TMIP Annual Report
October 2012 – September 2013

Peer Reviews

Data

$f(x) = ln \sum_n$

Tools

Webinars

Analysis
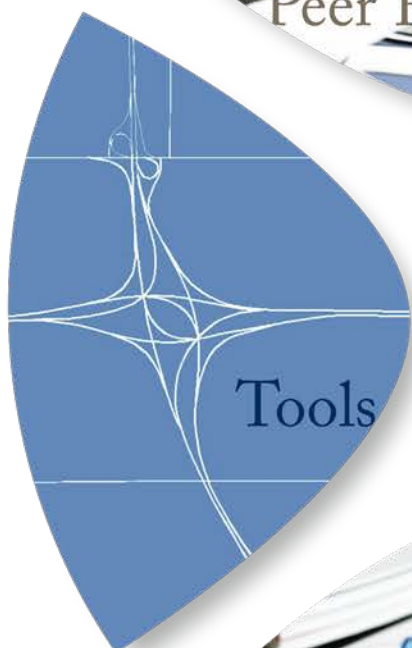
TMIP

Better Methods. Better Outcomes.

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Better Methods. Better Outcomes.

Who We Are

The Travel Model Improvement Program (TMIP) has conducted research, provided technical assistance, and delivered training to state, regional, and local transportation planning professionals since 1994. Much has changed since TMIP's inception, with shifts in transport policy, advances in modeling theories, and progressions in practical lessons. Throughout, TMIP has worked to advance modeling capabilities and support transportation professionals as they respond to current and future challenges. TMIP continues its mission of improving analysis practices to ensure that transportation professionals are well equipped to inform and support strategic transportation decisions. Currently, TMIP is funded by the Federal Highway Administration's (FHWA) Office of Planning, Environment and Realty's Surface Transportation Environment and Planning Cooperative Research Program (STEP).

What We Do

TMIP shares many of its objectives with other stakeholder groups and national organizations. TMIP works cooperatively with the Metropolitan Capacity Building Program (MCB), which is focused on enhancing the capabilities of state and local transportation staffs to meet planning requirements and needs. TMIP also works with the Association of Metropolitan Planning Organizations (AMPO) and the American Association of State Highway and Transportation Officials (AASHTO).

In addition, TMIP has updated its vision, mission, core values, and strategic goals to support the FHWA's mission to meet new planning and programming requirements contained in Moving Ahead for Progress in the 21st Century Act (MAP 21), which was signed into law on July 6, 2012. The bill funds surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014. MAP-21 emphasizes performance-based approaches.

TMIP Vision

TMIP provides technical support and promotes knowledge and information exchange in the transportation planning and modeling community.

TMIP Mission

TMIP helps transportation planners provide better information through effective use of quantitative methods and tools.

TMIP Core Values
- Collaboration
- Innovation
- Education

TMIP Strategic Goals

Outreach: Move transportation planning research from theory to practice and promote good practices in travel data analyses and quantitative methods applications.

Agency Support: Build transportation planning agencies' institutional capacity to effectively apply analytical tools in the transportation planning decision-making process.

Tool Enhancement: Develop the Toolbox as a comprehensive desk reference for applying travel analysis tools to support data-driven, performance-based transportation planning.

Program Highlights

Between October 2012 and September 2013, TMIP established a set of strategic goals to guide its future activities and initiatives. Additionally, TMIP staff outlined and accelerated the execution of eight major programs, summarized in the table below.

Table 1: TMIP Major Initiatives

Webinars: a virtual forum for transportation planning agencies and stakeholders to share insights and experiences. Webinars include both Workshops Over the Web (WOWs) and Web Knowledge and Information Exchange (WKIEs) on relevant topics to the transportation planning community. Ten (10) webinars were convened during the performance period with an average of 116 participants per session.

Peer Review Program: a program in which planning agencies collaborate with an expert peer review panel to review their data, methods, and planning models to ensure that their technical processes and tools meet analysis needs. Two (2) peer reviews were conducted during the performance period: the Vermont Agency of Transportation and the Florida Department of Transportation.

At A Glance Series: a series of concise brochures pertaining to transportation analysis, modeling, and simulation related topics for distribution to the TMIP Community. The second and third At A Glance Series brochures were developed in this performance period entitled "TMIP Peer Review Program" and "Household Travel Surveys," respectively.

TMIP Talks Initiative: a series of brief presentations made by prominent professionals in the field of transportation planning on topics serving TMIP's goals and objectives. One TMIP Talks presentation was filmed during the performance period by Eric Miller of University of Toronto, Canada.

TMIP Report Series: an initiative to disseminate information related to transportation modeling, simulation, and analysis through the publication of reports, case studies, and exemplary models and technical documentation. During the performance period, the first TMIP Agency Snapshot Report Series was published on the Vermont Agency of Transportation, and two other reports for the series were initiated.

TMIP Travel Analysis Toolbox: a reference for the selection and application of analytical tools and methods to support data driven decision-making process. During the performance period, the Toolbox work plan and an initial set of task work orders were finalized.

TMIP Online Community of Practice (TMIP|COP): a complementary community resource to the Transportation Research Board's Travel Forecasting Resource for surface transportation modeling, simulation and analysis discussion, documentation, and capacity building. During the performance period, progress included hosting TMIP transitional website, creating new content and pages, providing technical assistance to TMIP user community members, and attracting 13,040 unique visitors between October 1, 2012 and September 30, 2013.

TMIP Website: the website is TMIP's primary web presence. The website experienced 69,546 visitors during the performance period.

Over the course of the October 2012 to September 2013 fiscal year, FHWA spent just over five hundred thousand (500,000) dollars to conduct the major activities described here.

Figure 1 illustrates how each of the major initiatives addresses at least one of the TMIP strategic goals to aid in achieving TMIP's vision and mission. Each of these initiatives will be described further in the following section.

Figure 1: TMIP Initiative and Strategic Goals
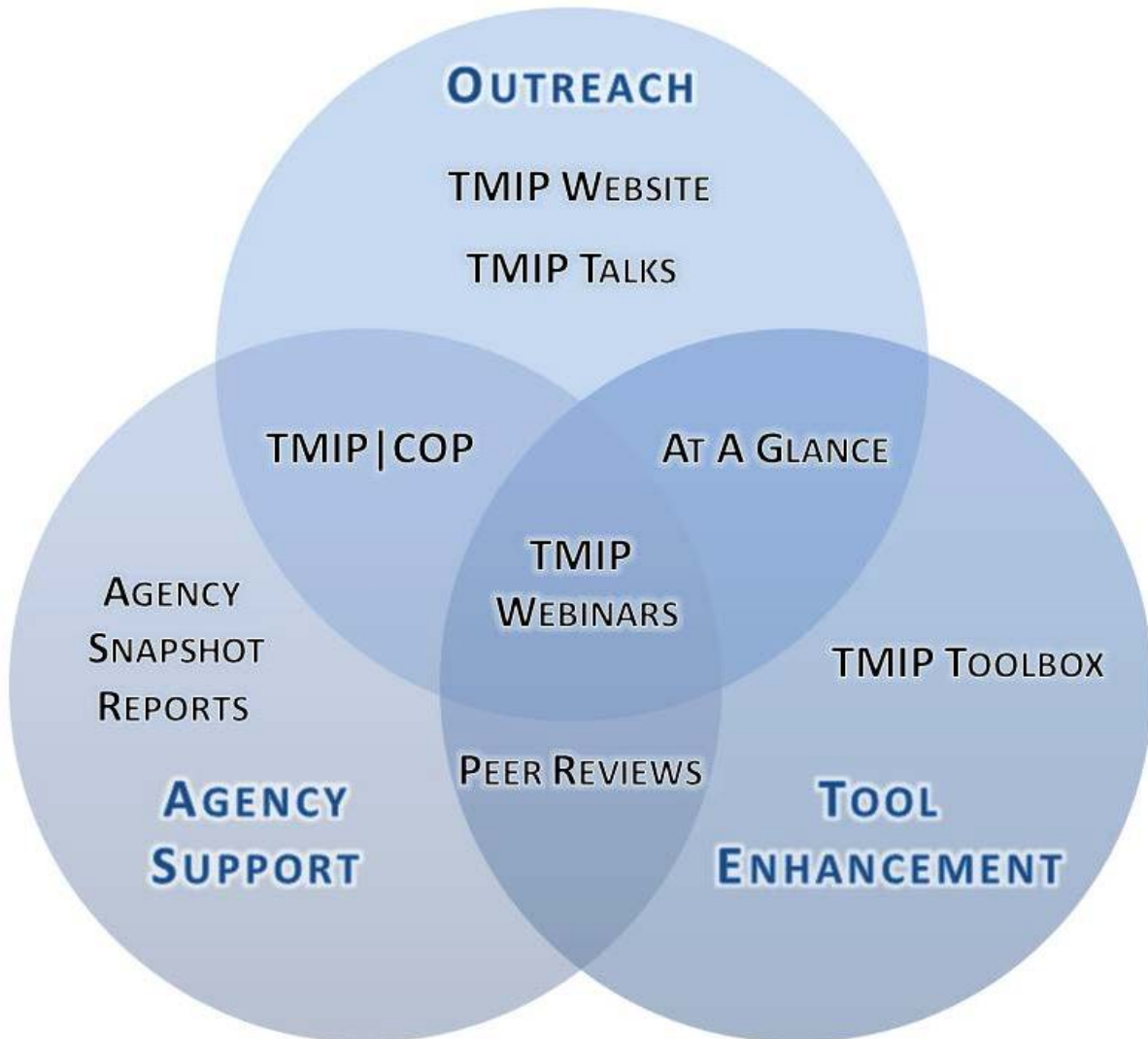
TMIP Webinars

In order to support TMIP's mission and goals, two categories of web-delivered seminars ("*webinars*") were designed: 1) the Web Knowledge and Information Exchange (WKIE), in which an agency or professional communicates a specific project or subject-related experience; and 2) Workshops Over the Web (WOW) webinars, which involve technical subject matter capacity building.

WKIE webinars provide a nationwide virtual platform on which stakeholders may impart knowledge and insight from relevant experiences. WKIE webinars are held on current topics of interest to the transportation modeling, simulation, and analysis communities. WKIE is composed of both one-day webinars and multi-day webinar series.

WOW webinars are typically conducted as a multi-day series, organized for highly complex topics, such as Land Use and Activity-Based Modeling, which are delivered as eight- and twelve-part sessions, respectively.

TMIP records all sponsored webinars and makes summaries available at: http://www.fhwa.dot.gov/planning/tmip/community/webinars/.

Audio-video recordings, and an Instructor's Manual that includes all of the presentation slides in the series with complete speaker notes and written transcripts of the questions and answers from each session, are available for download on the TMIP|COP website. There are currently more than 50 recorded webinars on many different topics related to transportation planning in the TMIP Webinar archive; these range in length from one to two and a half hours.

Rebekah Anderson stated why she liked TMIP webinars best in her October 17, 2013 email feedback.

Performance Period Accomplishments

Metropolitan Planning Organizations (MPOs) are required by Federal law to develop regional transportation plans through the estimation of future travel supply and demand and the analysis of transportation investment impacts. Emerging issues such as road pricing, peak spreading, climate change, non-motorized travel, mixed land use, and freight movement have prompted the need for advanced modeling practices such as activity-based modeling.

A WOW webinar series was developed to provide a comprehensive resource on agency experience with activity-based modeling. This series has continued to benefit the travel modeling community and those whom it serves by filling the gap between overly technical documentation and nontechnical resources to meet the immediate needs of MPO staff.

During the performance period (*October 2012 to September 2013*), six webinars were convened as part of this broader 12-session instructional series on activity-based modeling. Participation in each of the six sessions varied, but was often close to the maximum of 100 meeting room connections permitted by the regular FHWA license.

Aside from the webinar series focused on agencies' experience in activity-based modeling, several other sessions, including a session on Tour-Based and Supply Chain Freight in Chicago, a Virtual Conversation with TMIP Community Members to generate feedback on existing and planned initiatives, Advanced Analytical Techniques in North Central Texas, were convened during the performance period.

Table 2 provides more details on the 10 sessions held in this performance period.

Table 2: TMIP Webinar Sessions, Participants, Dates

Session Title	Participants[1]	Date
Agency Experience Using Activity-Based Models: ARC's Experience Using its Activity-Based Model	88	10/22/2012
Agency Experience Using Activity-Based Models: SF-CHAMP: How we Use It (SFRTA)	92	11/15/2012
Agency Experience Using Activity-Based Models: DRCOG Experience	134	12/13/2012
Tour-Based and Supply Chain Freight in Chicago (CMAP)	140	1/31/2013
Virtual Conversation with TMIP Community Members	52	3/28/2013
Agency Experience Using Activity-Based Models: Experience in the State of Ohio (ODOT, MORPC)	114	4/9/2013
NCTCOG Path Towards Advanced Analytical Techniques	144	4/25/2013
Agency Experience Using Activity-Based Models: Travel Modeling at the Metropolitan Transportation Commission (MTC)	109	6/6/2013
Agency Experience Using Activity-Based Models: Moving to Activity-Based Modeling in Houston (H-GAC, CSI, TTI)	135	7/25/2013
The Role of Travel Models in Making Good Transportation Investments (FHWA)	151	9/12/2013

A large number of agencies responded with positive feedback in the evaluation polls conducted at the end of each individual webinar session. Participant feedback, via the participant poll slides following each webinar, indicated immense public support. Some of the specific comments are "It was a great webinar!", "No suggestions at this time. Really good information was shared. Lots of food for thought", and "Thank you for the webinar series!"

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[1] We derive the participants from the first interactive poll question asking how many people are at each location. We assume that 6-9 people is "6" and 10-20 is "10" for the purposes of doing the multiplication. As can be seen below, the interactive poll question tells us about 79 people participated in total.

How many people are attending at this site?			
Numbers at this Site	Polls	Estimate/Each Connection	Total Estimate
1	55	1	55
2	6	2	12
3	2	3	6
4	0	4	0
5	0	5	0
6-9	1	6	6
10-20	0	10	0
TOTAL			79

Contributions to Program

A number of agencies have developed, or are developing, activity-based models, and agency staff members would like to know lessons learned in activity-based model development. In addition, issues regarding advanced-forecasting methods—including freight and goods movement, application of advanced analytical techniques, and modeling for major transportation investments—are areas of increasing interest for agencies. Therefore, each of these topics was addressed during this performance period.

The Activity-Based Model Webinar series include four "Agency Experience Using Activity-Based Models (ABM)" sessions. In addition to the four ABM experience sharing sessions, webinars were held to highlight good practices on other relevant modeling issues, including a Tour-Based and Supply Chain Freight webinar presented by the Chicago Metropolitan Agency for Planning (CMAP) and a session on "The Path Toward Advanced Analytical Techniques" presented by the North Central Texas Council of Governments (NCTCOG).

These 10 webinars played a unique role in achieving the TMIP mission by efficiently fulfilling both TMIP Outreach and Agency Support goals. These webinar sessions were effective in imparting knowledge of current and emerging practices in activity-based, freight and analytical modeling techniques to state, regional and local agencies. The recorded webinar sessions are available online and may serve as a source of reference, information, and expert advice for agencies planning to undertake advanced-forecasting endeavors. The individual webinar session held on March 28, 2013 served as a virtual conversation between TMIP staff and members of the TMIP Community and proved highly effective in gaining input from members to help meet user needs.

Peer Review Program

The Peer Review Program began in April 2003 with the objective of providing:

- Assistance from peer experts to improve forecast models in high-priority areas;
- Advice on how to proceed with model improvement activities;
- Recommendations on known modeling weaknesses; and
- Comments and advice for modeling prospective policy initiatives.

TMIP works collaboratively with the transportation modeling community to improve information sharing and support good available tools, data, and methods. The purpose of the Peer Review Program is to facilitate a process whereby leading practitioners in the fields of transportation, land-use, and air quality planning and modeling can provide guidance to ensure agencies are developing technical tools, procedures, and processes that meet an agency's needs while also satisfying Federal, state, and local planning requirements. TMIP's Peer Review Program provides an agency with the opportunity to elicit recommendations for addressing its current modeling challenges and those expected to arise due to growth and/or transportation policy changes.

TMIP supports peer reviews by assisting agencies in subject-specific panel assembly, logistics, and funding; documentation of the peer review meetings; and preparation of a final report that summarizes the review for the host agency. Web-conference technology is now also used in some cases to convene part of the peer review as a virtual pre-meeting in addition to the day(s)-long meetings held in person at the host agency. Peer reviews are customized to meet the specific needs of the host agency, but reviews often consist of:

- A one- to two-day meeting with four or five travel modeling experts, host agency planning staff, and other stakeholders;
- Documentation of the agency's model for panelists to review before the meeting;
- Questions or issues for peer panelists to address in their recommendations;
- A final report on the peer review meeting that includes all details and recommendations for tools and their application obtained during the peer review meetings;
- An action plan developed by the host agency in response to the peer recommendations;
- Implementation of recommendations from the host agency; and
- Self-evaluation of progress by the host agency, which may be submitted to TMIP for review.

Performance Period Accomplishments

During the performance period, two peer reviews were convened. Table 3 provides the details on dates and locations.

- **Florida Department of Transportation** *(Orlando, Florida)*

  The Florida Department of Transportation (FDOT) Express Toll Lane Modeling Blue Ribbon Panel Workshop was held on May 22-23, 2013, at the Florida Turnpike Enterprise headquarters in Orlando, Florida. This review focused on providing advice and recommended technical guidance for a new managed-lane model design, and specifications for a consistent modeling practice for express lane implementation resulting from an increased emphasis on managed lanes as a required alternative for analysis in major capacity improvement studies on existing limited-access highways in the State of Florida. The Systems Planning Office has recently started a program for developing a planning-level managed lane modeling application for the Florida Standard Urban Transportation Model Structure[2] (FSUTMS). Therefore, FDOT convened the Blue Ribbon Panel Workshop in order to:

  - Seek assistance in specifying the required elements of a common travel model framework;
  - Identify parameters and sensitivities for demand modeling in both express toll lane planning and operations; and
  - Define the relationships between regional travel demand, tolling, and microsimulation modeling.

  The panel spent the morning session of Day One of the workshop listening to presentations by FDOT planning staff, national experts, and other invited speakers, which culminated in a set of specific questions from FDOT and its planning partners. The second half of Day One of the workshop was spent discussing those questions in two breakout sessions (the Planning Session and the Operations Session) and asking the panel members to provide recommendations. The results of these discussions, in the form of comments and observations from the panel, were used as feedback to steer future toll model development.

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[2] http://www.fsutmsonline.net/

- **Vermont Agency of Transportation** (*State of Vermont*)

  The Vermont Agency of Transportation (VTrans) is responsible for transportation systems planning, development, and monitoring throughout the State of Vermont. Vermont contains 14 counties and has a population of over 626,000, according to the US Census. The Chittenden County Regional Planning Council (CCRPC) is the only Metropolitan Planning Organization (MPO) in the state. VTrans' statewide travel demand model is a critical tool for travel estimation and forecasting statewide and in its non-MPO regions. The statewide model estimates travel demand and link flow throughout the state and across its borders using Vermont's generalized spatial demographics and employment. The model estimates daily passenger-vehicle flow between 866 internal and 70 external traffic analysis zones (TAZs) for four trip types. Commercial truck traffic is estimated directly from traffic counts as a fifth trip type. The model employs a traditional four-step process.

  The University of Vermont Transportation Research Center (TRC), under contract with the Division of Policy, Planning, and Intermodal Development at VTrans, has hosted, improved, and applied the statewide model since 2008. The TRC recently completed the Model update to its current 2009-2010 base year, and VTrans is now considering a host of potential improvements. Given the lack of any previous peer review and the advancements made in the travel modeling field in the last 10 years, TRC and VTrans felt the TMIP peer review process would be useful to identify model enhancements to suit their agency's needs and make good use of the funds available for improving the model to accommodate future planning requests (e.g., energy efficiency evaluations or air quality assessments).

The host agencies and dates of the peer review meetings convened during the reporting period are listed in Table 3.

Table 3: Peer Review Meetings by Agency

Host Agency	Acronym	Virtual Meetings	In-Person Meeting
Vermont Agency of Transportation	VTrans	6/5/13, 6/19/13, 7/10/13, 7/31/13	N/A
Florida Department of Transportation	FDOT	N/A	5/22/13, 5/23/13

The complete reports for each of the two Peer Review Panels conducted during the reporting period are available on the TMIP website, and can be accessed via:

http://www.fhwa.dot.gov/planning/tmip/resources/peer_review_program/#

Contributions to Program

The Peer Review Program has been successful in creating a reputable venue for agencies to receive customized assistance in the development of their planning tools and tool applications. Panel members have proven effectual in helping agencies to identify issues and provide feasible solutions, resulting in targeted and specific short- and long-term recommendations to guide major model improvement efforts. Additionally, the Peer Review Program not only delivers

needed technical advice to the host agencies but also provides TMIP with an opportunity to gauge the varying needs of state, regional, or local agencies.

Documentation of the peer review meetings, discussions, recommendations, implementation strategies, and post-review evaluations is not only useful to the host agency, but it also serves as a valuable resource to agencies with similar models, methodologies, or transportation concerns. By making these materials available, TMIP provides another resource to state, regional, and local agencies regarding travel model improvement and enhancement. These agency-based reports are particularly valuable as they present actual modeling scenarios in a familiar context for MPOs, state departments, and similar agencies. Furthermore, the TMIP Peer Review Program plays an important role in promoting good practice in transportation planning analysis, modeling, and simulation.

> "Gathering a large group of experts to ask for their opinions was a difficult task, but the TMIP Peer Review Program sponsorship of some of the Blue Ribbon Panel Members for our workshop was instrumental in the workshop's successful outcome. The Peer Review Program also provided a facilitator who took notes, and summarized and prepared the final report. We truly appreciate TMIP's assistance."
>
> Vladimir Majano - Florida Department of Transportation

Vladimir Majano from FDOT noted why he found TMIP Peer Review Program a valuable resource in his email feedback from October 17, 2013.

At A Glance Series

TMIP designed the At A Glance Series to provide an easy-to-read reference on transportation analysis, modeling, and simulation-related topics. The At A Glance series is scheduled to be released quarterly and published as brochures for distribution to the TMIP community.

Performance Period Accomplishments

The first TMIP At A Glance brochure for the reporting period, titled "Peer Review Program," is a two-page brochure with a focus on the TMIP Peer Review Process, including an overview, assessment, examples, and future plans for the program. The brochure was distributed to the TMIP Community in January 2013 using the FHWA Office of Planning, Environment and Realty's new GovDelivery service.[3]

The second TMIP At A Glance brochure for the reporting period, titled "Household Travel Surveys," is a two-page brochure with a focus on data collection through household travel surveys, including an overview of methods, datasets, GPS data, and references available to MPOs and state DOTs in the process of conducting a household travel survey. The brochure was distributed to the TMIP Community in September 2013 using the FHWA Office of Planning, Environment and Realty's new GovDelivery service.[4]

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[3] The Peer Review Program At A Glance document is available for download at:

http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/peer_review_program/

[4] The Household Travel Survey At A Glance document is available for download at: http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/household_surveys/index.cfm

Contributions to Program

The At A Glance brochure is another initiative that complements current TMIP activities. It serves as a compact resource that provides a comprehensive, quick reference on important topics to the TMIP Community. By highlighting relevant topics and providing a "*30,000-foot view,*" the brochures are ideal for organizing technical information in an easy-to-read manner.

The Peer Review Program At A Glance brochure provides further information regarding the steps required to initiate and conduct a TMIP Peer Review; it also indicates what an agency should anticipate going into the review to help establish their goals and objectives for the sessions. By providing this overview of the program, the At A Glance brochure makes it possible for more agencies to know about the Peer Review Program in general and all the peer review reports in particular.

The Household Travel Survey At A Glance brochure is a valuable quick reference for agencies planning to conduct household travel surveys. The At A Glance brochure on this topic was intended to provide basic information and critical references related to good practice, rendering the best available resources accessible in one location.

TMIP Talks Initiative

Twice a year, TMIP will invite prominent professionals in the field of transportation planning to give short presentations on a topic of their choosing that aligns with TMIP's goals and objectives. These 10-15 minute talks will address a wide range of topics and provide the user community with access to some of the industry's most important leaders, policymakers, and practitioners. The intent of the TMIP Talks Initiative is to facilitate the engagement of esteemed members of the technical community in constructive discussions with the TMIP Community regarding high-priority issues and policies.

Performance Period Accomplishments

The TMIP Talks Initiative was launched with the filming of a Talks session featuring Eric Miller of the University of Toronto. The presentation, which was held on January 17, 2013, was based on elements of twenty-first century travel demand modeling. The presentation included a brief history of travel demand models, details pertaining to model components, and a discussion of increasing model capabilities related to technological advances.

Contributions to Program

TMIP Talks complements other activities in the TMIP Program by providing access to professionals and promoting conversation across the entire TMIP Community simultaneously. The basis of these short and targeted TMIP Talks is to provide food for thought to members of the TMIP Community and facilitate focused discussion on emerging issues and challenges among transportation modeling and analysis practitioners that will inform agency practices and decision-making.

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http://media.tmiponline.org/clearinghouse/At-A-Glance-Brochures/TMIP_Household-Surveys_AAG-Brochure.pdf

TMIP Agency Snapshot Report Series

The objective of the TMIP Agency Snapshot Report Series is to facilitate the sharing of agency practices in selecting and applying analytical tools and methods to support data-driven, performance-based transportation planning. The Agency Snapshot Report Series identifies the data; analysis tools; resources necessary to develop, use, and maintain both the data and analysis tools; and the planning processes from which these data and analysis tools are utilized for each showcased agency. The series promotes tool enhancement by illustrating new, innovative, and exemplary practices. The Agency Snapshot Report Series will highlight agency successes that provide information and examples to help other agencies thoughtfully identify good available data, tools, and methods to meet their agency's analytical needs.

Performance Period Accomplishments

The first Agency Snapshot Report featuring the Vermont Agency of Transportation (VTrans) was published in September 2013. VTrans has followed a performance-based approach in asset management as early as 2002. The snapshot report details the VTrans Transportation Planning Process, the agency's data collection efforts to support the planning process, the tools and methods employed in the planning process, methods used for measuring system performance, and the challenges posed in both the realms of modeling and data acquisition.

Within the 2012–2013 reporting period, two of the next Agency Snapshot Reports were initiated involving the Oregon DOT and the Wasatch Front Regional Council (WFRC). It is anticipated that reports will be produced for both of these agencies within the 2013–2014 reporting period.

Contributions to Program

One of the most essential and critical elements of the overall TMIP Program is technology transfer. The Agency Snapshot Report Series initiative accomplishes this through facilitating applied research related to transportation modeling, simulation, and analysis via tasks such as publishing reports and articles, conducting and publishing applied case studies, and providing working examples of models and technical documents.

The Agency Snapshot Report Series also presents an opportunity to provide more comprehensive and detailed information regarding technical data and data analysis processes in the context of a real-world agency. In particular, through this report series, TMIP will be able to promote good practices in the following areas:

- The data agencies collect and utilize to support planning.
- The analysis tools and methods used by agencies and the resources necessary to develop, use, and maintain them.
- Where in the agency planning processes these data and tools are utilized.
- Agency experience related to performance measurement and prediction.
- Emerging issues and challenges facing agencies.

TMIP Travel Analysis Toolbox

TRB Special Report 288 finds that

> "… there is no single approach to travel forecasting or set of procedures that is "correct" for all applications or all MPOs. Travel forecasting tools developed and used by an MPO should be

     appropriate for the nature of the questions being posed by its
     constituent jurisdictions and the types of analysis being conducted."[5]

The objective of the TMIP Travel Analysis Toolbox (the Toolbox) is to provide access to a range of travel analysis related tools and serve as a reference resource for the selection and application of analytical tools and quantitative methods to support transportation planning decision-making. The goal of the Toolbox is not to identify or create a single—or even a set of— ideal tools, but rather to provide processes, information, and examples to encourage agencies to select the appropriate tools and methods based on their analytical needs.

Performance Period Accomplishments

Over the course of the 2012–2013 reporting period, the Toolbox work plan was refined to further delineate the program's goals, objectives, and products. A finalized Toolbox work plan has been outlined and initial work orders will commence in the coming fiscal year.

Contributions to Program

The Toolbox will be a critical resource for the TMIP Community, providing information on existing tools and quantitative methods used in travel analyses and developing new tools and methods for future application.

TMIP Online Community of Practice

The TMIP Online Community of Practice (TMIP|COP) includes the management of the TMIP email list, but it is also an extension and enhancement of the TMIP email list. The intent of TMIP|COP is to provide an online forum for resources and knowledge exchange between TMIP Community Members. The TMIP|COP also includes an Ask-The-Expert live technical assistance service, allowing members of the users' community to either live-chat or email the TMIP expert with their technical questions. The TMIP|COP can be viewed as a complement to the Transportation Research Board's Travel Forecasting Resource (http://www.tfresource.org/). Figure 12 is a screenshot of TMIP|COP.

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[5] METROPOLITAN TRAVEL FORECASTING: Current Practice and Future Direction, Transportation Research Board, 2007, Page 3.

Figure 2: TMIP Online Community of Practice

A prominent component of the TMIP|COP is the TMIP-L email list. TMIP maintains the email list to promote the open discussion of issues related to transportation modeling, simulation, and analysis. The email list has over 1,610 subscribers representing travel forecasting professionals from around the globe.

Performance Period Accomplishments

Accomplishments during the 2012–2013 performance period involved: hosting and maintaining the TMIP|COP, hosting and maintaining the TMIP-L email list, and providing virtual technical assistance. These accomplishments are detailed in the following subsections, respectively.

Hosting and Maintaining the TMIP|COP
Google Analytics were used to produce site analytics and standard reports of activity on the TMIP|COP website. The overall usage of the TMIP|COP during the reporting period is summarized as follows:

- Over 13,040 unique visitors between October 1, 2012, and September 30, 2013
    - *70% of the unique visitors were from within the United States*
    - *The average visit duration was approximately 8 minutes*
- 27,947 page views between October 1, 2012, and September 30, 2013 (see Table 4 below)
    - *The Recorded Webinar landing page experienced the most page views, with the exception of the main landing page*

- Approximately 1,122 unique visitors per month on average from October 1, 2012 to September 30, 2013

Table 4 summarizes the TMIP|COP top ten page views for the reporting period. Figure 3 illustrates the visits per month, showing the month of October 2012 as the highest for the reporting period, with 2,196 visits.

Table 4: TMIP|COP Pageviews by Page (top ten pages *only*)

Page	Page views	% Page views
/Landing Page	2,943	10.5%
/Clearinghouse/Item-Types/Recorded-Webinar.aspx	2,063	7.4%
/Clearinghouse/Subject-Category/Activity-based-modeling.aspx	1,179	4.2%
/Clearinghouse/Items/Introduction_to_Travel_Demand_Forecasting_Self_Instructional_CD-ROM.aspx	1,120	4.0%
/Clearinghouse/Item-Types/Published-Report.aspx	657	2.4%
/Clearinghouse/Subject-Category/Travel-demand-modeling.aspx	631	2.3%
/Clearinghouse.aspx	485	1.7%
/Clearinghouse/Items/20120202_-_Activity-Based_Modeling_Executive_Session_1.aspx	457	1.6%
/Clearinghouse/Items/20120930_Activity-Based_Modeling_Forecasting_and_Application_Session_12.aspx	449	1.6%
/Calendar.aspx	333	1.2%
Grand Total	**27,947**	**100%**

Figure 3: TMIP|COP Visits per Month
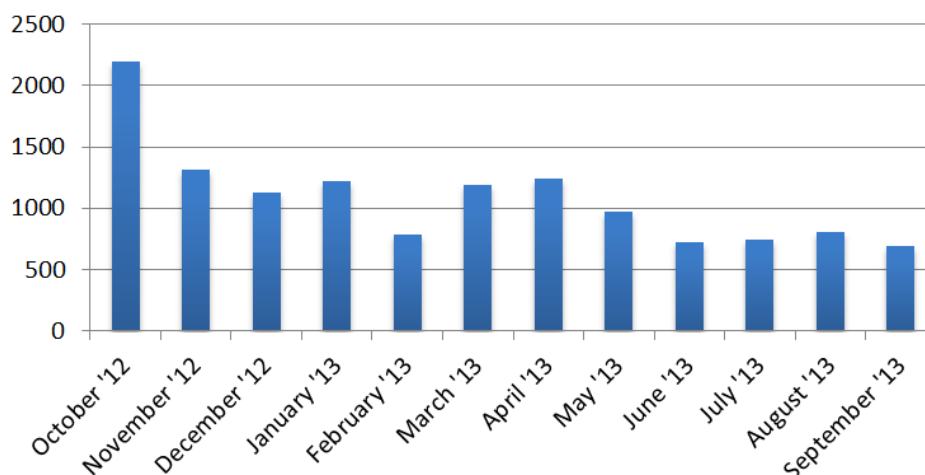
Table 5 below summaries the TMIP|COP visits by country, reporting over 3,900 visits from outside the United States. Figure 4 geographically illustrates the TMIP|COP visits by country.

Table 5: TMIP|COP Visits by Country (top ten countries only)

Country	Visits	Pages/Visit	Avg. Visit Duration	Bounce Rate *
United States	9,129	2.14	0:08:22	30%
Canada	643	2.42	0:06:25	21%
Iran	419	1.91	0:07:16	16%
United Kingdom	254	1.63	0:02:42	61%
Australia	233	2.84	0:12:58	37%
China	217	2.86	0:02:58	36%
India	200	2.14	0:09:10	57%
South Korea	161	3.90	0:03:49	24%
Germany	143	1.38	0:03:59	35%
Qatar	137	1.61	0:40:11	9%
Grand Total	**13,040**	**2.14**	**0:07:44**	**32%**

* Bounce rate is the percentage of visitors who enter the site and "bounce." Rather than continue viewing other pages within the site. A bounce occurs when a visitor only views a single page on a website.

Figure 4: TMIP|COP Page Visits by Country
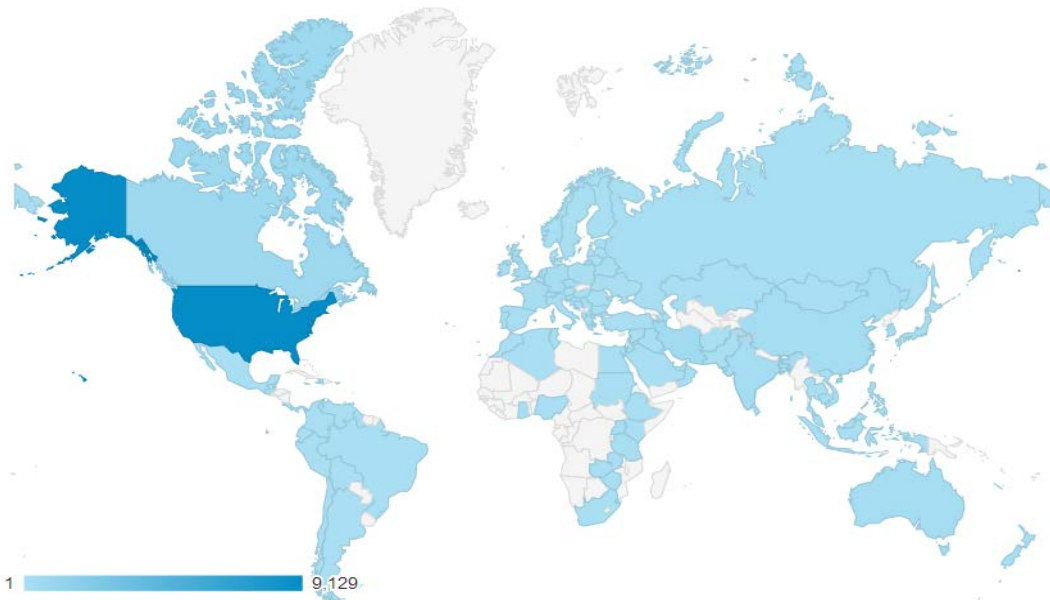
Hosting and Maintaining TMIP-L Email List

The TMIP-L email list has approximately 1,610 subscribers. During the performance period, 466 email messages were moderated and then distributed to the TMIP-L email list. Table 6 summarizes the breakdown of posts by topic.

Table 6: Total Number of TMIP-L Postings by Topic

Email List Topic	Email Posts
Technical Discussion	190
Announcements *(Call for Papers, Courses Offered, Seminars)*	101
Job Posts	94
Ask The Modeling Expert Responses	57
RFPs	24
Grand Total	**466**

Providing Virtual Technical Assistance

During the performance period, six live-chat and twenty-one email technical assistance questions were submitted to the TMIP|COP Ask-The-Expert service. Table 7 summarizes the technical assistance provided by the TMIP|COP Ask-The-Expert Service.

Table 7: Ask-The-Expert Technical Assistance

Ask-The-Expert Inquiries	Total
Live-Chat	4
Email	26
Grand Total	**30**

Contributions to Program

The TMIP|COP's and TMIP-L email list enables TMIP to reach out to thousands of professionals around the globe and provide a platform for community members to connect with each other in a cost-effective way. The TMIP|COP uses technology to provide an interactive learning and communication experience for transportation modeling, simulation, and analysis professionals. The TMIP|COP also contributes to the TMIP Program by facilitating critical technical discussions regarding innovation and ideas for enhancing tools that can be further evaluated and collaborated on by professional staff. Vivian Daigler expressed her sentiment of why TMIP online community is an integrated part of TMIP and perceived to be a valuable resource to TMIP community members.

"What I like best about TMIP is reading different people's opinions on all topics regarding the transportation industry. I am fairly new to the industry, and have a vast amount of learning to do. For me, the discussions are a great learning tool, even if I don't fully grasp what some of the experts are saying."

Vivian Daigler
NUSTATS Research Solution

TMIP Website

The TMIP website, located within the broader Department of Transportation (USDOT) and FHWA website, is the Program's primary web presence. The FHWA TMIP website is located at: http://www.fhwa.dot.gov/planning/tmip/. The TMIP Website varies from the TMIP|COP in that the TMIP|COP is a forum intended solely for TMIP Community members to utilize and share relevant research, information, and experiences that inform similar members and agencies. The TMIP Website, on the other hand, is designed as a general public access website to obtain information on TMIP initiatives. The website is a source for members, both inside and outside of the TMIP Community, to obtain information available through TMIP's offerings.

Performance Period Accomplishments

The TMIP Website is designed to inform the user community of news, events, and available resources for all of the TMIP initiatives. A simple navigation menu gives visitors the ability to easily locate information. Using each of the main subject headings, the pages clearly and concisely describe each initiative and provide hyperlinks to additional materials and websites.

Site analytics and standard reporting available through the FHWA StaffNet Internet usage statistics reports, were used to determine the usage of the TMIP Website during the reporting period. Due to reporting processes, site analytics were obtained for only the latter portion of the report period, from February 2013 through September of 2013.

Table 8 summarizes visits by month, while Table 9 provides a summary of page visits to the top 10 pages viewed on the TMIP.GOV site. Figure 5 presents the visits per week, showing the week of March 4, 2013, as the highest for the reporting period, with over 2,700 visits.

- TMIP .GOV website had 69,546 visits between February 1 and September 30
  - *The average visit duration was over 11 and a half minutes*
- TMIP .GOV website had 176,587 page views between February 1 and September 30
  - *The TRANSIMS Resources page experienced the most page views, with the exception of the main landing page*
- TMIP .GOV website had approximately 1,926 unique visitors per month on average between February 1 and September 30
-

Table 8: TMIP .GOV Website Visits by Month*

Month	Visits	Page views	Pages/Visit	Avg. Visit Duration
February	10,187	26,140	2.57	00:13:15
March	11,121	24,659	2.22	00:12:35
April	10,822	22,092	2.04	00:11:52
May	8,519	24,629	2.89	00:12:18
June	7,612	20,068	2.64	00:10:31
July	8,067	21,803	2.61	00:10:51
August	6,341	17,182	2.71	00:11:12
September	6,877	20,014	2.91	00:10:26
Grand Total	**69,546**	**176,587**	**2.57**	**00:11:37**

*Data for the reporting period only available from February 1 through September 30, 2013

Table 9: TMIP .GOV Website Page Views by Directory Page (top ten pages only)*

Page Directory	Page Visits	% of All Page Visits
1. TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/	8,604	7.7%
2. TRANSIMS - Resources - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/resources/transims/	2,222	2.0%
3. TRANSIMS - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/transims/	2,004	1.8%
4. About - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/about/	1,983	1.8%
5. Resources - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/resources/	1,737	1.6%
6. TMIP-L Email List - Community - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/community/list_serv.cfm	1,711	1.5%
7. Webinars - Community - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/community/webinars.cfm	1,538	1.4%
8. Other Reports - Publications - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/publications/other_reports/	1,403	1.3%
9. Highlighted Resources - Resources - TMIP - Planning – FHWA http://www.fhwa.dot.gov/planning/tmip/resources/sponsored_reports.cfm	1,334	1.2%
10. Peer Review Program - Resources - TMIP - Planning - FHWA http://www.fhwa.dot.gov/planning/tmip/resources/peer_review_program/	1,320	1.2%
Grand Total	**23,856**	**21.3%**

Data for the reporting period only available from February 1, 2013, through September 30, 2013

Figure 5: TMIP .GOV Website Visits per Week*
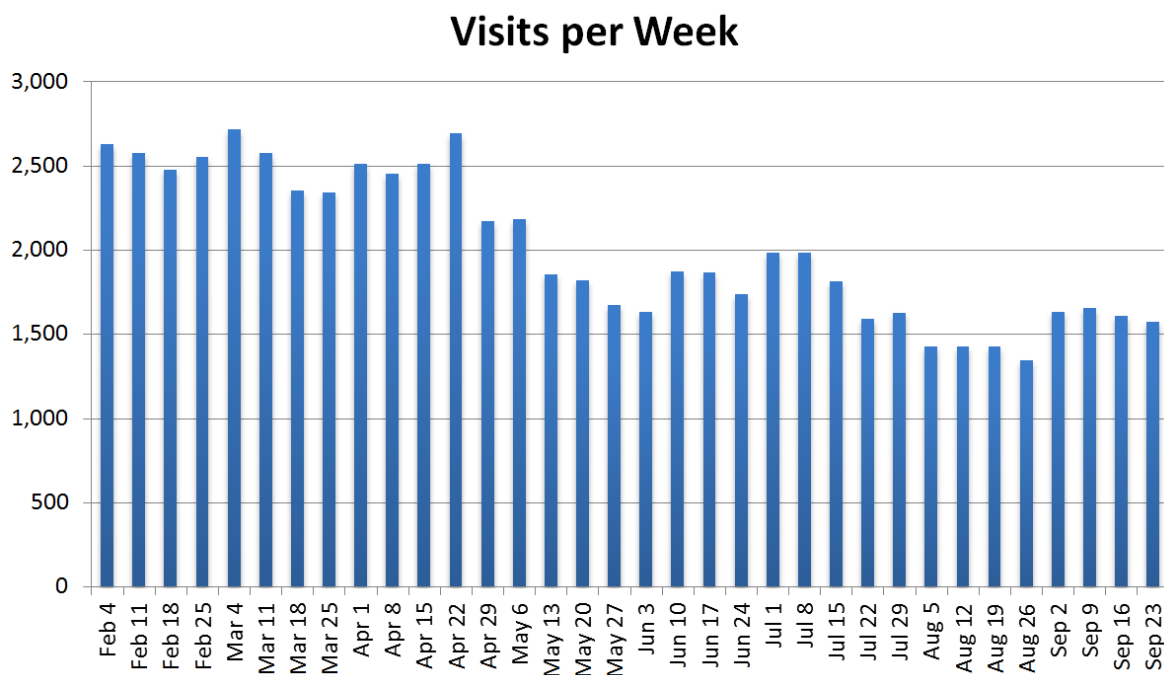
Data for the reporting period only available from February 1, 2013, through September 30, 2013

Contributions to Program

The TMIP Website is the face of the TMIP Program. The site is useful to agency staff as it illustrates the goals, objectives, and programs of the TMIP Program. It is also helpful in drawing agency awareness to the materials available.

Summary and Observations

TMIP strives to facilitate technology deployment and promote good practices. Outcome is what matters most. Each of the initiatives in the program is designed to meet the needs of state, regional, and local transportation planning agencies. TMIP staff members constantly monitor the industry trends and community needs and adjust initiatives to meet new, emerging needs. Each TMIP activity plays an important part in fulfilling TMIP's vision.

TMIP Webinars

Webinars are an important contribution that TMIP makes to the community. These webinars provide an extensive amount of information using limited resources. The WKIE and WOW webinars are unique in that they offer a cost-effective means of sharing noteworthy practices to build professional capacity in modeling and analytical techniques. WKIE sessions provide a forum for the TMIP Community to share knowledge and experiences, while WOW sessions deliver highly technical knowledge with a practical focus through comprehensive education sessions on a single topic. Ranging from 12-session series to one-session briefings, these webinars provide a classroom-like setting in which agency members can ask questions and spend time delving into complex information to expand their knowledge base in a cost-effective manner.

With an abundance of readily available information, these series aim to meet immediate local, Metropolitan Area Organization (MPO), and state agency needs. The webinar sessions are recorded so that they can be accessed on demand. By making these WKIE and WOW sessions available, TMIP's webinars make it possible for agencies and professionals to access a variety of materials, resources, and expert advice regarding the application and advancement of individual tools in planning practices.

Peer Reviews

TMIP Peer Reviews offer another venue for building state, regional and local agency capacity to promote good practices. The focused professional and peer networking opportunities that are fostered through the Peer Review Program promote the sharing and transfer of valuable information, skills, and expertise among transportation planning agencies. The opportunity to exchange different viewpoints and solutions to complex behavioral and computational problems can provide highly valuable perspective and understanding on specific topics for the peer review participants. This knowledge sharing and promotion of good practice is critically important as advanced tools and techniques become more widely adopted in the transportation planning community and as agency staff are simultaneously asked to conduct more detailed analyses using less time and funding.

Agency satisfaction in the Peer Review Program has been quite high. During post-Peer Review evaluations, agencies feel—almost universally—that the peer reviews meet or exceed the host agency's expectations. The Peer Review panels are characterized as collegial, technically skilled, and generally interested in helping the host agency while promoting improved techniques and methods.

At A Glance Series

It is extremely easy to obtain information with so many resources available at the click of a button. However, it is important to note that more information does not equate to useful information. The At A Glance series lends efficiency to the TMIP Community through its ability to eliminate the time-consuming process of searching through superfluous documentation to locate relevant, reliable, and current information. At A Glance brochures provide logical, succinct one-stop references that fill the gaps between superficial summaries and lengthy, technical documents.

TMIP Talks

Though in initial planning stages, the TMIP Talks Initiative has the potential to stimulate conversations focused on critical issues relevant to the present and future of transportation planning.

TMIP Agency Snapshot Report Series

The TMIP Agency Snapshot Report Series provides the latest information in a concise, yet comprehensive, style that is easily accessible for reference by state and local planning agencies. The Agency Snapshot Report Series also helps minimize the cost of reinventing the wheel by identifying common issues and needs expressed by planning agencies that have led to focused research efforts and demonstrated successes.

TMIP Toolbox

The TMIP Toolbox will help to identify and develop robust, reliable, and helpful travel analysis data, tools, and methods.

TMIP Online Community of Practice

The TMIP|COP aims to create a true sense of community by facilitating streams of communication between agency members, consultants, and associated professionals. Through the TMIP|COP, the TMIP Program strives to provide a national platform for public agency staff and travel modeling and analysis professionals to collaborate on various technical topics.

TMIP Website

The TMIP Website affords TMIP a simplistic medium to more effectively and efficiently provide information and services to the TMIP Community and, more importantly, to those unfamiliar with the TMIP Program. The website also provides a means to coordinate TMIP initiatives with other FHWA programs.

Concluding Remarks

There are a number of ways to gauge the success of a program, but few are as forthright as feedback provided directly from the program's users. Bhupendra Patel, Senior Transportation Modeler at the Association of Monterey Bay Area Governments (AMBAG), noted in his Oct 18, 2013 email feedback:

> *The Travel Model Improvement Program (TMIP) and constructive approach of TMIP staffs is a great resource and investment for the Travel Demand Modeling profession. TMIP forum provides a whole range (basic/ fundamental-level to advanced-level) of technical and professional assistance to transportation modelers and helps inform multi-modal transportation investment around the world.*

In a specific reference to AMBAG, a federally designated MPO in California, the TMIP program provided very specific assistance by conducting a peer review in March 2011 for our Model Improvement Plan. It was very successful and valuable to AMBAG, as well as our regional and local partner agencies. Technical and financial support as provided under the TMIP program helped us achieve the following goals:

1. External guidance on current model's functionalities,

2. Identification of possible model deficiencies,

3. Recommendations for AMBAG's future Model Improvement Plan (MIP),

4. Experienced advice on model development and its applications, and;

5. Expert opinion for resource needs (surveys/other data, technical, financial as well as timing) to implement the peer review recommendations into our Model improvement Plan.

Here is what Kevin Black[6] , another TMIP Community member, has to say about TMIP.

It is nice to have a forum where people can exchange questions and answers about the topics that they are dealing with in their work. In this capacity, TMIP serves as a teaching and training tool since some people are always entering the field and more experienced senior people can pass on knowledge before they leave.

The TMIP Community members both utilize and steer the program and its various initiatives. It is for these users that TMIP continues to offer services and provide the most relevant and useful information available.

---

[6] October 18, 2013 email feedback by Kevin Black, Senior Environmental Engineer at Federal Highway Administration

Appendix A.   Samples of TMIP Webinar Announcements and Evaluation Reports

1.0 Tour-Based & Supply Chain Freight Modeling in Chicago—TMIP Webinar Evaluation Report

1.1   Summary

On January 31, 2013, Travel Model Improvement Program (TMIP) sponsored a webinar highlighting the Chicago Metropolitan Agency for Planning (CMAP) experience developing and applying their activity-based model. The webinar was titled "Tour-Based & Supply Chain Freight Modeling in Chicago."

The webinar session included three presenters: Kermit Wies (Deputy Executive Director for Research and Analysis, CMAP), Monique Urban (Cambridge Systematics, CMAP Consultant), and Maren Outwater (RSG, CMAP Consultant). These presentations collectively provided a comprehensive summary of advanced freight modeling framework, development, and application in the Chicago metropolitan region. The presentations covered the following material:

Kermit Wies: Advanced Freight Model Development/Mesoscale model development

- Data Sources
- Sensitivity and Scenario Testing
- Application

Monique Urban: CMAP's Innovative Approach to Freight Forecasting

- Freight Modeling History
- Freight Model Scales (Macro, Meso, and Micro)
- Data Preparation
- Firm Location Model
- Supplier Selection
- Flow Apportionment
- Path Enumeration and Selection
- Assignment
- Example Results

Maren Outwater: National Freight Forecasting Model Framework

- Freight Forecasting Model Improvements/Advancements
- Model Framework in Chicago
- National Supply-Chain Models
- Regional Tour-Based Model
- Demonstration and Implementation

A total of one-hundred and forty (140) individuals and agencies (some with more than one participant) from academia, private consulting firms, local, state and federal governments attended the webinar. A majority of these participants either worked for large MPOs (>1 million population), state governments or private sector consulting firms.

In a post-webinar evaluation, 94% of the respondents agreed that the webinar was relevant to their day-to-day jobs and that the format of the webinar was just right as is. The presentation

received positive feedback in the polls, as well as various suggestions to guide the topics for future webinar sessions.

The following sections provide a detailed evaluation of the TMIP webinar on the Tour-Based and Supply Chain Modeling in Chicago webinar.

1.2 Promotions

This webinar was promoted via an email message sent to the individuals and institutions who have signed up to receive TMIP news and updates (approximately 2000 subscribers). The promotional email was sent using the GovDelivery, FHWA's news and email delivery service, on January 11, 2013. A reminder email was also distributed using the GovDelivery on January 29, 2013, one day prior to the webinar. The webinar announcement and reminder distributed via email can be found in Appendix B.

1.3 Participation

Of the 140 unique attendees (meeting connections), over 50% attended the webinar for over 90 minutes (of a duration of approximately 120 minutes). **Figure 6** below presents a temporal profile of all the webinar participants.

Figure 6: Temporal Profile of Webinar Participation – CMAP Advanced Freight
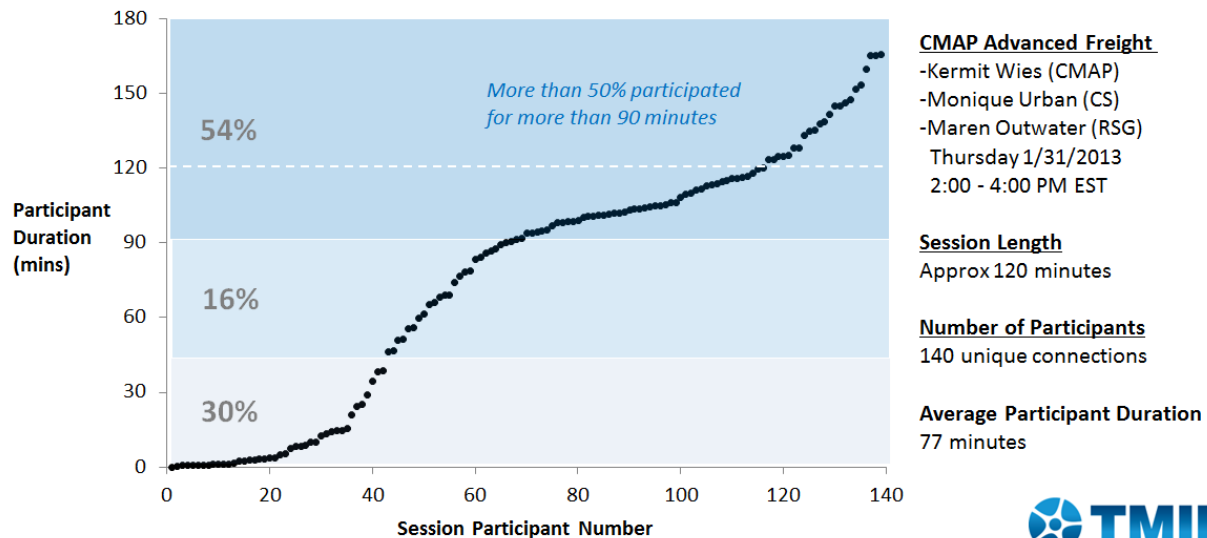
During the webinar, attendees were encouraged to submit questions via the meeting room chat pod. Eleven (11) questions on the content of the presentations were asked in the chat. These questions are as follows:

- Do you have a pipeline mode?
- How do you choose between the competing Class I railroads?
- Which year's make and use coefficient used in the study?
- Could you explain one more time why the FAF3 was used in the study?
- How to you determine truck load? Percent of light-heavy or perfect of heavy-heavy truck?

- How were you able to develop a touring model using commodity flow database where records show delinked flows?
- Where to you get information on how to estimate travel times and costs by mode throughout the country?
- How does this model integrate into a typical regional model using TransCAD?
- Is the software coded on R mentioned during presentation available now?
- How will CMAP use this model day-to-day? Please comment on the relevancy with your planning process.
- What was the budget for this project?

These questions were answered once the three presentations were complete.

1.4   Polling Questions

Five (5) polling questions were administered as part of the webinar. The remaining questions were answered at the end of the presentation. The results of these questions are listed below.

Question 1

How relevant was this webinar to your day-to-day job?

Table 10: CMAP Advanced Freight Evaluation Poll Question – Webinar Relevancy

Response Options	Response	Percentage
Very	27	42%
Somewhat	34	52%
Not Very	4	6%
Total	**65**	**100%**

A majority of the respondents found the webinar to be very useful at their current job.

Question 2

What changes would you like to see in the format?

Table 11: CMAP Advanced Freight Evaluation Poll Question – Desired Changes in Webinar Format

Response Options	Response	Percentage
More Time for Question & Answer	4	6%
More Presentation Time	3	5%
Just About Right As Is	59	89%
Total	**66**	**100%**

A significant majority of 89% viewed the webinar as "Just About Right As Is."

Question 3

What type of organization do you work for?

Figure 7: CMAP Advanced Freight Webinar Evaluation Poll Question – Type of Organization
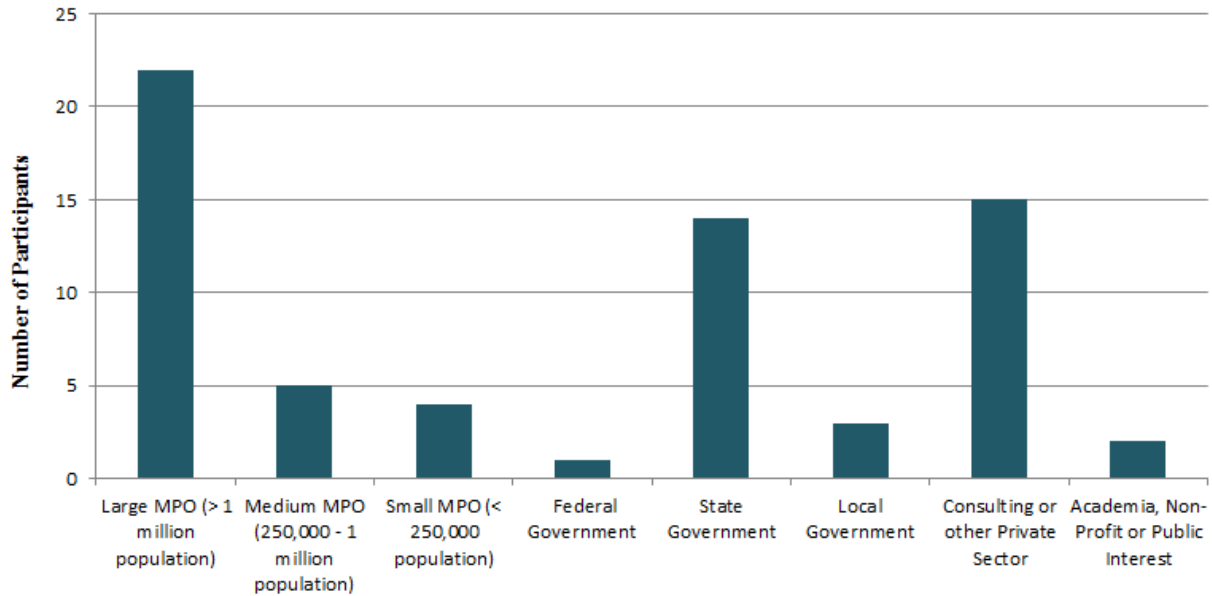
As stated earlier, a majority of the attendees of this webinar were from large MPOs, state government, or private sector consulting firms.

Question 4

Question 4 prompted the participant for their agency or firm's name and location.

Table 12: CMAP Advanced Freight Evaluation Poll Question – Agency/Firm Name and Location

Agency/Firm Name	*Agency/Firm Location*
ADOT	Phoenix, Arizona
PAG	Tucson, AZ
Arizona DOT	Phoenix, Arizona
Michigan DOT	Lansing, MI
SEMCOG	Detroit, MI
DRCOG	Denver, CO
MORPC	Columbus, OH
Yakima Valley Conference of Governments	Yakima, WA
California Department of Transportation	Oakland, CA
MIT	Cambridge, MA
CDM Smith,	New Haven, CT
Denver Regional Council of Governments	Denver-Aurora-Boulder, CO
data	Philadelphia, PA
Eco Resource Management Systems Inc.	Vashon, WA
Iowa Department of Transportation	Ames, Iowa
NCDOT	Raleigh, NC

Agency/Firm Name	*Agency/Firm Location*
M-NCPPC, Montgomery Planning	Silver Spring, MD
University of Connecticut	Storrs, Connecticut
SCAG	Los Angeles, CA
FDOT	Tallahassee, FL
Florida DOT	Tallahassee, Florida
SCAG	Los Angeles, CA
California Department of Transportation	San Bernardino, CA
North Florida TPO	Jacksonville, Florida
DVRPC	Philadelphia, PA
Puget Sound Regional Council	Seattle, WA
RST International Inc.,	Bellevue, WA
Christopher B. Burke Engineering	Rosemont, IL
METRO	Portland, OR
North Central Texas Council of Governments	Arlington, Texas
MAG	Phoenix, AZ
Alliance Transportation Group	Austin, TX
Central Transportation Planning Staff	Boston, MA
SA/BC MPO	San Antonio, TX
Michigan DOT	Lansing, MI
Puget Sound Regional Council	Seattle, WA
NJTPA	Newark, NJ
Citilabs	Tallahassee, Florida
SCAG	Los Angeles, California
Ministry of Transportation, Ontario	Toronto, ON
Parsons Brinckerhoff	Tallahassee, Florida
TCRPC	Lansing, MI
Metroplan	Little Rock, AR
Southwestern Pennsylvania Commission	Pittsburgh, PA
HNTB	Chicago, IL
CMAP	Chicago, IL
MDC	Miami, FL
H-GAC	Houston, TX
CDM Smith	Lexington, Kentucky
Oregon DOT	Salem, Oregon
Grand Valley Metro Council	Grand Rapids, MI
Ohio DOT	Columbus, OH
Alliance Transportation Group, Inc.	Austin, Texas
Kittelson & Associates	Oakland, CA
UPR Associates	Dallas, Texas
Cambridge Systematics, Inc.	Cambridge, MA
FHWA	Denver, CO
ADOT	Phoenix, AZ
City of Edmonton	Edmonton, Alberta
H-GAC	Houston, Texas
Champaign County RPC	Urbana, IL
Private	Dallas, TX

Question 5

Which of the following best describes you?

Table 13: CMAP Advanced Freight Evaluation Poll Question–Participant Professional Description

Response Options	*Response*	*Percentage*
I apply and maintain travel demand models (hands on)	37	61%
I manage a group primarily responsible for model applications and maintenance	5	8%
I manage/direct a group in which travel modeling is one of multiple technical services	5	8%
I'm an executive director of an agency	0	0%
I'm a developer of application software to support travel models	3	5%
I manage a model development group or practice	4	7%
I conduct or oversee research related to travel modeling	7	11%
Total	**61**	**100%**

The majority of the participants in the webinar apply and maintain travel demand models as part of their agency or firm role.

1.5 Participant Feedback and Recommendations

Participant response to the webinar was generally very positive. As indicated by the unedited comments below, the participants hoped that these seminars would continue with additional details and topics. A few common themes in the comments included requests for more detail on data and model components and suggestions for future webinar topics.

1.6 GovDelivery Webinar Announcements

Figure 8: CMAP Advanced Freight TMIP Webinar Announcement

TMIP

Better Methods. Better Outcomes.

Webinar Announcement

January 11, 2013
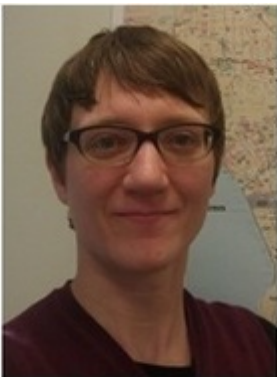
CMAP Advanced Freight Modeling

TMIP is proud to announce an upcoming webinar highlighting the Chicago Metropolitan Agency for Planning (CMAP) experience developing and applying a tour-based and supply chain freight forecasting framework. This webinar session will give you a behind-the-scenes look at the advanced freight modeling efforts underway at CMAP.

The webinar session will be held **Thursday January 31st from 2:00pm to 4:00pm EST**.

Kermit Wies (CMAP)   **Monique Urban (CS)**   **Maren Outwater (RSG)**

Presenters

Kermit Wies is with the Chicago Metropolitan Agency for Planning (CMAP) where he serves as Deputy Executive Director for Research and Analysis. Kermit has over 27 years' experience in urban systems modeling and planning and is the principal author of the 2030 Regional Transportation Plan for the Chicago metro area. Over the past several years, Kermit has been overseeing CMAP's development and implementation of new modeling techniques including an

analysis and evaluation work program in support of implementing Chicago's GO TO 2040 comprehensive regional plan.

Monique Urban is a Travel Demand Forecaster at Cambridge Systematics in Chicago, where she participates in a broad range of modeling studies. She has developed models of fare choice and ridership for regional transit agencies; is currently developing models of utilitarian and recreational trips by bicycle; and is equally interested in decision-making in goods movement. In the freight modeling area, Monique has helped develop aggregate, discrete choice, and agent-based freight models throughout the U.S., most recently for the Chicago Metropolitan Agency for Planning. Monique holds Bachelor's and Master's degrees in Civil Engineering from the University of Texas at Austin.

Maren Outwater is currently the Director of Advanced Forecasting Methods at RSG and published on a wide variety of advanced modeling topics. She managed the research and development of a freight forecasting framework based on logistics supply chain and tour-based methods for metropolitan planning organizations (MPOs) in the U.S., sponsored by the Federal Highway Administration and currently being implemented for the Florida Department of Transportation. Ms. Outwater has also developed trip-based and hybrid freight models for several states and regions in the U.S. She holds a BS in Civil Engineering and Masters in Urban Planning from the University of Michigan and is a registered Professional Engineer in California and certified with the National Council of Examiners for Engineering.

Description

CMAP has been trying to address the inadequacies of the current models (that were developed for personal passenger travel) in freight demand forecasting. A new tour-based and logistics supply chain model for the Chicago metropolitan area has recently been developed and tested. This presentation will cover these new model initiatives, motivations and policy considerations. The presentation will also include a software demo by CMAP.

Meeting Information

Participants do not need to preregister to attend the webinar. Attendance is limited to 100 connections and is first-come, first-served.* You can log on to the webinar at:

http://fhwa.adobeconnect.com/tmipvirtualseminars/

The webinar will be close-captioned. The audio portion of the webinar will be broadcast by Voice Over IP. We will have a limited number of teleconference connections available for those that are unable to use the Voice Over IP. The teleconference number will be posted in the webinar room.

Please note, if the session fills up and you are unable to log on, don't worry - the close-captioned sessions will be recorded and made available at the TMIP Community of Practice site (TMIP|COP).

Contact Us

If you have other TMIP webinar topic suggestions or if you are interested in presenting, please let us know. If you have any questions or comments about TMIP, please contact Sarah Sun, FHWA.

Chicago Metropolitan Agency for Planning

Figure 9: CMAP Advanced Freight GovDelivery Webinar Reminder

This is a reminder that the **CMAP Advanced Freight Modeling** webinar will be held:
Thursday January 31st from 2:00 - 4:00pm EST

Description
CMAP has been trying to address the inadequacies of the current models (that were developed for personal passenger travel) in freight demand forecasting. A new tour-based and logistics supply chain model for the Chicago metropolitan area has recently been developed and tested. This presentation will cover these new model initiatives, motivations and policy considerations. The webinar session will give you a behind-the-scenes look at the advanced freight modeling efforts underway at CMAP.

Presenters
Kermit Wies, Chicago Metropolitan Agency for Planning (CMAP)
Monique Urban, Cambridge Systematics (CS)
Maren Outwater, Resource Systems Group (RSG)

Meeting Information
Participants do not need to preregister to attend the webinar. Attendance is limited to 100 connections and is first-come, first-served.* You can log on to the webinar at:

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* Please note, if the session fills up and you are unable to log on, don't worry - the close-captioned sessions will be recorded and made available at the TMIP Community of Practice site (TMIP|COP).

2.0 SFCTA Experience Using Activity-Based Models— TMIP Webinar Evaluation Report

2.1   Summary

On November 15, 2012, Travel Model Improvement Program (TMIP) sponsored a webinar highlighting San Francisco County Transportation Authority's (SFCTA) experience developing and applying their activity-based model. The webinar was titled "SFCTA Experience Using Activity-Based Models."

The webinar session was presented by Elizabeth Sall (Deputy Director for Technology Services, SFCTA). It provided a behind-the-scenes look at what it is like to be a modeler at SFCTA where they have been using and improving their SF-CHAMP activity-based model for the past decade. The webinar presented answers to some very practical questions related to using and maintaining a fully functional activity-based model such as:

- How many people does it really take?
- How big are the computers?
- What do you do with all of that data?
- How does it actually help decision-making?
- How hard are they to maintain?
- How do you deal with all that code?

A total of ninety-two (92) individuals and agencies (some with more than one participant) from academia, private consulting firms, local, state and federal governments attended the webinar. A majority of these participants worked for large MPOs (>1 million population), state governments or private sector consulting firms.

In a post-webinar evaluation, more than 90% of the respondents agreed that the webinar was relevant to their day-to-day jobs and that the format of the webinar was just right as is. None of the participants experienced any major technical problems with the audio or video quality or service. As part of the open comments, a few attendees suggested that more MPOs or government agencies should present on how they are using advanced modeling techniques (such as activity-based models) in guiding their policy decisions.

The following sections provide a detailed evaluation of the TMIP webinar on SFCTA's Experience Using Activity-Based Models.

2.2   Promotions

This webinar was promoted via an email message sent to the individuals and institutions who have signed up to receive TMIP news and updates (approximately 2000 subscribers). The promotional email was sent using GovDelivery, FHWA's news and email delivery service, on November 8th, 2012. The webinar announcement distributed via email can be found in Appendix B.

2.3   Participation

Of the 92 unique attendees (meeting connections), 37% attended the webinar from start to finish (approximately 90 minutes). Figure 10 presents a temporal profile of all the webinar participants.

Figure 10: Temporal Profile of SFCTA Agency Experience with ABM Webinar Participation
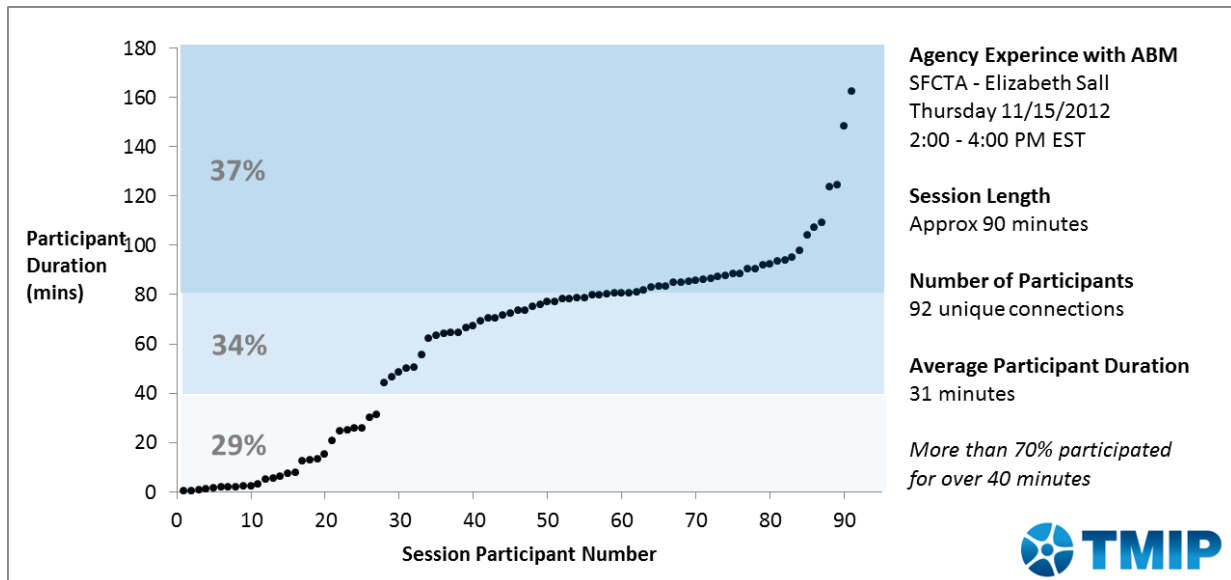
During the webinar, attendees were encouraged to submit questions via the meeting room chat pod. Six (6) questions on the content of the presentations were asked in the chat. These questions are as follows:

- Has using an ABM resulted in better validation of transit in the base scenario?
- Have you validated with any Bike or Walk improvements?
- What are some of the transit improvement scenarios that you have evaluated?
- Have you considered Google car impacts; SF is an early pilot I think?
- What are the health effects that you have analyzed?
- Please describe the integration of UrbanSim with your Activity-Based Model.

These questions were answered once the presentation by Ms. Sall was complete.

2.4   Polling Questions

Five (5) polling questions were administered as part of the webinar. The first question regarding the number of participants at each location was administered prior to the start and again at the end of the presentation. This was done to capture any additional participants that might have joined in during the course of the webinar. The remaining four questions were answered at the end of the presentation. The results of these questions are listed below.

Question 1

How many participants are there at your location?

Table 14: SFCTA Agency Experience with ABM Evaluation Poll Question - Number of Participants

Response Options	Response	Weight	Percentage
1 (just me)	44	1	90%
2	2	2	4%
3	1	3	2%
4	2	4	4%
5	0	5	0%
6	0	6	0%
7 to 20	0	13	0%
Total	**49**	**-**	**100%**

The response to this question was used to assign a weight to all of the other responses provided by the attendees except the final question. The final question inquired about the role of the attendee himself/herself or the head of the group that was attending at the organization to which s/he (they) belonged and thus did not need to be weighted.

Question 2

How relevant was this webinar to your day-to-day job?

Table 15: SFCTA Agency Experience with ABM Evaluation Poll Question - Webinar Relevancy

Response Options	Response	Percentage
Very	67	58%
Somewhat	47	41%
Not Very	2	2%
Total	**116**	**100%**

A majority of the respondents found the webinar to be very useful at their current job.

Question 3

What changes would you like to see in the format?

Table 16: SFCTA Agency Experience with ABM Evaluation Poll Question - Webinar Format

Response Options	*Response*	*Percentage*
More Time for Questions and Answers	2	2%
More Presentation Time	7	6%
Just About Right As Is	105	92%
Total	**114**	**100%**

A vast majority of the participants agreed that the webinar format does not need to be changed in any way.

Question 4

What type of organization do you work for?

Figure 11: SFCTA Agency Experience with ABM Evaluation Poll Question–Type of Organization
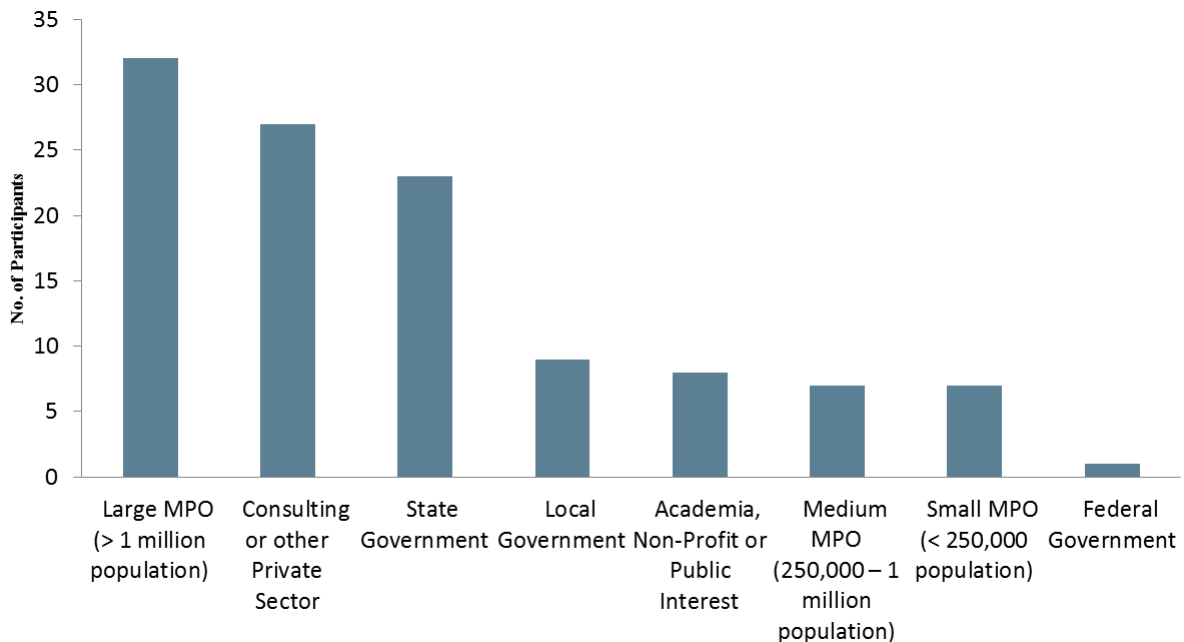
As stated earlier, a majority of the attendees of this webinar were from large MPOs, state government, or private sector consulting firms.

TMIP

Question 5

Which of the following best describes you?

<div align="center">**Table 17: SFCTA Agency Experience with ABM Evaluation Poll Question - Role at Organization**</div>

Response Options	*Response*	*Percentage*
I apply and maintain travel demand models (hands on involvement)	55	57%
I manage a group primarily responsible for model applications and maintenance	9	9%
I manage/direct a group in which travel modeling is one of multiple technical services	9	9%
I'm an executive director of an agency	0	0%
I'm a model developer (design, estimate/calibrate, test)	7	7%
I'm a developer of application software to support travel models	4	4%
I manage a model development group or practice	13	13%
I conduct or oversee research related to travel modeling	0	0%
Total	**97**	**100%**

2.5   Participant Feedback and Recommendations

Participant response to the webinar was generally very positive. As indicated by the unedited comments below, the participants hoped that more MPOs and government agencies would continue to present these policy and procedural overview and other advanced modeling (especially activity-based modeling) webinars. Some of the other primary recommendations from the participants were:

- Provide more details as part of the agency overview webinars;
- Agency presentation on additional areas of focus such as transit, bike and pedestrian models;
- Check audio quality and connection strength of all speakers before the webinar.

3.0 Denver Regional Council of Governments (DRCOG) Using Activity-Based Models—TMIP Webinar Evaluation Report

3.1 Summary

On December 13, 2012, Travel Model Improvement Program (TMIP) sponsored a webinar highlighting Denver Regional Council of Governments (DRCOG) experience developing and applying their activity-based model. The webinar was titled "DRCOG Experience Using Activity-Based Models."

The webinar session was presented by Erik Sabina (Regional Modeling Manager at DRCOG) and Tom Rossi (Principal at Cambridge Systematics). They discussed DRCOG's activity-based travel model called 'Focus'. A range of topics were covered during the webinar including:

- Development of the initial version of the model;
- Design of the model's theoretical and software structures;
- Calibration and validation of the model;
- Uses of the model during the two years since completion of its initial version.

A total of one hundred and thirty four (134) individuals and agencies (some with more than one participant) from academia, private consulting firms, local, state, and federal governments attended the webinar. A majority of these participants worked for large MPOs (>1 million population), state governments, or private sector consulting firms.

In a post-webinar evaluation, more than 90% of the respondents agreed that the webinar was relevant to their day-to-day jobs and that the format of the webinar was just right as is. None of the participants experienced any major technical problems with the audio or video quality or service. As part of the open comments, a few attendees suggested that more MPOs or government agencies should present on how they are using advanced modeling techniques (such as activity-based models) in guiding their policy decisions.

The following sections provide a detailed evaluation of the TMIP webinar on DRCOG's Experience Using Activity-Based Models.

3.2 Promotions

This webinar was promoted via an email message sent to the individuals and institutions who have signed up to receive TMIP news and updates (approximately 2000 subscribers). The promotional email was sent using GovDelivery, FHWA's news and email delivery service, on December 7, 2012. A reminder email was also distributed using GovDelivery on December 12, 2012, one day prior to the webinar. The webinar announcement and reminder distributed via email can be found in Appendix B.

3.3 Participation

Of the 134 unique attendees (meeting connections), 57% attended the webinar from start to finish (approximately 120 minutes). Figure 12 below presents a temporal profile of all the webinar participants.

Figure 12: Temporal Profile of DRCOG Agency Experience with ABM Webinar Participation
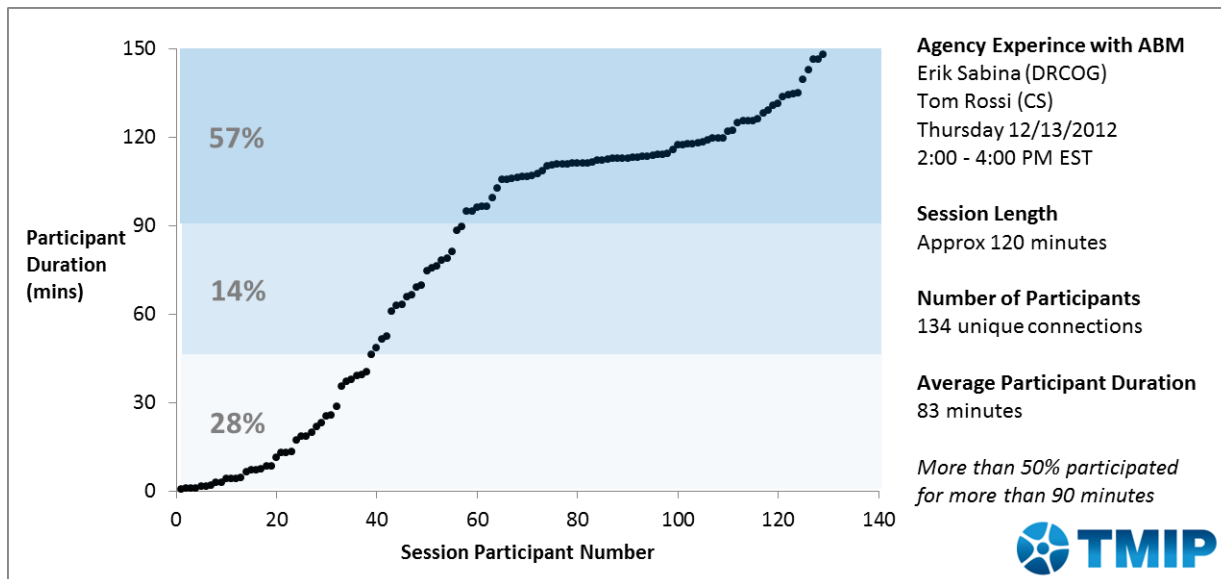
During the webinar, attendees were encouraged to submit questions via the meeting room chat pod. Eight (8) questions on the content of the presentations were asked in the chat. These questions are as follows:

- How are the candidate point/parcels (for Monte Carlo disaggregation from TAZ) updated for use in future scenarios?
- How do you deal with model result variations due to Monte Carlo simulation?
- Can you elaborate on what your VBA-enabled spreadsheet queries while the model is running? What is the goal of that effort (e.g., to check inputs are correct and/or model estimated finish time, other?)
- Do you run your ABM and land use model sequentially into horizon year with feedback between the two models?
- I would like to learn your program, what is the license agreement here? GPL, Opensource, or closed?
- What kind of model run times is DRCOG seeing with what kind of computer hardware?
- What non-motorized accessibilities do you use in the mode choice model, without an explicit bike/ped network?
- What will you have to do to make Focus acceptable to FTA? Has using an ABM resulted in better validation of transit in the base scenario?

These questions were answered once the presentation by Mr. Sabina and Mr. Rossi was complete.

3.4   Polling Questions

Five (5) polling questions were administered as part of the webinar. The first question regarding the number of participants at each location was administered prior to the start and again at the end of the presentation. This was done to capture any additional participants that might have

joined in during the course of the webinar. The remaining four questions were answered at the end of the presentation. The results of these questions are listed below.

Question 1

How many participants are there at your location?

Table 18: DRCOG Agency Experience with ABM Evaluation Poll Question-Number of Participants

Response Options	Response	Weight	Percentage
1 (just me)	59	1	86%
2	8	2	12%
3	1	3	1%
4	1	4	1%
5	0	5	0%
6	0	6	0%
7 to 20	0	13	0%
Total	**69**	**-**	**100%**

The response to this question was used to assign a weight to all of the other responses provided by the attendees except the final question. The final question inquired about the role of the attendee himself/herself or the head of the group that was attending at the organization to which s/he (they) belonged and thus did not need to be weighted.

Question 2

How relevant was this webinar to your day-to-day job?

Table 19: DRCOG Agency Experience with ABM Evaluation Poll Question - Webinar Relevancy

Response Options	Response	Percentage
Very	42	61%
Somewhat	25	36%
Not Very	2	3%
Total	**69**	**100%**

A majority of the respondents found the webinar to be very useful at their current job.

Question 3

What changes would you like to see in the format?

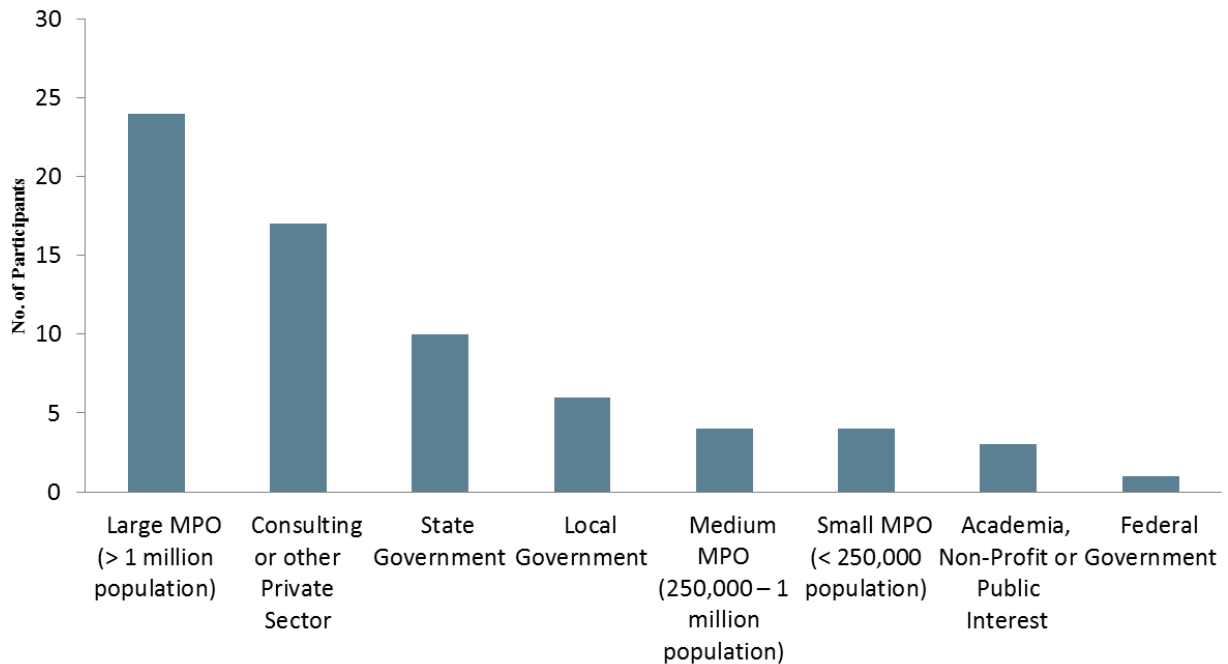<p align="center">**Table 20: DRCOG Agency Experience with ABM Evaluation Poll Question - Webinar Format**</p>

Response Options	*Response*	*Percentage*
More Time for Questions and Answers	0	0%
More Presentation Time	5	7%
Just About Right As Is	64	93%
Total	**69**	**100%**

A vast majority of the participants agreed that the webinar format does not need to be changed in any way.

Question 4

What type of organization do you work for?

<p align="center">**Figure 13: DRCOG Agency Experience with ABM Evaluation Poll Question–Type of Organization**</p>

As stated earlier, a majority of the attendees of this webinar were from large MPOs, state government, or the private sector consulting firms.

Question 5

Which of the following best describes you?

Table 21: DRCOG Agency Experience with ABM Evaluation Poll Question - Role at Organization

Response Options	*Response*	*Percentage*
I apply and maintain travel demand models (hands on involvement)	33	59%
I manage a group primarily responsible for model applications and maintenance	5	9%
I manage/direct a group in which travel modeling is one of multiple technical services	6	11%
I'm an executive director of an agency	0	0%
I'm a model developer (design, estimate/calibrate, test)	3	5%
I'm a developer of application software to support travel models	3	5%
I manage a model development group or practice	6	11%
I conduct or oversee research related to travel modeling	0	0%
Total	**56**	**100%**

3.5   Participant Feedback and Recommendations

Participant response to the webinar was generally very positive. As indicated by the unedited comments below, the participants hoped that more MPOs and government agencies would continue to present these policy and procedural overview and other advanced modeling (especially activity based modeling) webinars. Some of the other primary recommendations from the participants were:

- Provide more details as part of the agency overview webinars;
- Agency presentation on additional areas of focus such as transit, bike and pedestrian models;
- Check audio quality and connection strength of all speakers before the webinar.

> The participants hoped that more MPOs and government agencies would continue to present these policy and procedural overview and other advanced modeling (especially activity based modeling) webinars.

4.0 Measuring Participants' Interest in TMIP Webinars

In addition to the estimated participants, we also measure the quality of the presentation and the relevancy of the webinar topic to participants' work or interests using the "connection" duration[7]. The following figures illustrate the participants and participant or "connection" durations throughout the webinars. The figures show that most of the participants stayed for most of the sessions.

Figure 14: Temporal Profile of Participation in the Agency Experience with ABM Webinar—ARC

Agency Experince with ABM
ARC - Guy Rousseau
Monday 10/22/2012
2:00 - 3:00 PM EST

Session Length
Approx 60 minutes

Number of Participants
88 unique connections

Average Participant Duration
37 minutes

More than 50% participated between 40 - 60 minutes

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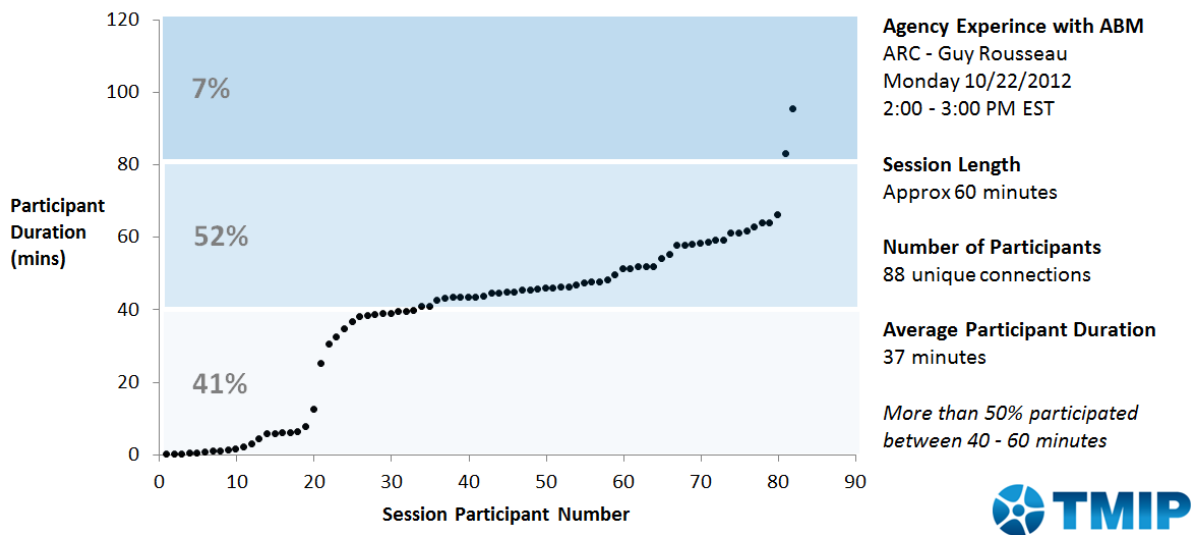
[7] Unique connections measures the number of times the meeting URL is accessed. We use this metric when developing the profile showing participant duration. For example, if Adobe shows us that there were 110 unique connections, the number is somewhat misleading since the same person may be connecting multiple times. In any one session, the maximum number of connections is 100. The multiple times connections may also partially explain why some of the connections have very short "connection" durations.

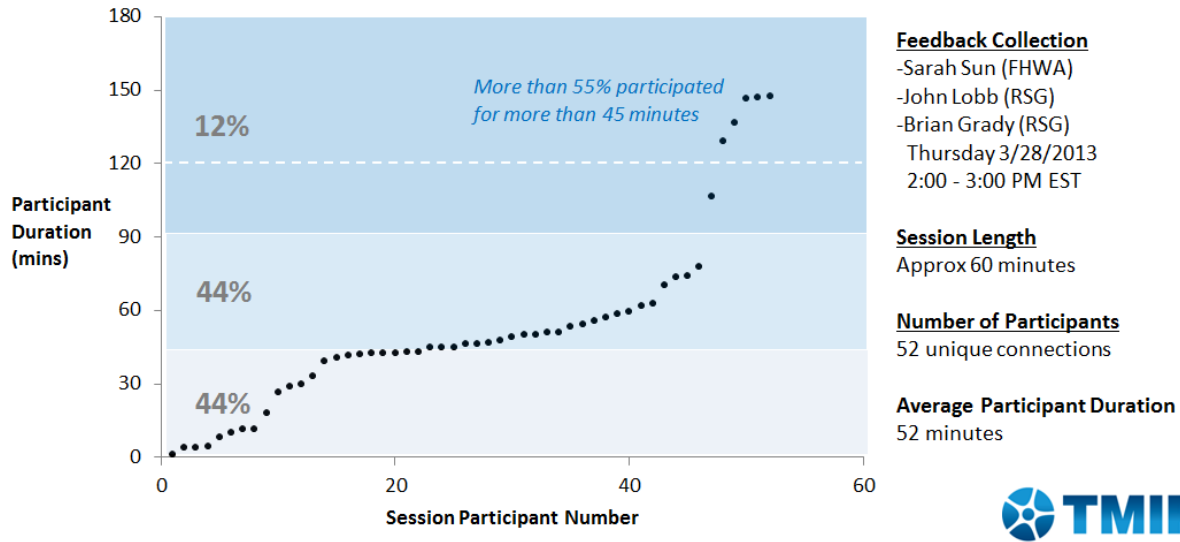**Figure 15: Temporal Profile of Participation in the TMIP Feedback Webinar**

More than 55% participated for more than 45 minutes

Feedback Collection
-Sarah Sun (FHWA)
-John Lobb (RSG)
-Brian Grady (RSG)
  Thursday 3/28/2013
  2:00 - 3:00 PM EST

Session Length
Approx 60 minutes

Number of Participants
52 unique connections

Average Participant Duration
52 minutes

Figure 16: Temporal Profile of Participation in the Agency Experience with ABM Webinar—ODOT/MORPC

More than 60% participated for more than 60 minutes

ODOT & MORPC
-Rebekah Anderson (ODOT)
-Zhuojun Jiang (MORPC)
  Tuesday 4/9/2013
  2:00 - 3:30 PM EST

Session Length
Approx 90 minutes

Number of Participants
114 unique connections

Average Participant Duration
62 minutes
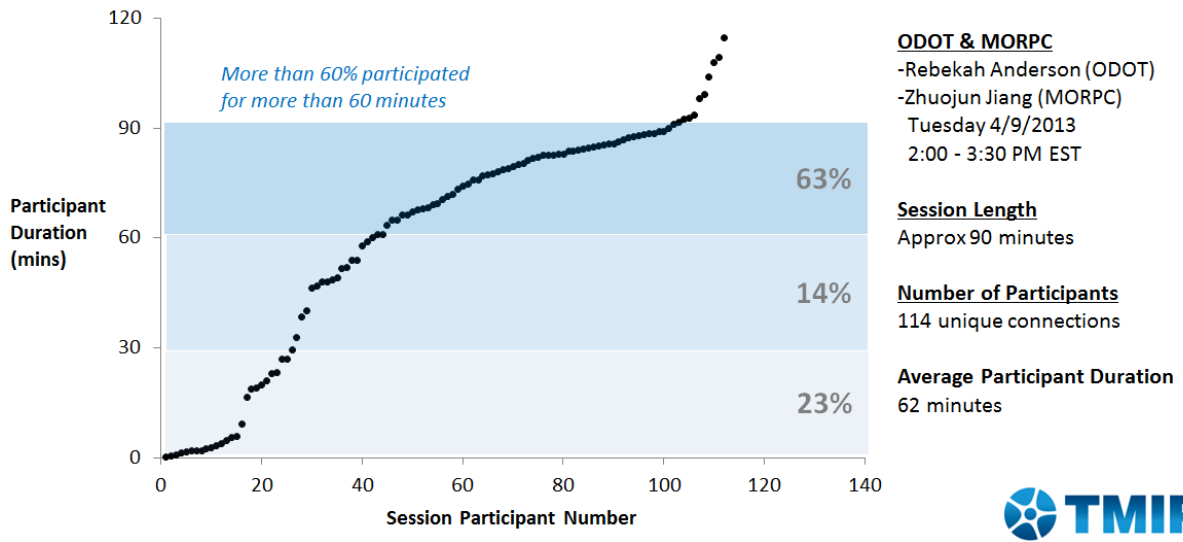
Figure 17: Temporal Profile of Participation in the Advanced Analytical Practices Webinar—NCTCOG

NCTCOG Webinar
-Arash Mizraei (NCTCOG)
-Kathy Yu (NCTCOG)
-Behruz Pachai (NCTCOG)

Tuesday 4/25/2013
2:00 - 3:30 PM EST

Session Length
Approx 120 minutes

Number of Participants
144 unique connections

Average Participant Duration
72 minutes

Figure 18: Temporal Profile of Participation in the Agency Experience with ABM Webinar—MTC

MTC
- David Ory
  Tuesday 6/6/2013
  2:00 - 4:00 PM EST

Session Length
Approx 120 minutes

Number of Participants
109 unique connections

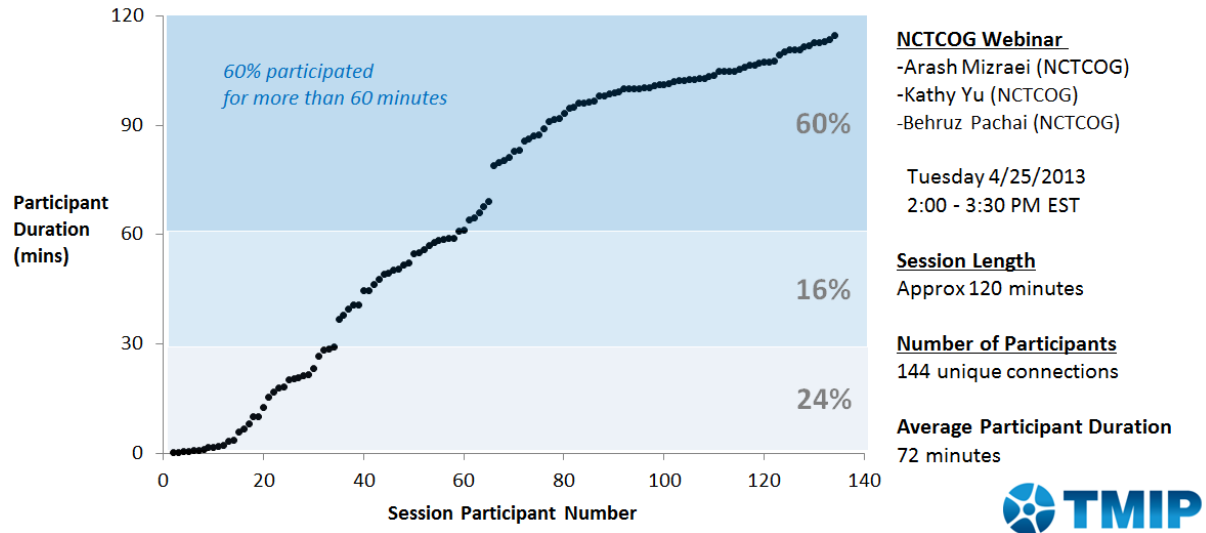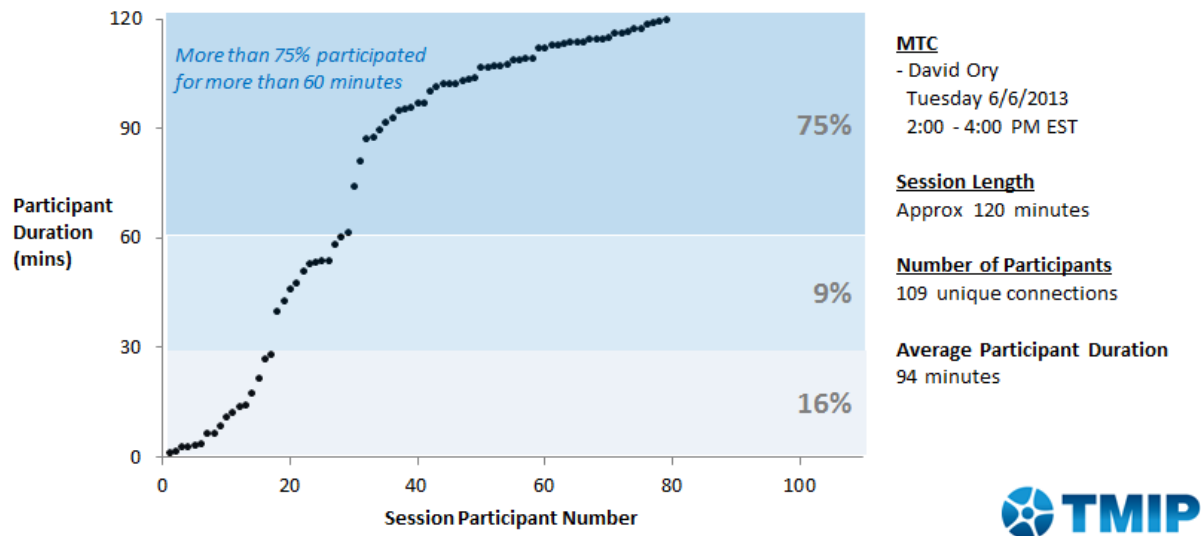**Average Participant Duration**
94 minutes

Figure 19: Temporal Profile of Participation in the Agency Experience with ABM Webinar—HGAC
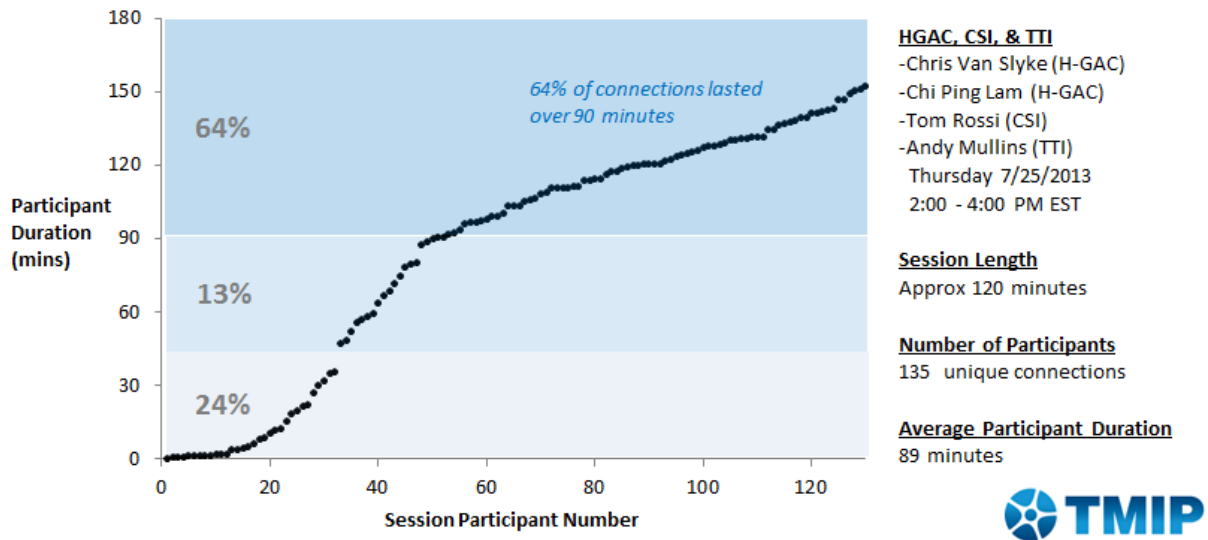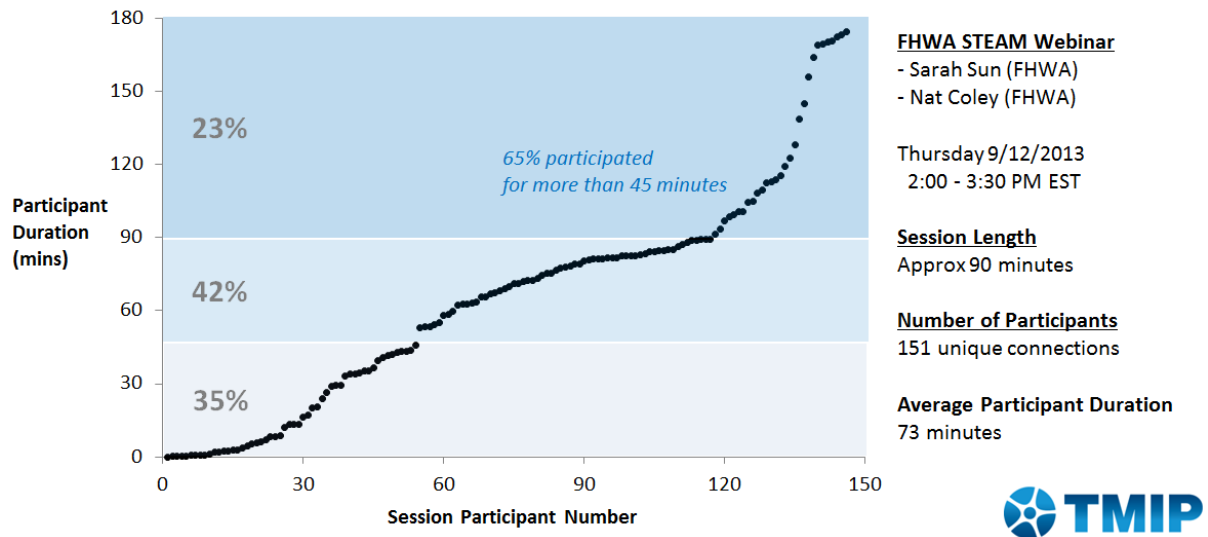

Figure 20: Temporal Profile of Participation in the Model Roles in Transportation Investment Webinar—FHWA

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