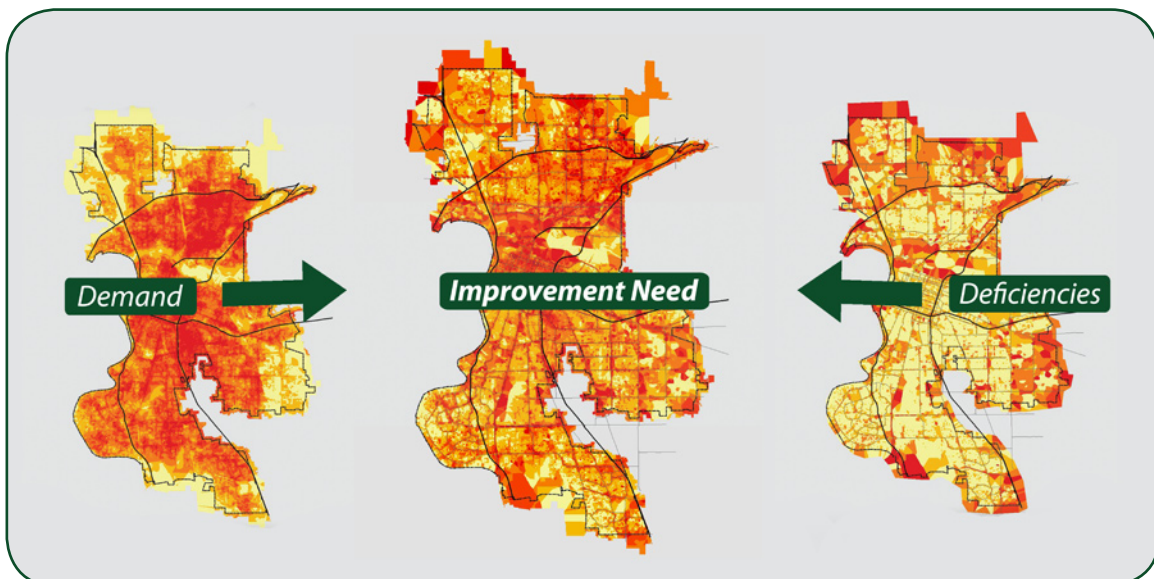


GIS Tools for Multimodal Planning

You can't achieve it if you can't measure it

Fehr & Peers is now adding GIS techniques for bicycle planning and modal integration to our unique and successful pedestrian and transit GIS tools. Our successes with Pedestrian GIS in Sacramento and Direct Transit Ridership Forecasting techniques in California and Utah, are expanding through R&D for the Roseville Bicycle Master Plan, the Sacramento County Bicycle Master Plan and the Ventura Mobility Plan.



The GIS graphic above displays Pedestrian improvement need, which is based on a composite score of pedestrian potential and infrastructure deficiency. Areas with a high pedestrian potential score and a high level of deficiency are identified as having the highest priority.

- **Who needs this?**

Local and Regional Jurisdictions

Jurisdictions with an interest in implementing multi-modal transportation systems are seeking ways to measure overall mobility. Rather than rely on intersection level of service, jurisdictions are increasingly seeking other metrics to use as mobility objectives. The City of Ventura represents the most comprehensive approach. Fehr & Peers is developing a series of GIS-based tools to predict latent demand for transit, pedestrian and bicycle travel. These demands are generated on a block-by-block basis allowing for prediction of mode shares that will differ based on localized factors such as population and employment density, land use mix, proximity to and quality of transit service, urban design factors, and vehicle ownership rates. The tools allow assessment of alternative futures. If the Circulation Element contemplates a high capacity transit service within a specific corridor, the tool will not only describe how much ridership could be generated, but how it would affect vehicle and pedestrian trip-making characteristics.

- **How is it better than what I already have?**

GIS tools allow us to quantify relationships between different transportation investment options, mode choice, and overall mobility. At present, it has not been built into a traditional four-step modeling process, but it could ultimately mature into a locally validated mode split model. Two evolutions are required to make this possible: (1) further research into the factors affecting transit trip making in bus corridors; and (2) validation of predicted users to travel survey and multi-modal count data (similar to the way that Direct Ridership Models were validated for use in rail transit forecasting).

- **Who else is using it?**

Many jurisdictions are developing multi-modal transportation objectives, but few have tools to assess their progress in meeting those objectives. Instead of relying on tools and metrics many are completing bicycle, pedestrian, and transit systems under the notion that if they build it they will come. None have tools measure pedestrian, bicycle and transit levels and predict changes in mode splits resulting from different investment options.

