DATE: 09/25/2020  PROJECT AREA: Planning

TITLE: Next-Generation Scenario Planning for Emerging Transportation Technologies

PROBLEM STATEMENT:
Emerging vehicle technologies for connected, automated, and electric vehicles are rapidly maturing in testing and early market release. Mobility services such as microtransit, dockless mobility devices, and ridehailing are also beginning to earn enough market shares to be considered distinct new modes of transportation. These technologies will impact traffic demand and congestion, and strategic planning to anticipate and leverage their impacts can lessen or eliminate the need to add physical capacity to the Arkansas transportation system. Because there is much uncertainty around these emerging transportation modes, traditional transportation and land use planning paradigms are not suited to model the impacts they may have. A significant need exists for understanding the future impacts of the emerging vehicle technologies. In order to achieve this, a new, dynamic approach to transportation planning should be implemented to complement existing modeling approaches if transportation program dollars are to be spent wisely.

OBJECTIVES:
The objective is to assess the feasibility of scenario planning for future transportation systems and develop scenarios relevant to Arkansas. The tasks involve: i) identify current mobility trends and assess their probabilities of impact. ii) determine the social and economic factors and technologies that could substantially influence travel, to be included within the scenarios, iii) elicit projections on the influencing factors in workshops of subject matter experts and develop scenarios by distinguishing clusters of consistent projections across the influencing factors, iv) consider the impacts and challenges of each scenario, vi) develop a toolkit of strategies that will create the flexibility for ARDOT to respond to any scenario.

FORM OF RESEARCH IMPLEMENTATION AND RETURN ON INVESTMENT:
The project will produce a research report documenting the findings of the research, including a menu of policy and planning strategies identifying how these policies play out across the scenarios. The research report will also outline the process for incorporating scenarios into the Statewide Long-Range Intermodal Transportation Plan and other key planning documents of ARDOT. The rate of return that includes both qualitative and economic benefits, to be included in the final research report.

Estimated Project Duration: 24 Months

PREPARED BY: Suman Mitra

AGENCY: University of Arkansas, Fayetteville

PHONE: (479) 718-1298  REVIEWER: Kim Romano

Standing Subcommittee Ranking  Advisory Council Ranking  Statement Combined with Statement Number(s)

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