



**Advancing Livable Communities through Sustainable Personal Mobility:
An Integrated Assessment**

Proposal Title:

An Integrated Assessment of the Potential for Innovative, Disruptive Applications of
Technology in Personal Vehicles to Advance Livability and Sustainability

Requested Budget:

\$150,000.00

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1 Proposal Summary

This project proposes to frame several conspicuous problems associated with today's automobiles, engage stakeholders in an investigation of the emerging technologies and the impact they could have on those problems, and explore future scenarios where technology is applied to overcome problems. A global perspective will be maintained throughout the scenario building exercise regarding technological improvements and socio-economic changes with impacts on U.S. The process will employ an Integrated Assessment methodology to evaluate the implications for sustainability and livability of the evolving automobile.

The word “disruptive” is used because current government planning activities have not yet come to grips with all the policy implications and sustainability implications of the battery-powered, non-polluting electric cars that are emerging from the world automobile industry with high levels of computerization, wireless communications, and even automated controls. Such vehicles are on a development path to significantly reduce vehicle and pedestrian accidents while automatically triggering electronic tax/fee payments covering road maintenance and insurance based on daily usage metering. The three Es of sustainability—environment, economics, and equity—are all going to be affected.

As a result of Phase 1 planning activities funded by Graham Institute, the research team is now intending to use an Integrated Assessment process and its results to produce an interactive online, graphic educational model about benefits, costs, and recommended public policy response to disruptive technologies in sustainable mobility. The model will reflect input gathered from the scientific, engineering, and policy community as engaged in the IA. We estimate that such a final result, among other uses, will serve the function of justifying and motivating appropriate public spending, regulatory reform, and implementation of pilot demonstration activities, such as DoD-funded deployment of high-tech vehicles in and around Joint Base Lewis McChord (JBLM) located along the Interstate 5 corridor between Tacoma and Olympia.

In the Phase 1 planning, the research team drew upon CVPC's experience in participative policy analysis to design an eight month interactive process with a stakeholder group of urban planners focused on transportation issues in Western Washington State joined with national experts on the technical substance of the disruptive technologies. This process will begin with an educational symposium of prominent speakers on September 7 in Seattle. The research team will add interested and available elected state and local government officials to the stakeholder group. We intend to employ on-line Delphi opinion collection and aggregation process to define scenarios for automated, electric vehicles covering a span of uncertainties while using graphical illustrations in the process. The team will manage a process to converge on a consensus assessment of impacts on the most important aspects of sustainability, and then use the Delphi process to facilitate the stakeholders developing via “backcasting” a roadmap of important antecedent steps to get to a more livable, sustainable future described in the scenarios. The project staff from CATES and CVPC will feed research findings from the larger industrial and academic research environment into the participative process, and document all process and substantive results for evaluation and dissemination by Graham Institute.