SHRP2 C10: Metropolitan Transportation Commission

Quarterly Report for October 2017 – December 2017 (prepared 18-Dec-2017)

SUMMARY

The three-agency group implementing Fast-Trips has continued advancing work on network development, demand preparation, route choice estimation, and software development. Past quarter technical activities were primarily focused on software development and advancing the research track. Specifically, this included: further performance tests on the Fast-Trips algorithm based on recommendations from the TRL assessment; additional bug fixes and feature development; exploration of convergence issues; conducting a collaborative literature review on dynamic passenger assignment; facilitating a discussion session with research partners to identify and prioritize future research needs. Dissemination and communications activities conducted over the past quarter include: additional work to finalize the teaching materials packet; distribution of the revised glossary on dynamic transit assignment; and submission of a session proposal for the upcoming ITM conference. We completed contracting paperwork with one of our bench consulting firms, in order to support the software implementation task, and we initiated amendments with multiple project partners (PSRC, SFCTA, and Urban Labs) in order to extend the period of performance through June, 2018. Lastly, the Management Team participated in a debrief interview with staff from FHWA and Volpe in mid-December.

IMPLEMENTATION

Work accomplished for the period:

Task	Activities
Task 1 - Project Mgmt / Tech Oversight	• Continued to meet on a bi-weekly basis on management-level updates and issues • Completed task order process with on-call consultant to support remaining software development • Validated project schedule and budget parameters including time-frame and local match status • Initiated contract paperwork to extend project to end of Jun-2018 for active partners • Participated in debrief interview with FHWA & Volpe staff • Identified possible path forward for Fast-Trips after close of SHRP2-funded workplan
Task 2 - Network Supply	
Task 3 - Transit Demand	

Task	Activities
Task 4 - Transit Rider Behavior	
Task 5 - Transit System Performance	
Task 6 - Software Implementation	• Conducted additional Fast-Trips runs to assess performance sensitivities and convergence behavior • Identified and resolved bugs and other high priority code fixes • Preliminary implementation of new features including: allowing departure/arrival after/before preferred time, reducing looping inefficiencies, and using a faster library to read GTFS (shortening development time)
Task 7 - Test Case Development	
Task 8 - Agency Implementation and Testing	• Continued data gathering for PSRC implementation
Task 9 - Communications and Outreach	• Received final draft of teaching materials • Circulated final draft of DTPA glossary • Submitted proposal for session at next ITM • Conducted research track literature review and guided discussion; synthesized research priorities and identified 3 candidate research needs statements

Schedule status:

The core implementation work has moved slowly this quarter due to staffing availability issues, so we have focused on two main areas: closing out smaller pieces of the scope including the teaching materials, glossary, and research track and then shifting the bulk of the software work to external resources in order to accommodate reduced availability of the former task leader. Based on the pace of work to date, the team has initiated plans to extend the technical work through June, 2018.

Expenditures and budget status:

Reimbursements requested to date are detailed in the table on the next page. Some invoices for the latter half of 2017 have been delayed pending the results of an analysis of local match contributions through June, 2017. Those calculations are now complete, but the corresponding invoices will not be received and processed in time for this quarterly progress report. We expect to provide a more complete update of funds utilized and remaining as part of the next QPR.

Resource	FHWA/ In-kind	Encumbered / Committed	Invoiced to Date / Expended
SFCTA	FHWA	$337,800	$195,500
SFCTA	In-kind	$80,000	$98,300
PSRC	FHWA	$65,000	$45,700
PSRC	In-kind	$65,000	$45,700
MTC	FHWA	$5,000	$4,800
MTC	In-kind	$98,000	$120,000
Univ. of Texas, Austin	FHWA	$38,500	$14,600
Mark Hickman (Univ. of Queensland)	In-kind	$10,500	$0
Hood Consulting	FHWA	$18,000	$11,400
UrbanLabs, LLC	FHWA	$100,000	$68,100
RSG	FHWA	$100,000	$0
Shlomo Bekhor	FHWA	$5,000	$0
Hani Mahmassani	FHWA	$6,500	$0
AJH Associates	FHWA	$3,750	$0
To be determined	FHWA	$20,450	$0
Total	*FHWA*	*$700,000*	*$340,200*
Total	*In-kind*	*$253,500*	*$264,000*
Total	*All*	*$953,500*	*$604,200*

Summary of the quarter ahead:

In the next quarter, we will be focusing on accelerating our work on software features and performance; re-starting validation and calibration activities for the implementations in the SF Bay Area and Puget Sound regions, respectively; advancing project documentation of work that has now been completed; and preparing for the ITM conference.

Risks/Challenges/Obstacles:

As had been the case for some time, we continue to monitor schedule-driven risks including challenges we have encountered in implementing all of our scope and expending all of our budget before the close of the project period. We have recently compiled documentation for all

of the in-kind labor costs that have been contributed as local match from the three partner agencies (MTC, PSRC, and SFCTA) in order to confirm that we have fulfilled the commitment made in our grant application.

MEASURES

Our performance measures tracking tool shows current values for all metrics, including the developments in the past quarter specifically noted below.

Implementation and Deployment:

Over the past quarter, our main activity in this category related to participation in a debrief interview with staff from FHWA and Volpe.

Capacity and Partnership:

A total of 27 people are currently using our collaboration tools: the Asana project management system, our code repositories on GitHub, and cloud storage on Google Drive and Box.

Dissemination:

We did not have any new activity in the metrics in this category over the past quarter.

CATEGORY	DEFINITIONS	METRIC	TARGET	TOTAL	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Jan-Mar 2017	Apr-Jun 2017	Jul-Sep 2017	Oct-Dec 2017
Tool Implementation and Deployment	**OUTPUT MEASURE**	**METRIC 1**	**TARGET 1**									
	Agency and project partners participate in all required calls/meetings.	Number of calls/meetings attended	Minimum: Participation in group kick-off, project kick-off, and 2 additional scheduled calls per year	11	1	2	1	0	0	1	0	1
	Project deliverables are submitted to Volpe/FHWA on time and on schedule.	Quarterly progress reports submitted by specified due date	Quarterly progress reports submitted by specified due date.	11	1	1	1	1	1	1	0	1
		Final deliverables submitted by due date	Final deliverables submitted by due date.	3	0	0	0	0	0	0	0	0
	Agency identifies desireable refinements (i.e., suggestions for future research) for tools created from the C10 project.	Documentation of desireable refinements within existing project deliverables	Information about desireable refinements included within final report.	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Agency supplies lessons learned from participating as a C10 grantee.	Documentation of lessons learned	Information about grantee experience included within final report.	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	OUTCOME MEASURE	**METRIC 2**	**TARGET 2**									
	Travel demand model contains new sensititivities suitable for policy analysis.	Number of progress reports that document new variables / modeling options available	At least one	0	0	0	0	0	0	0	0	0
	Methodologies, work processes, key decisions, problems encountered, & lessons learned are sufficiently well documented that peers can follow the work and repeat the results.	Number of issues and lessons documented in on-line tools	At least one	4	0	0	0	0	0	3	1	0
Capacity Building and Partnerships	**OUTPUT MEASURE**	**METRIC 1**	**TARGET 1**									
	Agency practitioners (staff, contractors, consultants) and assigned partner staff are engaged with project and familiar with results.	Number of users of online collaboration tools	Staff from each partner agency makes contributions to archive of project knowledge.	27	22	23	23	23	24	24	27	27
	OUTCOME MEASURE	**METRIC 2**	**TARGET 2**									
	Agency and partner staff acquire additional skills and expertise.	Number of progress reports that document new skills / expertise acquired	At least one	2	0	1	0	0	0	1	0	0
	Improved work processes, data, analysis tools, and decision information are in use by our agencies.	Number of progress reports that document uptake of new processes, data, tools, methods	At least one	3	0	1	0	1	0	1	0	0
Technology Transfer / Research Dissemination	**OUTPUT MEASURE**	**METRIC 1**	**TARGET 1**									
	Project data and information is shared with the academic and practitioner communities.	Number of presentations delivered (conferences, technical meetings, TRB)	1 TRB paper or poster, or participation in a panel/workshop that recounts the information	9	1	1	0	0	3	3	0	0
		Number of papers/memos/articles written about the project experience	1 Presentation prior to project closeout to FHWA or other interested communities	9	0	6	0	0	2	1	0	0
	OUTCOME MEASURE	**METRIC 2**	**TARGET 2**									
	Peer agencies in the state/region expresss interest in or begin to deploy C10 tools.	Number of agencies that contact C10 team about the project and/or express plans to pursue implementation	At least one	4	0	1	0	1	0	0	1	0