AGENDA

TPR MODELING AND ANALYSIS GUIDES UPDATE

OMSC WORKING GROUP MEETING #2
JULY 31, 2023; 9:00 AM – 11:00 AM
VIRTUAL MEETING

SUMMARY OF KEY MEETING TAKEAWAYS:

- Placetypes has been used by Metro and is a tool that is important to the guidance
- Include land use change or land use evolution into the modeling framework to help think about level of development being built out over the next 20 years.
- OHAS includes information related to how housing types and demographics influence other travel behavior
- Important to consider resolution of both multimodal network and the resolution of analysis. Network resolution may vary between trip based and ABM models.
- Consider the range of auto operating costs to understand implications. Eventually ActivitySim may bring consistency to this need, but in meantime an off model tool may be needed.
- Tool identification and tool building may be needed as part of the project
- Off-model for ped/bike and TDM projects are probably the way to go
- The population synthesizer may provide both utility and consistency across regions
- Consider whether there is leeway to consider a range of populations outside the PSU control totals for purposes of evaluating a range of scenarios. Maybe this differs by region (Portland metro and others)
- Guidance should capture how to incorporate SWIM for external trip estimates.

1. PROJECT TEAM INTRODUCTIONS / AGENDA OVERVIEW   9:00

- Project team introductions
  - Attendees (alphabetical order)
    - Yazeed Alsrashdi
    - Garth Appanaitis
    - Alexander Bettinardi
    - Sydney Borek
    - Peter Bosa
    - Kelly Clarke
    - Zachary Horowitz

- > Ray Jackson
- > Becky Knudson
- > Christopher Melson
- > Nick Meltzer
- > Kim Sapunar
- > Peter Schuytema
- > Tara Weidner
- Review agenda and meeting purpose

2. MEETING OVERVIEW AND PURPOSE 9:05

- Ground rules, Guiding objectives and process, Meeting purpose

3. MODEL SUMMARY 9:15

- Overview of Tech Memo #4
- Discussion: Are there important gaps that are not reflected in the memo or model summary?
  - There has been a previous discussion about the CALM model switching to an Activity-based model sometime in the mid-2020s; curious about the timeline
  - The quickest this could be made available is the next RTP cycle and we hope to include an Activity-based model structure
  - Next RTP updates for Corvallis and Albany will be 2028.

4. FOCUSED DISCUSSION TOPICS 9:35

- Discussion:
  - What inputs or model elements should be our focus? (40 minutes) 9:35
    - > Include place-types construct that is relevant to modeling and doing the analysis Kelly described.
    - > Include land use change or land use evolution into the modeling framework. Need a land use model or something to help think about level of development being built out over the next 20 years.
    - > Including both how characteristics of how households influence behavior and the increase in multifamily standards is important in the modeling framework. OHAS provides information for this.
    - > Can go to OHAS to see the cross section between household demographics and housing types change in demographics with density....see last page of the Place Types Overview which shows the OHAS evidence on land use/demographics and impact on travel behavior (VMT and mode split). Ch. 6 of the OHAS report notes more trends by place type.
    - >

> There are many multimodal networks (not just transit) and costs that should be reference in the memo (TM 4).

> What is the proper resolution to conduct analysis? Is it at TAZ (maybe not), or at the local jurisdiction. Need guidance on resolution of analysis.

> Include parking constraints/minimums in the modeling framework. Paid parking could be used as a parking supply lever.

> To properly represent parking supply and user choice within the model we must integrate that side of behavior into the model, which means we need to understand the behavior choice set through observed data such as the HH travel survey

> Note that changes to the model framework are different for smaller urban areas versus larger urban areas. Smaller urban areas may be more of a challenge to practically implement (e.g., prevalence of parking).

> Review auto operating costs and consistency across the state. Review impact electrification may have on these costs. Review of if local gas taxes to be included in TSPs. Review auto ownerships. – possibly to become an off-model toolkit.

- ActivitySim could ultimately provide consistency across models. Is there an issue with consistency in existing models?

- In Portland region there has been research into auto operating costs and they have remained relatively consistent relative to inflation so it has not been an area of focus in the models. With the shift to electric vehicles, this may change, but reevaluate based on the new household survey.

- Will ultimately want to be able to look at a range of auto operating costs to understand the implications. Right now the revenue on operating costs (e.g., gas tax) does not keep up with the maintenance needs.

> Ultimately need to be able to calculate household VMT.

> What types of off-model or post processing do you anticipate needing to do this type of analysis (related to auto ownership or bike network analysis), and therefore that perhaps the guidance should discuss explicitly so there's a framework in which you can operate? To create VMT per capita metric

- Travel demand models have not previously been sensitive to the type of investment in multimodal improvements – how to get a VMT-type review from multimodal improvements?

  o Important to be explicit about what scale these models can be applied. Generally the sub-TAZ scale of (multimodal) improvements do not impact the models. But we recognize that these types of improvements do have benefits and can reduce VMT.

- Tool building and tool identification work that needs to be done

- Off-model for bike, pedestrians, and transportation demand management

- There's an additional discussion about a somewhat independent off-model tool question, and some guidance is needed for how to deal with the size of CFAs that the result is going to be helpful

> Are there ideas for tools to help with BikePed? CMAQ bikeped is a tool that is out there, but doesn't consider quality of network change, destinations/land use context, etc.

> OHAS data is expected by end of calendar year 2024.

○ What should we do differently with ABM? (10 minutes)   10:15

> Guidance is needed related to the use of population and population forecasting (such as a synthesizer to establish consistency)

> Review whether the guidance should take on the question of whether there is leeway in making different assumptions from the PSU population forecast model that are the state mandate – deviations of the assumptions that going into the RTP versus the assumptions being used by cities in their CFA

> Need to be sure that out models are reflecting traveler behavior (and surveys) and that the surveys are conducted more frequently.

> Consider ways to measure the potential impact of a proposed project prior to spending a lot of time focusing on that type of project.

○ Is using SWIM for external VMT calculation worth the effort? (10 minutes)   10:25

> The intent is to measure all travel for people that live in a given area. SWIM can help us understand what the level of travel is outside the regional model and if other strategies (like vanpool) could be helpful.

> There is a need to collect data related to the amount of travel (place to place) as opposed to the distribution of travel – aka the number of people traveling to Salem from Portland, and vice versa

• Want to capture things not just internal to the jurisdiction, but internal to external in the jurisdictions

• Identifying household VMT

• There is a corollary opportunity in the ABM world, specifically the development of activity SIM to perhaps aid the treatment of IE trips, because activity SIM has some features that could help make, even if they're not capturing everything outside of the boundary

> Can include offline tools such as vanpooling or carpooling, parking fees, etc.

5. GENERAL DISCUSSION AND PINNED ITEMS   10:35

Discussion of pinned items identified during meeting or other general items

• Is there an opportunity to discuss other tools besides ABM? The goal to reduce VMT per capita is really going to change traveler behavior. Two most important things: 1) ensure the tools are actually reflecting traveler behavior, which requires more frequent traveler surveys more often than every 10-15 years, 2 years would be better. 2) Car sharing, vanpooling, carpooling, and new facilities at the local level like pedestrian and bike facilities have an affect too. Unsure if the model is going to pick up those changes at the needed level.

○ Finding and providing consistency and documentation among all models for household size distribution is a way of making sure our population distributions have the most opportunity to reflect the VMT

• There's an NCHRP project that identifies assumptions to use with the low-effort, conservative desktop research, medium effort approach. The guidance needs to be helpful now with what we have.

• It's important for CPAC implementation to make the best use of existing data we have and sort of tweak that, rather than come up with something new. Identify how best to use existing data.

- Biggest disconnect in the guidance and tools is multiple trips made and trying to tie the second or third trip back to the household/TAZ. Identify how the model framework can look into multi-stop trips back to household VMT. Guidance will need to think carefully about this.
- RTPs will be updated in 2028, but TSPs might be updated before then, so there's a need to reflect different land uses now
  - Demographics and identifying how to put a ton of different housing types or a much larger percentage of multifamily that we have in the past
  - Adding new households or new housing types to an area that might have no housing right now. Then, what does transit do? They might not have considered the CFAs during their long range plans
- Jeff Frkonja: Can one person at the MPO level share any discussions they've had with their cities about the practicalities of how you're going to work together on this? Such as, how much are we using the regional model, who is going to be using it?
  - At Central Lane, we submitted our scenario planning work program to ODOT and LCD. It was due June 30th, and it does contain the working model for the scenario: how we're going to work with each other, to comply with the CPAC-related components of this scenario planning rule.
  - **Outcome: Kelly Clarke to share this document with the Project Team.**

6. NEXT STEPS / ADJOURN   10:55

- What's coming next?
- Can I recommend that the Case Studies include one large MPO and one smaller model area? I can see different issues arise in areas made up of 1 or 2 jurisdictions vs. those made up of many more jurisdictions!