



Planning, Policy,  
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White Paper on the Environmental Effects of New Mobility Services

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## White Paper on the Environmental Effects of New Mobility Services

Untangle the magnitude and balance of these complex effects and provide a structured lens through which to evaluate current and emerging evidence.

### WHAT IS THE NEED?

In recent years, the introduction and rapid evolution of new shared use mobility services (e.g., Zipcar, Uber, and Lyft) have disrupted long established transportation models. There is a significant need to understand the travel behavior and environmental effects of services to inform decision-making around greenhouse gas reduction targets for land use and transportation plans under SB 375.

### WHAT WAS OUR GOAL?

New mobility services have complicated effects, both positive and negative, on the environment. The goal of the review was to untangle the magnitude and balance of these complex effects and provide a structured lens through which to evaluate current and emerging evidence.

### WHAT DID WE DO?

The literature on new shared use mobility systems is critically reviewed. There is limited stated and revealed preference data surrounding shared use mobility systems. This literature is included in the review, but, in addition, we add the body of modeling literature on the subject. We also introduce a framework that includes the mechanisms by which these services may impact travel behavior and the environment.



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## WHAT WAS THE OUTCOME?

Early research suggests that new shared use mobility services may reduce auto ownership, increase transit use, and decrease vehicle miles traveled and greenhouse gas emissions. However, more recent evidence indicates that carsharing services may have a more modest impact and that ride-hailing services may actually reduce transit use and increase VMT and greenhouse gas emissions.

## WHAT IS THE BENEFIT?

This white paper highlights lessons learned from the body of research on shared use mobility and suggests how these services may be directed to achieve improved environmental effects. These include directing services to expand first and last mile access to transit, encouraging shared ride services, incentivizing electric vehicle fleets, and expanding access to those with limited mobility (e.g., disabled, poor, and elderly).