VISUALIZATION TOOLS FOR THE GEN3 TRAVEL MODEL

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TPB Travel Forecasting Subcommittee
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National Capital Region
Transportation Planning Board

Agenda Item #3

Introduction

- Comments from the Gen3 Model beta tester survey and the recent COG/TPB model stakeholder survey called for better geographic user interface that could enhance the use experience of the Gen3 Model.
- Over the past year, TPB staff worked on some prototype visualization tools in Python; Recently, the development has been significantly accelerated with AI assistance.
- Today, TPB staff will demonstrate **four** in-house visualization tools we have recently developed for the Gen3 Model.
- These tools are still in draft form. Once finalized, they will be included in a future release of the Gen3 Model.

Overview

1. A Graphic User Interface (GUI) to configure and launch a Gen3 Model run
2. A Windows application to view ActivitySim output files and conduct simplistic cross-tab analysis in them
3. A new ABM Visualizer that visualizes the **aggregated** Gen3 Model results
   - Replacing the existing R-based ABM Visualizer developed by the consultant, the new visualizer is Python-based (consistent with ActivitySim) and runs a lot faster.
   - The new visualizer is much more customizable and includes several new features, such as subpopulation analysis, scenario comparison, and base-year model calibration/validation functionalities.
4. A daily travel itinerary visualizer that visualizes tours and trips made by an individual household or person based on the **disaggregate** data generated by ActivitySim.
   - Although the model data is not validated at the tour/trip level, this tool has great potential to be used for storytelling, scenario analysis, and model troubleshooting.

Demonstration

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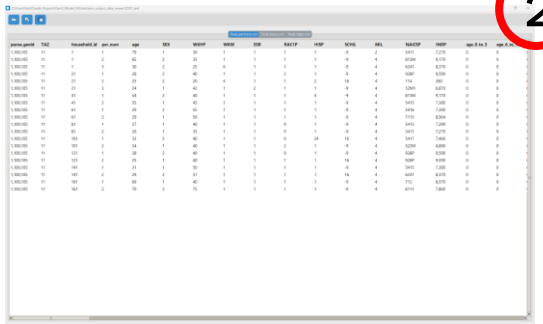

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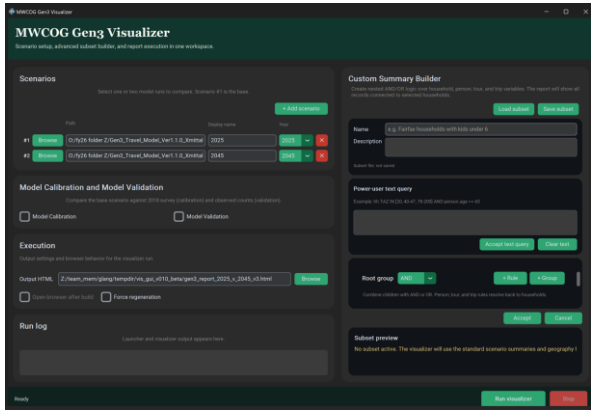

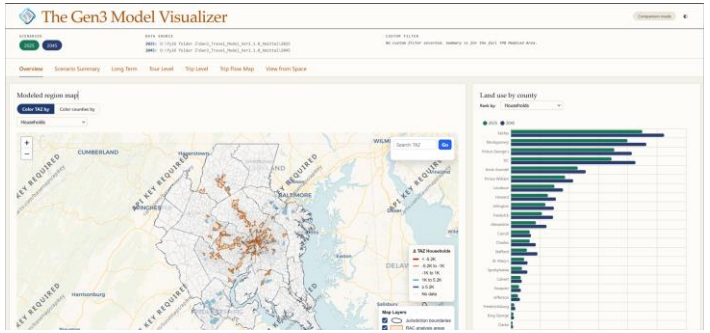

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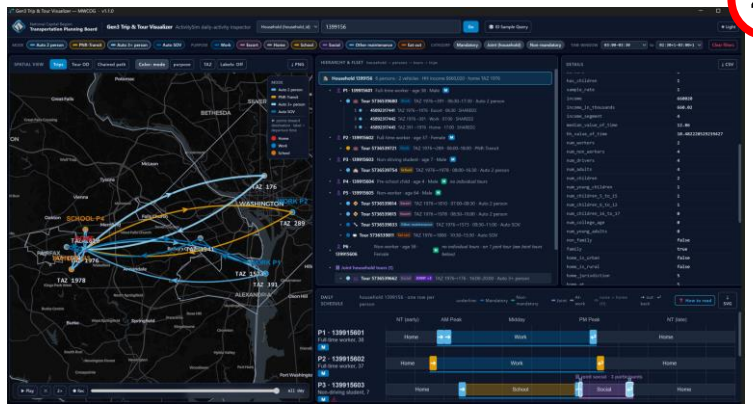

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