

Mobility Options For Commuters

University of Arizona



Cities face a huge transportation problem: too many individuals driving too many cars trying to travel on a limited number of streets and producing too much harmful pollution. The resulting traffic and air problems are unsustainable, not to mention the driver frustrations.

But what if cities could work with travelers to make small behavioral changes that would help drivers commute more efficiently, which in turn, resulted in more efficient commutes, less pollution and happier commuters?

This is what Metropia does. The system was originally developed by Associate Professor Yi-Chang Chiu and his team in the Department of Civil Engineering at the University of Arizona. The technology provides a city-wide ecosystem connecting commuters, businesses, employers and governmental agencies to help drive improvements in metro mobility. The system has two elements that integrate into a single solution:

- **Mobile App:** This gives commuters advanced traffic prediction and vehicle-routing technology so that they can make choices to help alleviate traffic by changing their traditional travel routes and times. Those who make smarter and safer travel decisions earn rewards that are provided by community and business partners in

participating cities.

- **Synergy Platform:** Integrated with a city's systems, this management platform uses proprietary algorithms and data analytics to provide a framework for agencies to collaborate, actively manage demand and enhance and monitor transportation systems' performance.

Metropia's unique approach empowers individual drivers to make informed decisions that work for their schedules and incentivizes them to save time and earn rewards while reducing the strain on roads. Rewards come in the form of points, which can be redeemed at local partnering businesses. Drivers can also choose to exchange points for gift cards; in Tucson, AZ, the company has agreements with Target, Amazon, and Starbucks as participants in the rewards program. Points can also be exchanged for the planting of trees.

“ *Most navigation apps start working when the user gets into their car, but by then it's often too late. By planning ahead with Metropia, users get a clear picture as to what their upcoming commute will look like, as well as updated alerts when accidents and lane closures require an earlier departure or a detour.* ”

Pre-scheduling a trip gives users the foresight to plan their drive and the flexibility to make adjustments when needed.

In Tucson, a proactive effort to alleviate congestion and reduce impacts on air quality in the region, Metropia Inc. partnered with Pima Association of Governments (PAG), the region's metropolitan planning organization. Research gathered by Metropia is benefiting PAG's travel reduction program to promote ridesharing. Metropia is also collecting travel time and speeds for PAG to inform plans for future road projects, forecast pollution levels and ensure compliance with air quality regulations.

Along with improving travel experiences and making cities work more efficiently through incentivizing and facilitating better "travel choices and behavior," the company is actively giving back. Most recently, Hurricane Harvey destroyed nearly 500,000 vehicles in Houston, leaving many without access to reliable transportation. To help bring people together to ride share, Metropia quickly implemented its Houston Riding program to provide access to its online carpool-matching service.

The Metropia platform is currently implemented and available to travelers in Tucson, AZ; Austin, TX, El Paso, TX; and Juarez, Mexico. It will soon be available in Houston, TX; and Phoenix, AZ.

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