


Gauging Demand for Intercity Passenger Rail Transport



Steer needed to quickly and easily measure trips between five major metropolitan areas. StreetLight's Origin-Destination metric revealed long-distance trip details.

EXECUTIVE SUMMARY

- Steer's client, a regional rail operator, needed O-D data for travelers between city pairs in the Northeast.
- By linking multiple trip stops, StreetLight analyzed long-distance journeys to identify demand from longer-drive trips and air travel.
- Steer used the trip tables to update its regional travel demand model and better forecast ridership and revenue.

Mission: Measure Long-Distance Trips

Steer's client, a regional rail operator, wanted to forecast potential demand and assess impacts of capital and service improvements within their service area. While the operator has comprehensive data on existing ridership, they lacked insight into overall regional travel patterns by different modes.

Origin-Destination (O-D) data for trips of over 75 miles would have required new surveys or intercepting auto travelers – expensive, unpractical, and subject to various biases, including low sample sizes.

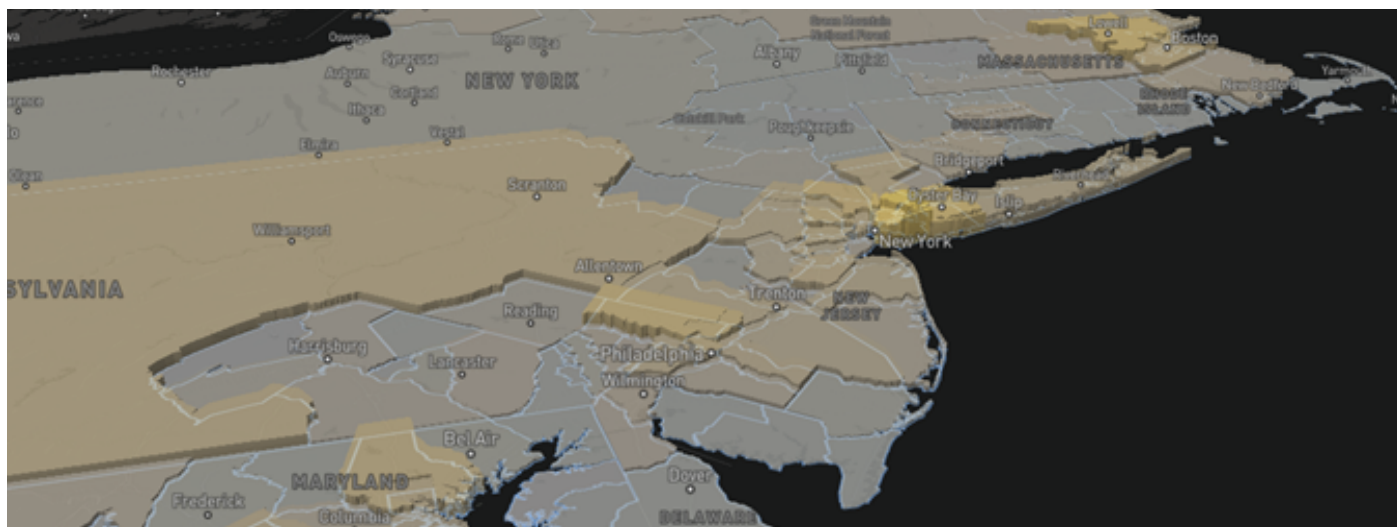
Instead, Steer partnered with StreetLight Data to analyze travel patterns between five major metropolitan areas in the Northeast: Washington, Baltimore, Philadelphia, New York City, and Boston.

"StreetLight provides a cost-effective medium to assess O-D patterns at a large scale, with minimum biases, and a fraction of the cost of traditional surveys."

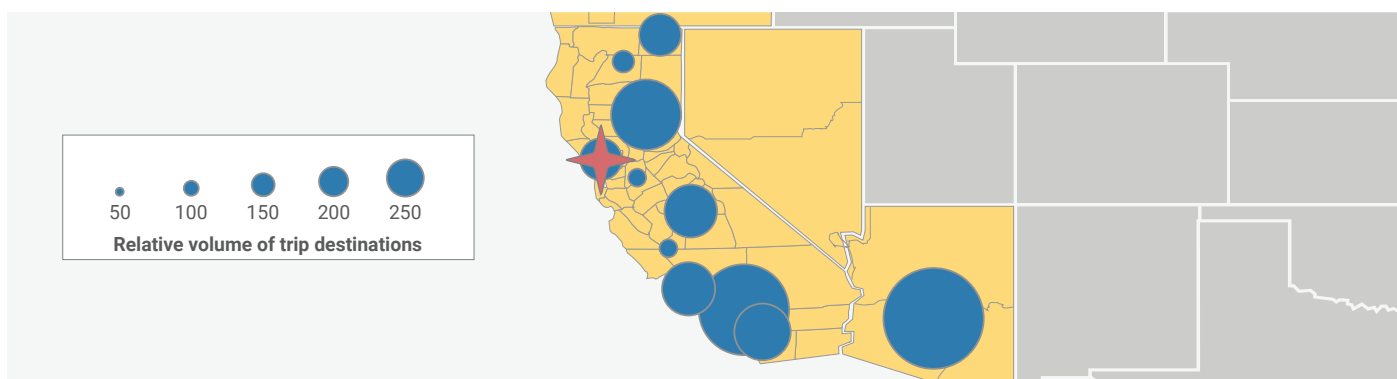
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StreetLight InSight® shows 3D visualization of relative trip activity across the northeast travel corridor Steer analyzed.



Steer applied StreetLight Metrics to other rail projects, including this California analysis showing destinations of trips coming from the San Francisco Bay area.

Analysis: Customize Trip-Breaking

StreetLight analyzed O-D information for trips between approximately 150 zones, consisting of counties and sub-counties, situated along a 350+ mile corridor.

These longer trips between zones often require multiple stops along the journey for gas, food, and rest. StreetLight's standard trip-breaking criteria signal the end of a trip when a device is stationary (i.e., doesn't move more than five meters in five minutes).

StreetLight provided a customized solution in which consecutive trip stops were linked together into a longer "tour," using adjustable temporal thresholds. These tours represented the traveler's true O-D pair.

Results: Forecast Ridership and Revenue

StreetLight delivered a trip table summarizing O-D patterns, for all modes (including air) between all zone pairs within the study region. By adjusting the time threshold between consecutive trips within a tour, StreetLight was able to provide valuable insights about long-distance intercity travel (i.e., >250 miles).

StreetLight Metrics were then used to inform the baseline conditions for Steer's regional travel demand model. This model provides the end client with granular, up-to-date metrics regarding traveler behavior in the Northeast, which, in turn, helped inform their revenue and ridership forecasts.