EBP

Impacts and Costs of Connected and Automated Vehicles

Client

USDOT

Facts

Period   2019

Project Country   United States

EDR Group (now EBP) led a team conducting a study for the United States Department of Transportation (USDOT) to calculate the infrastructure, vehicle, and user costs of different deployment scenarios for connected and autonomous vehicles.

The scenarios included a slow roll of moderate technology development, the deployment of niche applications, managed lanes for AVs, "Ultimate Travel Assist" communication systems, competing fleets of autonomous on-demand services, and an integrated mobility future. Cumulative costs for implementing each scenario in 2035 relative to the baseline were considered as well as annual costs for operations, maintenance and use.

Interactions between scenarios and different technology deployments in various parts of the country were considered. EDRG provided FHWA with a tool inventorying the costs and impact factors and functions for each scenario and different mixes, which the agency will use to inform the AV 3.0 policy-making discussion. An intuitive user interface for inputs and graphical and tabular outputs helped summarize the detailed cost and inventory data stored in the tool. Data sources and assumptions were documented along with ranges for each scenario that will allow risk analysis.

Partners for this project included ICF and Mike McGurrin Consulting under the ICF IDIQ contract with the FHWA Office of Policy Studies.

Contact Persons