

Evaluating Automated Truck Platoon Deployment for the Los Angeles-Inland Empire Trade Corridor Enhancement

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Introduction

The California Freight Mobility Plan 2020 lists the Los Angeles-Inland Empire trade corridor region as one of the prominent industrial hubs that have seen a recent increase in warehouses and distribution centers and, thus, an increase in freight flows in the corridor. The region consists of the Southern California counties of Los Angeles, which include Orange, Riverside, San Bernardino, and Ventura counties. The California Freight Mobility Plan also regards automated truck platoon (ATP) as an emerging opportunity to minimize congestion on the trade corridor routes. In fact, as per Assembly Bill (AB) 669, California permits platooning for testing. However, there is no focused research on evaluating the extent of ATP deployment on congestion relief for the supply chain network of the industries in the Los Angeles-Inland Empire trade corridor region.

The ATP appears to ease some of the current challenges industries face by at least partially addressing the truck driver shortage, meeting California's emissions reductions goals, and improving transportation for businesses impacted during the COVID-19 lockdown. However, the extent to which ATP could benefit industries dependent on the Los Angeles-Inland Empire region trade corridor is unknown. Therefore, this comprehensive research evaluates the impact of ATP on potential improvements in the accessibility of industries in the Los Angeles-Inland Empire trade corridor through a new measure developed in this study.

Study Methods

In this project, accessibility has been used as a performance measure to understand any percentage change in the impacts of "without" and "with" ATP deployment across eighteen industry sectors of the

Los Angeles-Inland Empire trade corridor. This research uses data on travel times on I-710 and I-10 within Los Angeles County and collected data on travel times for the weekdays (Monday to Friday) using Google Maps on both interstates.

Findings

The findings suggest that all industry sectors have a very high “positive” percentage change in accessibility by transforming from “without” to “with” ATP deployment-based accessibility. In the vicinity of the prominent freight corridors of I-710 and I-10 within Los Angeles County, notably, the largest increase in accessibility above 90% are observed for these sectors of the Los Angeles-Inland Empire: Agriculture, Forestry, Fishing and Hunting; Health Care and Social Assistance; Finance and Insurance; Transportation and Warehousing, and Retail Trade.

Policy Recommendations

These findings suggest the deployment of ATP on specific freight routes to enhance and sustain economic activity across the Los Angeles-Inland Empire trade corridors.

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/2244



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