2018 Research Project Abstract

**Project Title**: Discovering Potential Market for the Integration of Public Transportation and Emerging Shared-Mobility Services (Project F2)

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**ABSTRACT**: In recent years, the advance of communication and information technology enables travelers to conveniently request, track and pay for trip via mobile devices. This significant convenience promotes the emerging travel modes such as shared-mobility service including carsharing, bikesharing, ridesourcing (like Uber and Lyft), and private shuttles (like Bay-Area tech shuttles), etc. Sharedmobility owners have claimed that these new traffic modes will help reduce car ownership and promote the ridership of public transit, while transit agencies often unsure of how to coexist with them and demonstrate concerns on the potential competition[1][3]. To address this dilemma, we need to fully understand the potential market, where intermodal traffic modes involving both public transit and shared mobility will provide more attractive services. Accordingly, strategic solutions can be implemented to well integrate these two traffic modes.

Motivated by the above view, this research seeks to discover the potential market from both demand and supply sides for the integration of public transit and emerging shared-mobility services. Mainly we would like to answer two questions. Who are the potential demand with high potential to use this intermodal services? Where and when are the supply gap/hubs to integrate this emerging mobility and public transit services?

To accomplish these research objectives, the study draws from several sources and approaches, including quantitative analysis of transit and ridesourcing temporal-spatial service gaps and cooperative operation potential, employing statistical and machine learning approaches. Together, these efforts provide a snapshot for better understanding the potential market for rapidly widening shared mobility and promoting the ridership of public transit as well. Overall, the outputs of this project will increase the use of sustainable transportation modes, which may reduce urban congestion, emission and energy consumptions. Thus, the success of this project will help establish an eco-friendly transportation system.