

Symposium 2021 Breakout Session Title:

B102-Sharing AVs: Policies and Impacts in a Post-COVID World

Session Contact/Organizers:

- Danielle Chou (POC) - AAAS Science & Technology Policy Fellow, DOE Vehicle Technologies Office
- Elizabeth Machek - Technology Policy Analyst, DOT Volpe Center
- Ellen Partridge - Policy and Strategy Director, Shared-Use Mobility Center
- Scott Smith - Operations research analyst, DOT Volpe Center

Session Description

Analysis suggests automated vehicles (SAE levels 3-5) may increase congestion and worsen greenhouse gas emissions through induced demand and zero-occupancy miles traveled (deadheading). Ridesharing can mitigate those negative effects, but how do we encourage sharing in a post-COVID world? Rideshare can mean two different things: sharing vehicle assets or sharing journeys. We start with presentations exploring these two definitions and associated implications. We then break into discussion groups to identify what policy levers and incentives are available for each type of sharing and how COVID-19 affects them differently. The group will reconvene at the end to share their respective insights.

Goals/Objectives/Outputs

- Learn about the energy and potential congestion implications of non-shared AVs and why we want to promote sharing.
- Discuss the distinction between sharing vehicle assets versus sharing journeys.
- Identify impacts, stakeholders, and policy levers associated with each definition.
 - Shared assets: OEM vehicle sizing, MaaS business models, maintenance business models, parking, routing to minimize zero-occupancy miles
 - Shared journeys: liability for potentially negative passenger interactions, corporate remote control for safety, pricing, equitability
- Identify potential analyses to quantify the pros and cons associated with each type of sharing.
- Identify promising policy tools and incentives to promote both types of socially-beneficial sharing within their own communities.

Agenda

- 30 minutes
Presentation: *Energy and Mobility Impacts of Connected, Automated, and Shared Vehicles in the Polaris SMART Mobility Workflow*
Speaker: Joshua Auld (Argonne National Laboratory)
- 15 minutes
Presentation: *Stated and actual sharing preferences for ridehailing services and autonomous vehicles: Insights from TOMNET T4 Survey*
Speaker: Denise da Silva Baker (Arizona State University)
- 5 minutes
Panel introductory remarks

Moderator: Billy Riggs (University of San Francisco)

- 55 minutes
Panel discussion on sharing either vehicles or journeys
Panelists:
 - David Zipper (Harvard University Taubman Center)
 - Andy Taylor (Cubic)
 - Ann Foss (Government of Arlington, TX)
 - Richard Ezike (EVHybridNoire)
 - James Fishelson (Ford)

- 15 minute break

- 40 minutes
Breakout sessions discussing policy tools and ideas

- 20 minutes
Reconvene and review breakout session discussion. Share takeaways.