OREGON DEPARTMENT OF TRANSPORTATION

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SPR Quarterly Progress Report
October 1, 2016 through December 31, 2016

Date December 21, 2016

TO: Technical Advisory Committee Members:
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1. Project

Title: Performance-Based Planning and Decision Making – Understanding Mode Choices
SPR # 788

2. Project Investigator

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3. Project Coordinator

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4. Key Dates

Project start date: 10/6/2015
Project completion date: 5/15/2017

First Fiscal Year: [year]
Final Fiscal Year: [year]
[List revised completion dates and corresponding amendment numbers]

5. Project Status (Completed by project investigator)

Task 1 **: Literature review and data exploration 12/15/16**

Percent completed reported in last quarterly report: 95%
Percent completed after this quarter:

Key Progress-To-Date
- Finished initial review of research literature on key drivers of household mode choice decisions;
- Finished initial review of potential data sources for mode choice model estimation;
- Finished initial review of potential model form;
- Researched and explored potential data sources;
- Delivered a literature review report and presented to TAC

Specific Progress This Quarter
- Delivered the final literature review report

Problems
-

Work Planned for Next Quarter
-

Task 2 **: Model design and estimation – 1/1/17**
Percent completed reported in last quarterly report: 90%
Percent completed after this quarter: 95%

Key Progress-To-Date
- Explored various data sources for model estimation;
- Coordinating with Brian Gregor in the model design and estimation process;
- Retrieved and processed 2009 NHTS and Smart Location Database (SLD);
- Identified two alternative model designs;
- Estimated models with 2009 NHTS + SLD, validated models and evaluated sensitivities;
- Drafted a working paper on Task 2

- Met & discussed model specification with TAC
- Reported results of updated model specification, validation and sensitivity tests with TAC.

Specific Progress This Quarter
- Refined model specification; produced validation and sensitivity tests
- Reported results to the TAC
- Determined model structure in consultation with TAC and incorporate feedback to model specifications
- Refactored codebase to streamline model estimation, validation and sensitivity tests.

Problems
-

Work Planned for Next Quarter
- Finalized model specification

Task 3 **: Model implementation – 2/1/17**
Percent completed reported in last quarterly report: 40%
Percent completed after this quarter: 60%
Key Progress-To-Date
- Retrieved and studied the GreenSTEP implementation of relevant models (VMT model with household budget);
- Considered implementation trader-offs for alternative model structures;
- Studied and familiarized VisionEval modeling framework
- Created a common codebase for model estimation/testing and implementation

Specific Progress This Quarter
- Determined the implementation options between RSPM and VisionEval (RSPM is preferred)
- Created a common codebase for model estimation/testing and implementation

Problems
-

Work Planned for Next Quarter
- Implement and integrate new TFL model with RSPM code
-

Task 4**: Mode testing – 4/1/17**
Percent completed reported in last quarterly report: 0%
Percent completed after this quarter: 5%

Key Progress-To-Date
- Discussed options for testing areas between Corvallis (CAMPO) and Rogue Valley (RVMPO)

Specific Progress This Quarter

- Discussed options for testing areas between Corvallis (CAMPO) and Rogue Valley (RVMPO)

Problems

-

Work Planned for Next Quarter

- Start to retrieve data in preparation for model testing

***Task 5*: Brian Gregor training, consultation and support for Tasks 2-4 - Ongoing**
Percent completed reported in last quarterly report: 70%
Percent completed after this quarter:

Key Progress-To-Date

- Provided detailed feedback to the literature review report;
- Provided guidance and detailed feedback on model estimation and testing;
- Provided technical support on RSPM/VisionEval design and implementation;
- Set up regular project meetings

Specific Progress This Quarter

- Provided guidance and detailed feedback on model estimation and testing;
-

Problems

-

Work Planned for Next Quarter

- Continue to provide feedback and technical support on design and implementation
-

***Task 6*: Final report - 5/15/17**
Percent completed reported in last quarterly report: 0%
Percent completed after this quarter:

Key Progress-To-Date

-

Specific Progress This Quarter

-

Problems

-

Work Planned for Next Quarter

-

6. **Project Coordinator's Comments** (Completed by ODOT) The TAC meeting was very productive, although there are concerns about how well the model will work with bikes, pedestrians and transit users. The main issue is that even with national data, the auto portion swamps the signal of the other modes. Several suggestions were given to try and work around this before implementation. All-in-all, there is good progress being made.

7. **Finances** (Completed by ODOT)
SPR Project Summary

VENDOR	FY'16	FY'17	FY'18	FY'19	TOTALS
ORIGINAL BUDGET					$ -
WORK PLAN BUDGET	$52,371	$21,772	$74,143		$ 148,286
REVISED BUDGET	**$24,000**	**$65,000**	**$14,000**		**$ 103,000**
EXPENDITURES - VENDOR	$11,804	$25,198	$0	$0	$ 37,002
BALANCE	$12,196	$39,802	$14,000	$0	$ 65,998
ODOT	FY'16	FY'17	FY'18	FY'19	TOTALS
ORIGINAL BUDGET	$60,000	$60,000			$ 120,000
REVISED BUDGET	**$6,000**	**$5,000**	**$6,000**		**$ 17,000**
EXPENDITURES - ODOT	$3,802	$2,944	$0	$0	$ 6,746
BALANCE	$2,198	$2,056	$6,000	$0	$ 10,254
PROJECT	FY'16	FY'17	FY'18	FY'19	TOTALS
ORIGINAL BUDGET	$60,000	$60,000	$0	$0	$ 120,000
REVISED BUDGET	**$30,000**	**$70,000**	**$20,000**	**$0**	**$ 120,000**
EXPENDITURES - PROJECT	$15,606	$28,142	$0	$0	$ 43,748
BALANCE	$14,394	$41,858	$20,000	$0	$ 76,252