

VISUALIZATION TOOLS FOR THE GEN3 TRAVEL MODEL

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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



1

Gen3 Model Run Launcher

Configure the parameters for the Gen3 model run.

Scenario

Scenario Folder:

User Specifications

Cube Version:

Model Year:

Python Environment Name:

☐ Execute a full run

☐ Automatically shut down server after run

☐ Enable job-sitting processing

Visualizer Settings

Compare Against Survey:

Baseline Scenario Folder:

Baseline Scenario Name:

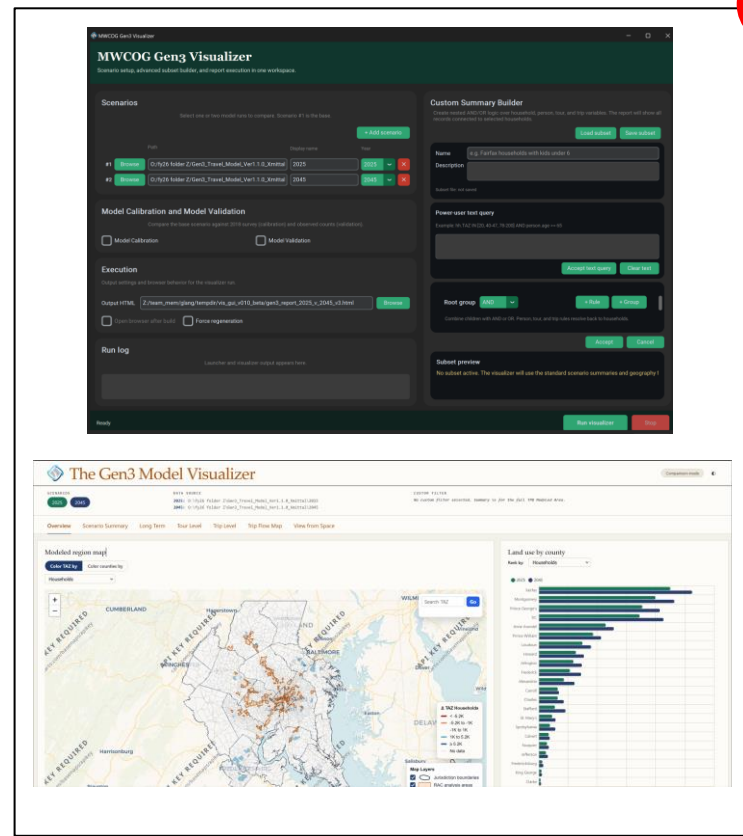
Alternative Scenario Name:



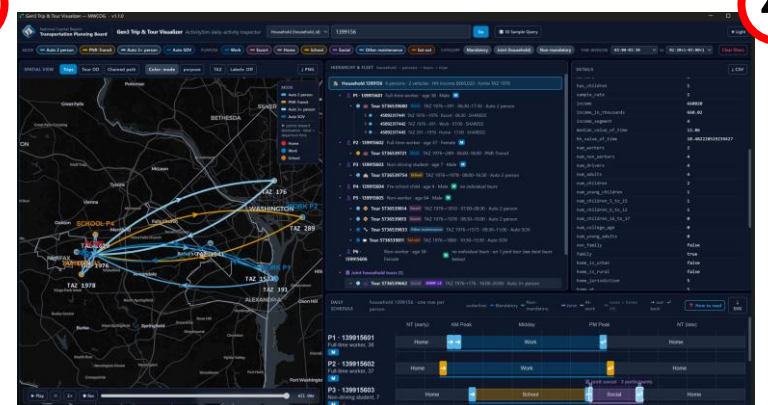
2

Scenario	Model	Year	Run Type	Run Status	Run Date	Run Time	Run Location	Run Description	Run Notes
13001	13001	13001	13001	13001	13001	13001	13001	13001	13001
13002	13002	13002	13002	13002	13002	13002	13002	13002	13002
13003	13003	13003	13003	13003	13003	13003	13003	13003	13003
13004	13004	13004	13004	13004	13004	13004	13004	13004	13004
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13006	13006	13006	13006	13006	13006	13006	13006	13006	13006
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13010	13010	13010	13010	13010	13010	13010	13010	13010	13010

3



4



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