

UTC Project Information	
Project Title	MPC-552 – The Effects of Autonomous Vehicles on Safety and Safety Culture in Freight Operations
University	University of Denver
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Total Project Cost	\$359,884
Agency ID or Contract Number	69A3551747108
Start and End Dates	December 1, 2017 to July 31, 2022
Brief Description of Research Project	The proposed study will monitor and evaluate the impact of autonomous or semi-autonomous vehicles on safety and safety culture in an operational environment. Safety and safety culture might be negatively affected by the introduction of autonomous or semi-autonomous vehicles into an operational environment. The utilization of a standard measure of safety culture to assess the impact of the introduction and utilization of autonomous and semi-autonomous vehicles into an operational freight environment is needed. By assessing safety culture, and accident rates the comparison of pre-post interventions as well as the normative comparison of organizations to each other, we can monitor and evaluate the impact of autonomous or semi-autonomous vehicles into an operational environment. In addition, such measurements could also aid in the identification of areas within an organization, such as departments, relationship between management and labor, training programs and other areas that are in need of improvement relative to establishing a strong safety culture. The project will primarily utilize survey and interview methodology to gather data which will use statistical techniques to review historical evaluative data as well as qualitative data from focus groups and interviews. Reports on the accident incident rates of the study organization and scores obtained on the survey instrument (SCS) will be examined. Both analysis of variance and regression analysis will be used to obtain estimates of the relationship between and the impact of safety culture variables on the occurrence of accidents and incidents. Since this is a correlational field study it will only be possible to determine associational relationships. The data on safety culture will be obtained through the administration of Safety Culture

	<p>Scale (SCS) (Sherry & Colarossi, 2016). The SCS was developed using a large sample of employees from a large public transportation agency (N=1909). The research will identify the relationship between the introduction and utilization of autonomous and semi-autonomous vehicles, the safety culture and the accident incident history of the sample organization. The project will also contribute to the identification of statistical patterns and degrees of association between those patterns. A final report, a conference presentation of results to local stakeholders and additional publications will be prepared and conducted to ensure dissemination of research results.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	