

Demand Modeling for Uber Air

EXECUTIVE SUMMARY

- *Uber Air's transportation planning model lacked multimodal travel insights.*
- *StreetLight provided complete metrics for 45.8 million average weekday trips in LA.*
- *Final modeling predicted demand, and mapped optimal skyport locations.*

Where should Uber Air locate its aerial ridesharing hubs? To find out, Uber Air built a sophisticated transportation planning model and populated it with StreetLight's metrics.

Mission: Model Aerial Transportation

Uber manages over 19 million trips every day, which provide the company with extensive ride-sharing transportation data. Using that data, Uber Air has built and validated sophisticated transportation models full of insights about traffic flow through cities.

For Uber Air, the company created an entirely new transportation model to analyze movements of all traffic in any city: the Flux Optimizer. It was designed to identify demand and to site each network node (group of one or more skyports).

Although Uber Air had extensive ride-hailing data, it lacked data on personal vehicles to populate the Flux modeling tool.

"StreetLight's multimode trip insights combined with our data helped build the foundation for Uber Air."

IAN VILLA

UBER
Elevate



Analysis: Identify Demand and Network Location

Uber Air combined their own data with metrics from StreetLight InSight® to capture nearly 100% of vehicular traffic through Los Angeles streets. StreetLight provided metrics on travel distances, trip origins and destinations, trip purpose (particularly commuting), and modes.

Uber Air's open-source visualization tools were then able to generate a three-dimensional visual display mapping travel flow for the 45.8 million average weekday trips in Los Angeles.

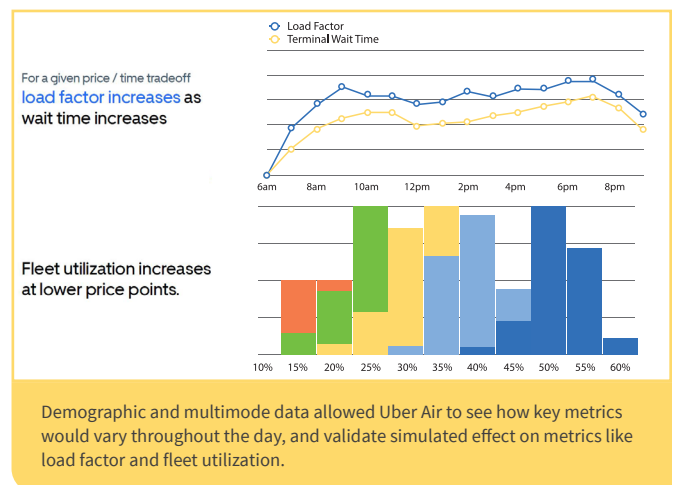
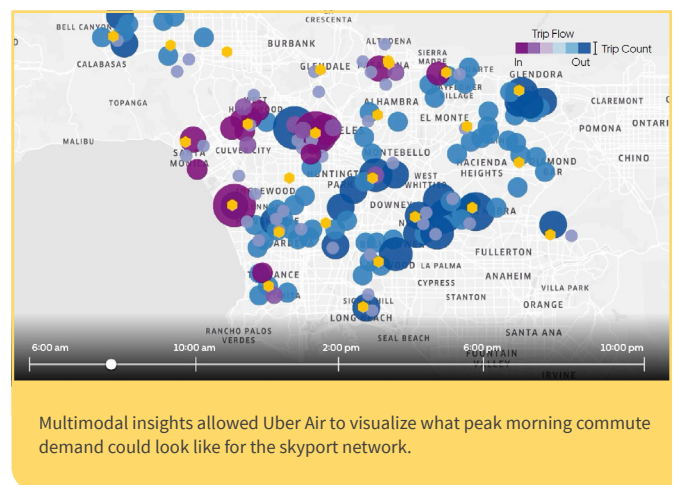
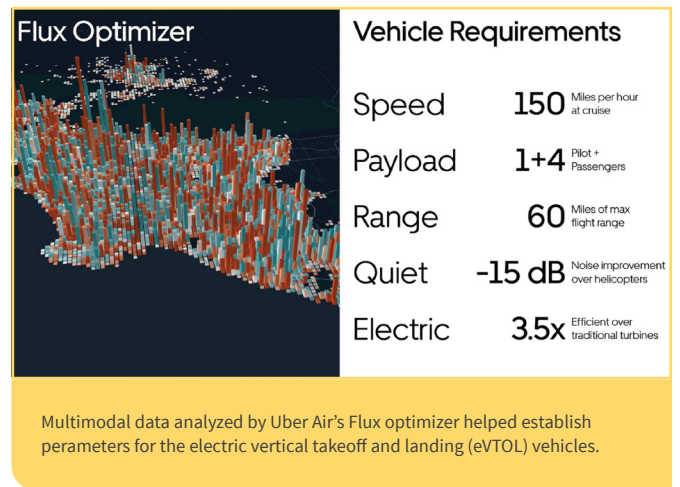
The Origin-Destination analysis from Flux mapped traffic through one-kilometer grids, with colors showing trip origins and destinations, and grid block height indicating traffic volume through the grid. Overall, the model captured 348 million miles of daily travel.

Results: Fly Millions of Travelers

The Elevate team identified overall demand for the service in the LA and DFW markets. Demand modeling was fueled by detailed transportation metrics combined with non-transportation data like pricing and customer preferences. It predicted that if Uber Air were as affordable as owning a personal vehicle, several million people would use it every day.

Flux also pinpointed locations for nodes based on transportation metrics. The model then applied additional factors including real estate realities, airspace sequencing, and power grid optimization.

Ultimately, Uber Air identified locations for 40 nodes in Los Angeles that could move millions of travelers each day, and plans to launch the service in 2023.



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