

Notes from the Integrated Transportation Modeling Subcommittee

TRB 2023 Annual Meeting Agenda Integrated Transport Modeling Subcommittee of AEP50, AMS30, and AMS50 Tuesday, January 10, 2023 6:00 PM-7:30 PM Marriott Marquis, Liberty Salon O (M4)

1. Welcome and Introductions

The subcommittee co-chairs, Josh Auld and Mehrnaz Ghamami started the meeting with welcome and introductions. Around 20 participants attended the subcommittee meeting. The attendees include members and friends of the AEP30, AEP40, AEP50, AMS30, AMS50, AMS40, and AP020 committees, as well as others interested in the subcommittee activities.

2. Presentations

Erin Boyd (DOE) gave an introduction to their SMART2.0 research program and the upcoming webinars series documenting insights derived from it. Danielle Chou from FHWA discussed the Scenario Interoperability Working Group (SIWG), a ground up collaborative effort by researchers at USDOT, USDOE, EPA and national laboratories to jointly explore model/tool interoperability and demonstrate this through scenario analysis, to further collaboration amongst the agencies. The last invited presentation was Matt Dean from UT Austin on “Planning for Electric Vehicles: Integrated transportation and power system modeling”. The presentation led to discussions on the data requirements and transportation and grid analysis integration.

3. Recent Subcommittee activities

Recent subcommittee activities such as workshops, cross-cutting sessions, and call for papers were discussed., followed by discussions on future subcommittee sessions and workshops.

4. Announcements

- Bridging Transportation Researchers (BTR) Conference #5
August 2023, No-cost, web-based conference, website:
<https://bridgingtransport.org/>
- TRB Innovations in Travel Analysis and Planning Conference
June 4-6, 2023 – Indianapolis, IN, Combines the TRB ITM and Planning applications conferences, website:
https://trb.secure-platform.com/a/page/travel_analysis_and_planning
- 2023 IEEE Transportation Electrification Conference & Expo
June 21-23 – Detroit, MI, <https://itec-conf.com/>

5. Emerging research needs

The discussion on research needs led to the following list of topics to be explored by the subcommittee friends/members in the near term:

Integration of land use tools with demand modeling and energy analysis tools

The effect of house prices, and data on property sale on general travel behavior was another point of discussion. Attendees from Canada (and perhaps countries with similar

housing markets) seemed to suggest the importance of capturing housing market volatility through integrated modeling.

Bridging strategic/high-level sketch planning models with detailed activity-based and urban metabolism models (that operate at different spatial scales)

The role of land use, energy, and travel demand modeling on public health

Complexity vs. uncertainty in integrated models. Characterization, quantification, and evaluation of uncertainty in large-scale integrated models.

Spatio-temporal transferability of the integrated models

Impacts of TNC drivers, in an integrated fashion by modeling home location, on land use changes, travel demand and energy consumption

Data and data availability have been affecting many industries, including transportation.

In that line, testing assumptions of the models requires data, and it is recommended to look at emerging behavior before data becomes available. For this purpose, the following datasets were introduced during the meeting and will be added to the subcommittee's website as sources for researchers:

- o Livewire platform: <https://livewire.energy.gov/>
- o TF resource
- o US DOT open data catalog: <https://data.transportation.gov/>

Other avenues for consolidating a list of all related data sources was also pointed out to be of interest to this subcommittee's community.

Modeling EV transition from both public and private sector were deemed to be of some importance.

6. Action items for 2023

- Justification of subcommittee activities and products
- Decision on website updates and potential migration
- Liaison activities with other committees/subcommittees: Effects of Information and Communication Technologies (ICT) on Travel Choices (ADB20), Alternative Fuel Vehicles (AMS40)
- Liaison with National Labs and AICP
- Hold a Spring subcommittee web-meeting
- Calls for papers
- Planning and proposals for a workshop or session for TRB 2024