



MOBILITY ON DEMAND (MOD) SANDBOX

City of Palo Alto

Bay Area Fair Value Commuting Demonstration

TEAM, BUDGET, AND WAIVERS

Key Partners: Joint Venture Silicon Valley Network, Redwood City, City of Fremont, City of Mountain View, San Mateo County, City of Cupertino, RideAmigos, Luum, Moovel, Lyft, GenZe, EcoReco, Microsoft, Google, Commute.org, C/CAG, samTrans, VTA, Bay Area Council, Transportation for America, Palo Alto Transportation Management Association (TMA), SPUR

Project Supporters: State Assembly District 22, Bay Area Air Quality Management District, Governor’s Office of Planning and Research, Metropolitan Transportation Commission, Silicon Valley Leadership Group, Transform, Sierra Club, and Association for Commuter Transportation – NorCal Chapter

Budget Summary: The budget from the applicant is summarized below:

MOD Sandbox Demonstration Federal Amount (\$)	MOD Sandbox Cost Share (\$)	Total Cost
\$1,085,000	\$1,964,800	\$3,049,800

INNOVATION: PROJECT APPROACH

The proposed solutions seek to reduce Bay Area single occupancy vehicle (SOV) commute share from 75% to 50% through a Fair Value Commuting (FVC) solution. Stanford University’s commute program provides the conceptual FVC starting point. Stanford reduced SOV from 75% to 50% (with transit share increasing from 8.0% to 31.1%), eliminating the need for \$107M in new parking structures. FVC consists of five components:

Component #1: Enterprise Commute Trip Reduction (ECTR) software automates employer commute programs. ECTR will integrate with public transit by filling up transit fare cards (Bay Area’s Clipper) and allowing pre-tax commuter benefits purchase of transit passes. Project partner vendors are Luum and RideAmigos

Component #2: Mobility Aggregation (MobAg) app is a mobile multimodal trip planning app with a seamless combination of public/private transit, bikeshare, rideshare, carshare, and electric scooter/bike “loan-to-own,” with e-payment. MobAg integrates MOD products such as Lyft line, UberPOOL, Waze Carpool, Scoop, ZipCar, and Car2Go. MobAg apps include Moovel, Urban Engines, Whim, Moovit, Transit App, TripGo, Swiftly, Ventra, Siemens, and GoLA. The project integrates MobAg with ECTR. MobAg integrates with public transit by providing multimodal trip planning featuring transit via the GTFS open standard interface.

Component #3: A “revenue-neutral workplace parking feebate” charges a fee for SOV commutes and rebates that revenue to non-SOV commutes, structured so that there is no cost to employers. ECTR vendors take their fee out of SOV revenue.

Component #4: “Gap Filling” describes analytics to identify commutes with poor alternatives and subsequent attempts to improve them. Lyft/Uber services integrate with public transit by providing first/last mile - 20% of Lyft trips are first/last mile to transit. E-scooter loan-to-own integrates with transit by providing first/last mile. Bike network improvements integrate with transit by providing first/last mile. Public microtransit such as VTA Flex is already public transit and also provides first/last mile to transit.

Component #5: Alleviating systemic obstacles such as: a) enable better public transit routes that cross county borders (the region has 24 transit agencies), b) better integrate transit fares within multi-agency trips, c) modernize transit e-payment, and d) develop a healthy, interoperable mobility software ecosystem, following open standards.

The project will: a) collaborate directly with the top vendors that contribute to FVC by enhancing software/hardware feature sets and interoperability, b) pilot FVC at 11 employers with more than 27,000 employees, and c) collaboratively analyze commute patterns and develop/pilot new gap-fillers such as low-income subsidy and loan-to-own.

CHALLENGES PROJECT IS DESIGNED TO ADDRESS

Scale Challenge: In car-loving portions of the Bay Area, transit commute mode share is an anemic 3.3% and Lyft/Uber serves less than 1 out of every 1,000 trips. For a zip code with 31,550 residents, of which 500 are downtown Palo Alto workers, there are fewer than 8 people to match in each 20-minute peak hour commute interval. SOLUTION: At regional scale FVC creates 465,000 new customers for non-SOV mobility.

Gap Challenge: There is a need for “Gap Filling” to identify commute vectors with poor alternatives and subsequently improve options. SOLUTION: FVC fills gaps with: low-income transit subsidies, e-scooter first/last mile, Uber first/last mile, bike network analysis/improvements to reduce stress, e-bikes for 8-mile commutes, on-demand P2P rideshare (Lyft Carpool), microtransit (VTA Flex, Bridj), and telecommuting.

Integration Challenge: A handful of suburban employers have reduced commuting from 75% to 50% SOV, but no suburb or suburban county has adopted city-wide or county-wide technologies/policies that have reduced SOV commuting by even 5%. SOLUTION: FVC addresses demand and supply side challenges. FVC’s integrated five-component solution combines technologies and policies, providing a “credible success narrative” that mode shift from 75 to 50% may be achieved.

Mobility for All Solution: FVC provides equitable pathways to jobs as follows: 1) The Palo Alto TMA low-income commute gap-filling work task. 2) The FVC “feebate” serves as a progressive wealth transfer from high-income to low income. Compared to other congestion reduction policies, FVC scores high for social equity. 3) 25% mode shift away from SOV in suburbia will result in multimodal expansion to the great benefit of the disability community.

Systemic Challenge: The Bay Area has a series of systemic obstacles that need addressing, including: a) enable better transit routes that cross county borders, b) provide better transit fares for multi-agency trips, c) e-payment, d) interoperable software ecosystem. SOLUTION: One of FVC’s five components reduces systemic obstacles.

ANTICIPATED OUTCOMES, BENEFITS, IMPACTS

Capstone deliverables: 1) a real-time commute mode dashboard aggregated from 11 employers using two different ECTR apps and 2) a consortium-wide conclusion about far along FVC has progressed from 40% ready towards 100% ready to become a regional-scale solution.

Potential Bay Area-wide Benefits / Impacts include:

- Creating \$670M/year new transit, biking, carpool, and mobility service funding out of thin air
- Benefits lower income workers more than higher income workers
- Reducing 1M car trips/day, 1.3M tons/GHG/year, 3.4B VMT/year at a “negative cost” of -\$558/ton GHG reduction
- Creating a large new pro-transit voting constituency.