPIN ride</li> <li>• Diverse data on SPIN users</li> <li>• Insight into public scooter sentiment</li> </ul>
<p>Web Links</p> <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	<p><a href="https://www.vtti.vt.edu/utc/safe-d/index.php/projects/e-scooter-safety-assessment-and-campus-deployment-planning/">https://www.vtti.vt.edu/utc/safe-d/index.php/projects/e-scooter-safety-assessment-and-campus-deployment-planning/</a></p>