

## QUARTERLY PROGRESS REPORT

Fiscal Year 2015/2016 , Quarter 1st

Caltrans Task Manager: Frank Law Task ID/Project ID (for Caltrans use only):

Task Order No.: TO 003

Contract No.: 65A0529

1. Task Title: From Trend Spotting to Trend Setting: Modeling the Impact of Major
2. Technological and Infrastructural Changes on Travel Demand
3. Describe last quarter's tasks/deliverables:

Finalizing model estimation and results for the following two models:

1- Model of technology and service adoption

This comprises a latent class choice model that identifies the utility of adoption of a new transportation service for the three different latent classes i.e. innovators, imitators and non-adopters.

2- Dynamic travel behavior model

This entails a hidden markov model (HMM) that tries to understand transitions in modality styles over time which is key to understand and predict shifts in overall trends in travel behavior and in particular mode choice.

A powerpoint presentation summarizing these models will be submitted separately from this document. We request that this be kept internal to Caltrans at this time and not be made public on the UCCONNECT or other website.

4. Describe next quarter's tasks/deliverables and their due dates:

1- Finalizing model application for technology diffusion project

Forecasting adoption into the future for several hypothetical scenarios to try and understand the effect of having stations versus on-street parking in new zipcodes. Also, we are interested in using the model to understand the potential effectiveness of new pods placed in different locations.

2- Assessing model performance and selecting best model

We have estimated several HMMs by varying the number of modality styles. We are interested in having a hold-out sample to assess model performance and identify the optimal number of modality styles that best describes the data. This is important in forecasting the mode shares of a certain policy in a more representative manner.

We will work with Caltrans to determine the technology transfer deliverable.

5. Describe Project Status:



- Are you on time with your schedule?  
 YES  
 NO
  
- Are you on budget?  
 YES  
 NO
  
- Are you on scope?  
 YES  
 NO

If the answer to any of the above is NO, please explain below:

While we are for the most part on schedule with this project, the application of the models may require more time than intended. We will know more as we finalize the models.

6. Estimated percent of work completed: 70%  
 Estimated percent of budget expended: 70%

7. What are your expenditure projections for the next four quarters or until the project's end?

FY 15/16; Q1	FY 15/16; Q2	FY 15/16; Q3	FY 15/16; Q4
\$ 41,255	\$ 43,620	\$	\$



Use this area for any additional information. Clearly identify which Section this information applies to.

Submitted By: Joan Walker

Date: November 2, 2015