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Improving the Urban Freight System in California

The Issue

The Urban Freight System (UFS) is a crucial part of California's economy and has undergone rapid changes in recent years, mainly due to the growth of e-commerce. People are shopping online more, and businesses are adapting to the demands for more deliveries and faster shipping. This has affected existing issues related to air pollution, climate change, and environmental justice.

Research Goals

This project comprehensively analyzes the UFS and its sustainability challenges in California. Key trends, challenges, and strategies to reduce negative impacts are identified. The recommendations aim to improve the UFS's sustainability and efficiency while benefiting businesses, the environment, and impacted communities.

Key Conclusions

- Demand for UFS has increased significantly since the pandemic, with U.S. e-commerce tripling between 2014 and 2021.
- Improved routing can reduce air pollution that affects air quality and climate while reducing operational costs for freight owners.
- Electric vehicles can reduce costs, air pollution, and noise pollution while improving traffic safety.

Recommendations

Project recommendations include:

Encourage businesses to be greener: Governments should use incentives to encourage companies to use cleaner delivery methods.

Work together and share information: Data sharing between public and private entities can help improve models and tools that inform decision-making.

Overall, new technology and cooperation between governments and businesses could help improve the UFS to provide fast, equitable, and low-polluting deliveries.

More Information

This is a summary of contract 21RD015. It ended in October 2024. This project was conducted independently and not in connection with any regulatory proposal or other action considered by CARB. Visit CARB Research or contact the Research Division for more information.