The advent of novel transport modes has challenged forecasters to develop new methods of capturing behavior and estimating service capabilities. Bike share, e-scooter, ride hail, and autonomous vehicles have been forecasted with activity-based models, multi-agent simulations, spatial analysis, survey data and statistical methods, and even machine learning approaches. Methodologies to model new transport technologies are dissimilar and difficult to access. In this paper, we examine novel mode forecasts generated by different activity-based model and multi-agent simulation mode choice combinations. Using ActivitySim as the activity-based model and BEAM as the multi-agent simulation, we establish 10 different mode choice combinations to analyze ride hail capabilities for a Salt Lake City, Utah case study region. By analyzing ride hail ridership, utilization, and wait times we determine two effective approaches to modeling novel modes using a linked activity-based model and multi-agent simulation. We also determine that linking an activity-based model and a multi-agent simulation is a valid methodology to forecasting novel modes, especially if novel mode choice is kept to only one of those modeling tools. Lastly, we conclude that using the combination of path, person, and location type variables to calculate the mode choice utility is more effective than only using path type variables. Overall, the results of our research give direction to those struggling to forecast new transport technologies with the current disarray of modeling approaches.