



# Transportation & Housing

*New Opportunities Through Collaboration*

Housing California  
Match 9, 2018



# About Self-Help Enterprises

- ▶ Established in 1965
- ▶ Helped more than 6,200 families to build their own homes & developed over 1,350 units of rental housing
- ▶ Work with over 60 community services districts or small water systems; active in the drought and permanent water solutions
- ▶ Received two AHSC awards in round 2
- ▶ Innovative new partnership with CalVans
- ▶ Implementing transportation, solar PV, graywater, etc.





# Palm Terrace (Lindsay)

- ▶ 50 units of rental housing (20 units/acre)
- ▶ Graywater and grid-neutral zero net energy (solar PV)
- ▶ \$1,000,000 for roundabout-Westwood & Hermosa
- ▶ Two vans in partnership with CalVans
- ▶ Sidewalks and bike lanes







# Sequoia Commons (Goshen)

- ▶ Affordable Housing and Sustainable Communities (AHSC) application for 66-units rental housing & transportation
- ▶ Partnership with CalVans for vanpool
- ▶ Sidewalks and bike lanes
- ▶ Transit subsidies and marketing \$\$ for fixed route bus service
- ▶ New bus stop on Rd. 72 which implements Goshen short-range transit plan
- ▶ Signalization of Rd. 76 and road improvements
- ▶ \$3,000,000 investment in transportation

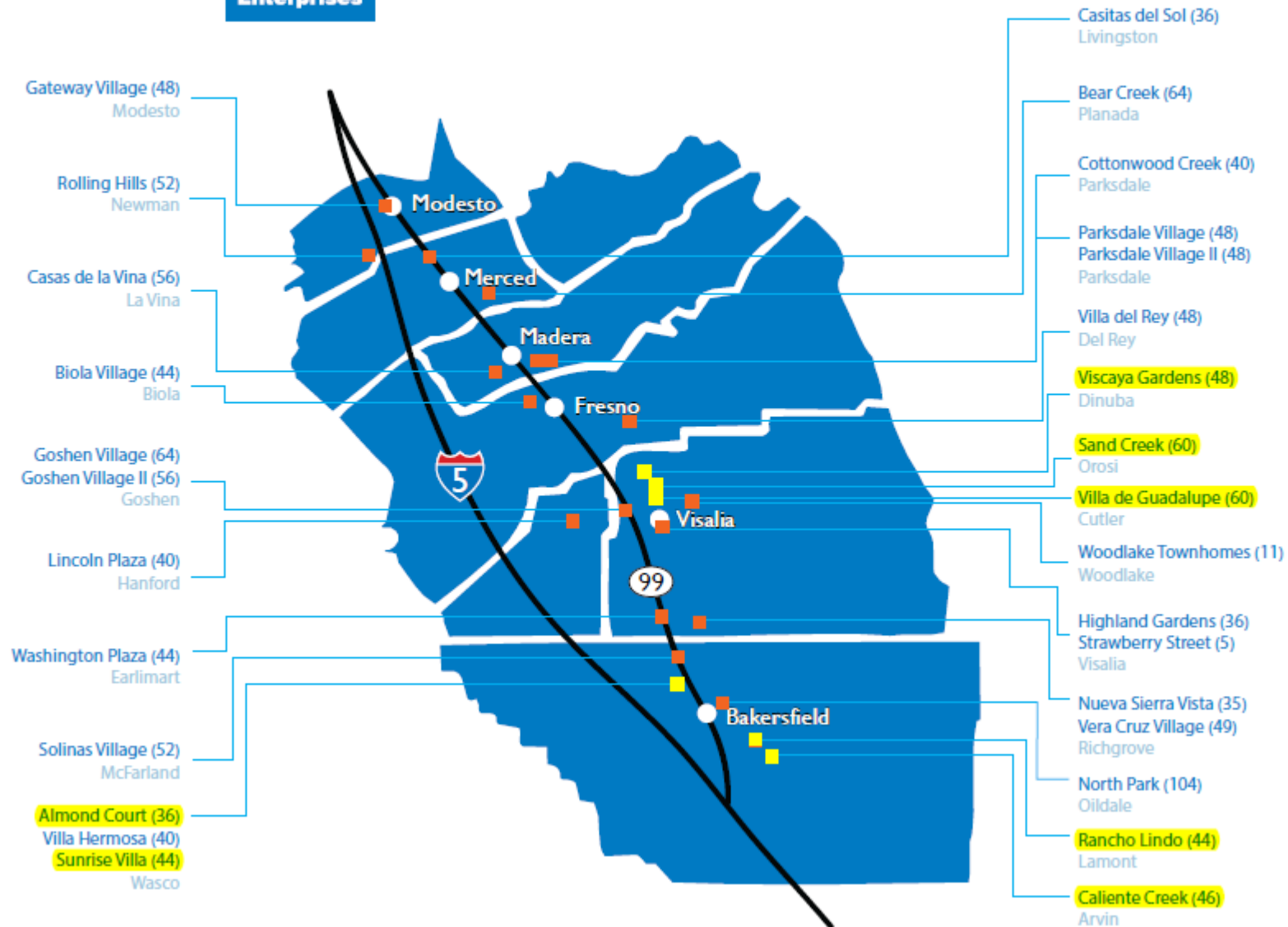


# Pilot Project: *Valley GO*

- ▶ San Joaquin Valley Air Pollution Control District (Valley Air) is the lead applicant
- ▶ Multiple Partners-Valley Air, SHE, KCOG, TCOG, StanCOG, transit providers, UC Davis, Shared Use Mobility Center, other partners
- ▶ Battery electric vehicle (BEV) carsharing and ridesourcing
  - ▶ 7 sites (4 in Kern County and 3 in Tulare County)
- ▶ Technology platform and community outreach/engagement



## 29 Multi-Family Project Sites 1,358 total units



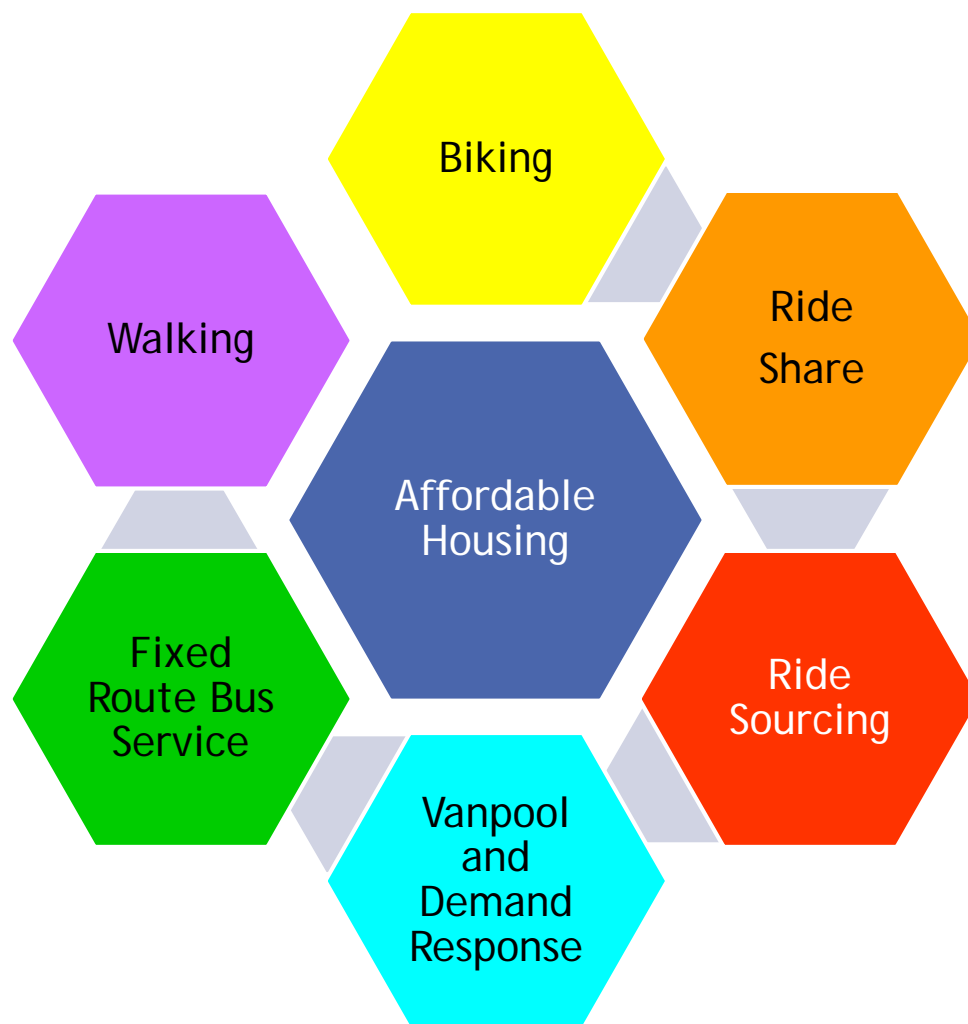


# Valley Go Challenges

- ▶ General investor buy-in, including the ability to host ride sourcing (Uber/Lyft) vehicles on a tac credit site
- ▶ Shift in mentality—changing the reliance on traditional transportation
- ▶ Rate structure and absorbing the cost of electricity to charge vehicles
- ▶ Locating a strong vehicle provider/partner
- ▶ Community engagement & outreach challenges in rural communities
- ▶ Retrofitting old electrical infrastructure to add PEV charging



# Housing & Transportation Nexus







# Questions?

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**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

# 2018 Housing California Annual Conference

Rural Shared Mobility: Funding and  
Implementing Transportation Amenities  
for Affordable Housing  
Friday, March 9, 2017



**HEALTHY AIR LIVING™**

*Live a Healthy Air Life!*

# San Joaquin Valley's Need for Reduction in Mobile Source Emissions

- San Joaquin Valley businesses and residents subject to toughest regulations in the nation
- District oversees 8 counties that include: San Joaquin, Stanislaus, Merced, Madera, Fresno , Kings, Tulare, and the Valley portion of Kern County
- District has reduced emissions by over 80% since 1992
- Despite significant reductions, significant additional reductions necessary to meet ever-toughening standards
- Mobile sources contribute 85% of Valley's NOx inventory (main precursor for ozone and PM2.5)
- District has created several successful programs targeted at reducing emissions from passenger vehicles (i.e. Tune in Tune Up, Drive Clean!, etc.)

# Electric Vehicles in the Valley

- Valley has traditionally lagged other areas of the state in electric vehicle (EV) use and ownership
  - Only 3% of participants in state Clean Vehicle Rebate Project
  - Despite recent increase, still lag behind more affluent, urban areas
- District has identified numerous barriers to more widespread EV adoption:
  - High poverty rate
  - Wide-spread geography
  - Lack of public awareness
  - Lack of charging infrastructure
- District implementing numerous strategies to address barriers, including incentive programs for EV purchases and charging infrastructure

# Incentives

- EV related programs:
  - Vehicles:
    - Drive Clean Rebate Program: Up to \$3,000 for the purchase or lease of a new vehicle
    - Enhanced Fleet Modernization Program & Plus Up: Up to \$9500 in funds to help scrap an old vehicle and purchase either a cleaner gas, hybrid, PHEV, or BEV
      - Up to \$9,500
      - targeting Low-Income and Disadvantage Communities
    - Public Benefit Program: Up to \$20,000 for the purchase of a new Clean air vehicles for Public Agencies



# Incentives (Cont.)

## – Infrastructure:

- Charge Up: Provides Up to \$6,000 for a Level 2 and up to \$25,000 for a Level 3 DC fast charger for public agencies, valley businesses, and MUDs

## – Funding Opportunities:

- The District is a firm believer of pursuing additional grant funding to improve the air quality in the Valley. We continuously seek funding opportunities from multiple sources including CEC and ARB

# Car Sharing and Mobility Grant

- CARB released a solicitation to implement a Car Sharing and Mobility Options Pilot Program in April 2017
- District with project partners submitted two proposals:
  - Large Project: Ecosystem of Shared Mobility Services in the San Joaquin Valley Pilot Project
  - Small Project: Valley Air ZEV Mobility Pilot Project
- \$2,999,800 awarded for both projects
- District's Role: Project management
  - District will subcontract with partners to administer projects

# Car Sharing and Mobility Grant (cont.)

- Goals: Employ innovative solutions to bring the benefits of clean transportation to disadvantaged communities that are most impacted by pollution
- Ecosystem of Shared Mobility Services in the San Joaquin Valley Pilot Project:
  - 2 main components include:
    - **Valley Go:** car sharing and ride sourcing for affordable housing communities
    - **Valley Flex:** establishment of a technology platform
  - Pilot will serve over 130,000 community members across 24 rural census tracts
  - Services would be available all year round

# Valley Go

- Purpose: Support car sharing and ride sourcing in affordable housing communities.
  - Seeks to understand whether car sharing and resourcing services located in affordable housing complexes could serve enough Dial-a-Ride (DAR) demand to retire one or more old, gas-powered DAR vehicle(s) in each county
  - Deploys car sharing and ride sourcing programs to expand on existing services
  - Subsidizes costs for using services with a goal to offer zero or much lower cost rates to end users
  - Will be deployed at 7 affordable Self Help Enterprise (SHE) housing properties located in Kern and Tulare Counties
  - Adding 24 EV and 17 Level 2 EV chargers and 1 Level 3 DCFC that will be deployed at the 7 locations

# Valley Flex

- Purpose: Develop a technology platform to coordinate existing services (i.e. public DAR vans, volunteer transportation organizations including car sharing and ride sourcing groups that includes Uber and Lyft) to better match trips, fill empty seats, and reduce empty miles traveled
  - Utilize demand and supply data to match travelers with compatible origin destination locations and departure arrival times to minimize service costs, travel times, vehicle miles traveled (VMT) and GHG emissions
  - Act as a competitive marketplace that lowers cost by rewarding the cheapest and fastest providers





# Valley Flex (cont.)

- Project partners include multiple transit agencies including: San Joaquin Regional Transit District, Stanislaus County Public Works Transit, City of Escalon, City of Manteca, and Modesto Area Express
  - Agencies will coordinate with residents of affordable housing communities to utilize the technology platform

# Outreach and Education

- Self-Help Enterprises (SHE) will coordinate outreach and education in the Valley GO Communities that include Kern and Tulare Counties
- MOVE will coordinate outreach and education in the San Joaquin and Stanislaus Counties
- Coordination of community meetings, press events, recruitment of car sharing members, drivers, and system users

# Research and Reporting

- UC Davis will conduct the research evaluation of the project by the following steps:
  - Inform Pilot Design (months 1-6): Surveys to understand current transportation resources, travel patterns, and overall feedback from
  - Transit Use (months 7-24): Transit agencies will provide critical information including community members using the service, operational cost, and VMT (empty and revenue miles)
  - Participant Experience (months 13-24): Seek feedback from riders and drivers to find ways to improve
  - Car sharing and Ride sourcing Data (months 13 to 24): Data will be used to determine the use and cost effectiveness of the pilot

# Why is Car Sharing Important

- Project will help the Valley better understand how car sharing can work for residents
- Provides less driving which equals lower emissions
- Benefits all groups especially those without access to a vehicle
- Participating groups in this Pilot include:
  - Sigala Inc.: Main subcontractor
  - UC Davis: Overall project coordination and oversight, including development of education and outreach efforts
  - Shared-Use Mobility Center (SUMC): Oversee procurement of vendors, tech service providers, implementation, and operations.
  - Self Help Enterprises: Lead outreach for Valley Go
  - MOVE: Lead outreach for Valley Flex
  - Multiple Transit Agencies: Assist with activities between Valley Go and Valley Move

# Contact Information

## **Charge Up!, Drive Clean, & the Car Sharing Mobility Pilot Project**

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## **Public Benefits Grant Program**

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## **Enhanced Fleet Modernization Program:**

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# Affordable Clean Transportation in Rural Disadvantaged San Joaquin Valley

Caroline Rodier, Ph.D., University of California, Davis

Institute of Transportation Studies and National Center for Sustainable Transportation

# The Challenge: Rural Mobility



# Transit: Density and Distance

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# Poverty and Low Vehicle Availability

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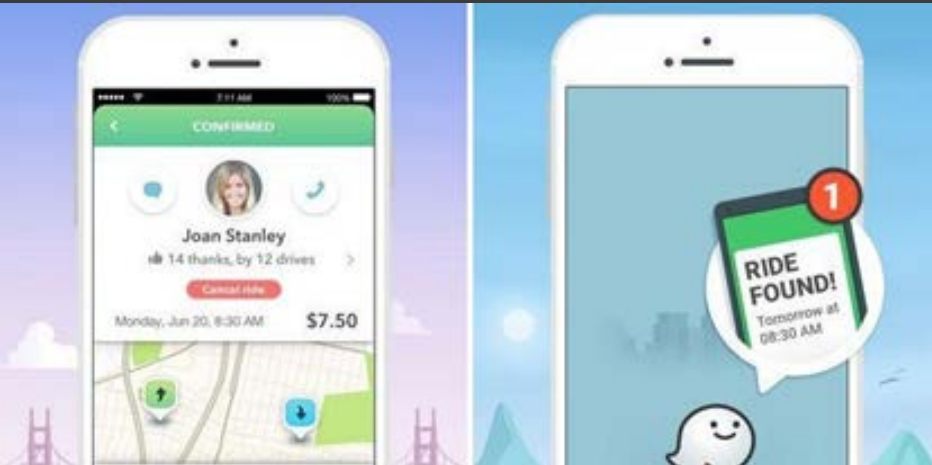
Opportunity: Shared-Use  
Electric Vehicles and Rural  
Affordable Housing





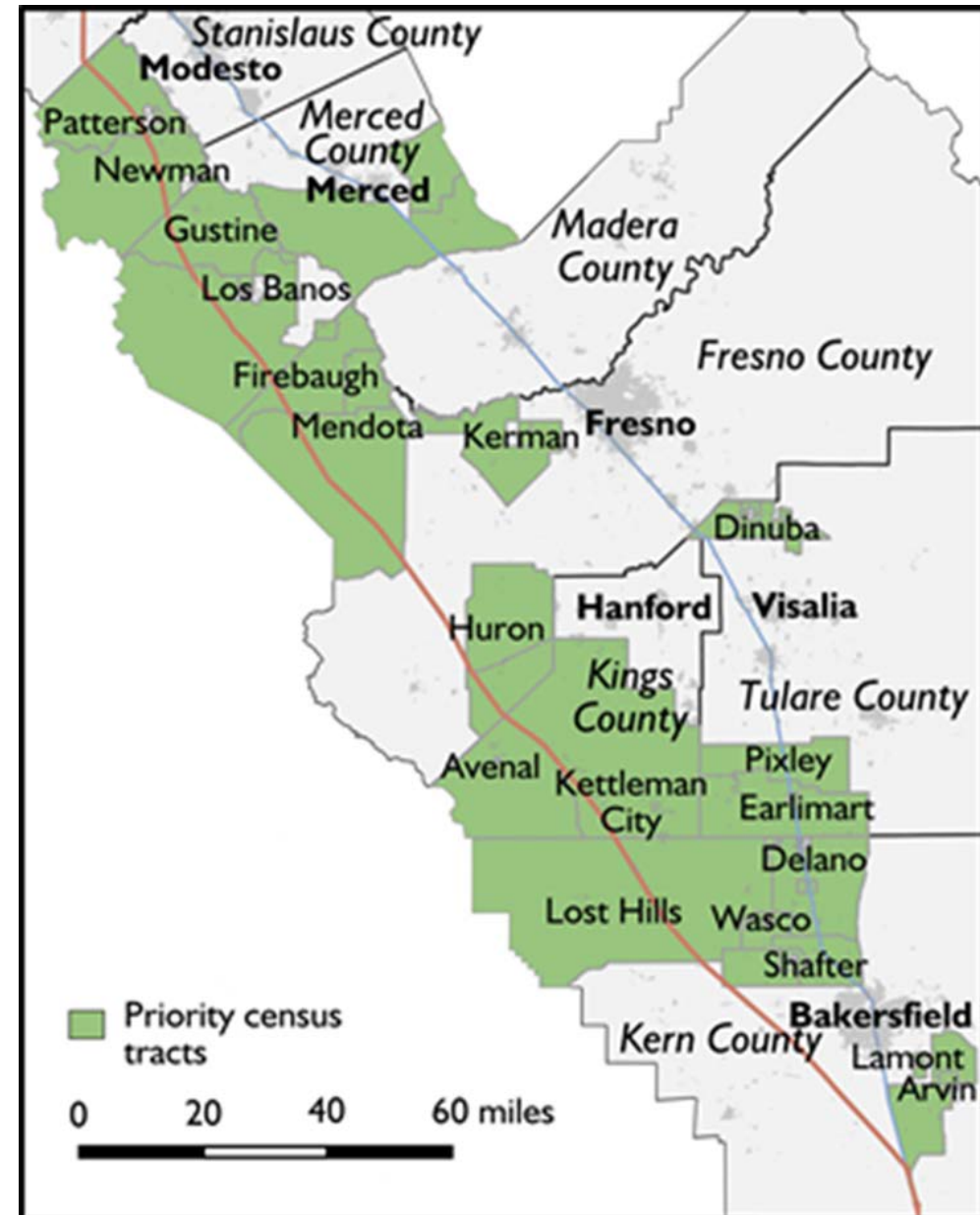
# Shared-Use Services: Flexibility of Auto Ownership without the Cost

- Carsharing
  - Zipcar
- Ridesourcing
  - Uber and Lyft
- Ridesharing
  - Uber Pool and Lyft Line



Rural disadvantaged areas where shared-use services may beat the public cost of providing transit.

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# Battery Electric Vehicles: Increased Access without Increased GHG Emissions

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## Affordable Housing: Potential Win-Win Partnership

- Public
  - High Relative Density
  - Amenities
  - Funding for O&M
- Developer
  - Fewer Vehicles
  - Less Parking
  - More Housing Units



Evidence

# Survey

Administered to residents in  
Self-Help Enterprises'  
affordable housing in the San  
Joaquin Valley (2017).



# Unmet Travel Needs

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Marshal resources to get to activities essential for economic wellbeing, but not physical and emotional.

- 12% or less missed work and/or school within last week.
- 80% report limited access to medical, grocery and social activities.



# Willingness-to-Use Shared-Use Services

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- 25% to 50% for work, higher education and K-12 travel.
- About 70% for shopping, health and household errands.

# Up to 25% Parking Reduction, Given

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- Stated willingness-to-use shared-use services
- Use of existing vehicles
  - 13% Never
  - 2% Once a Month or Less
  - 6% Few Times a Month
  - 5% About Once a Week
  - 75% More than Once a Week

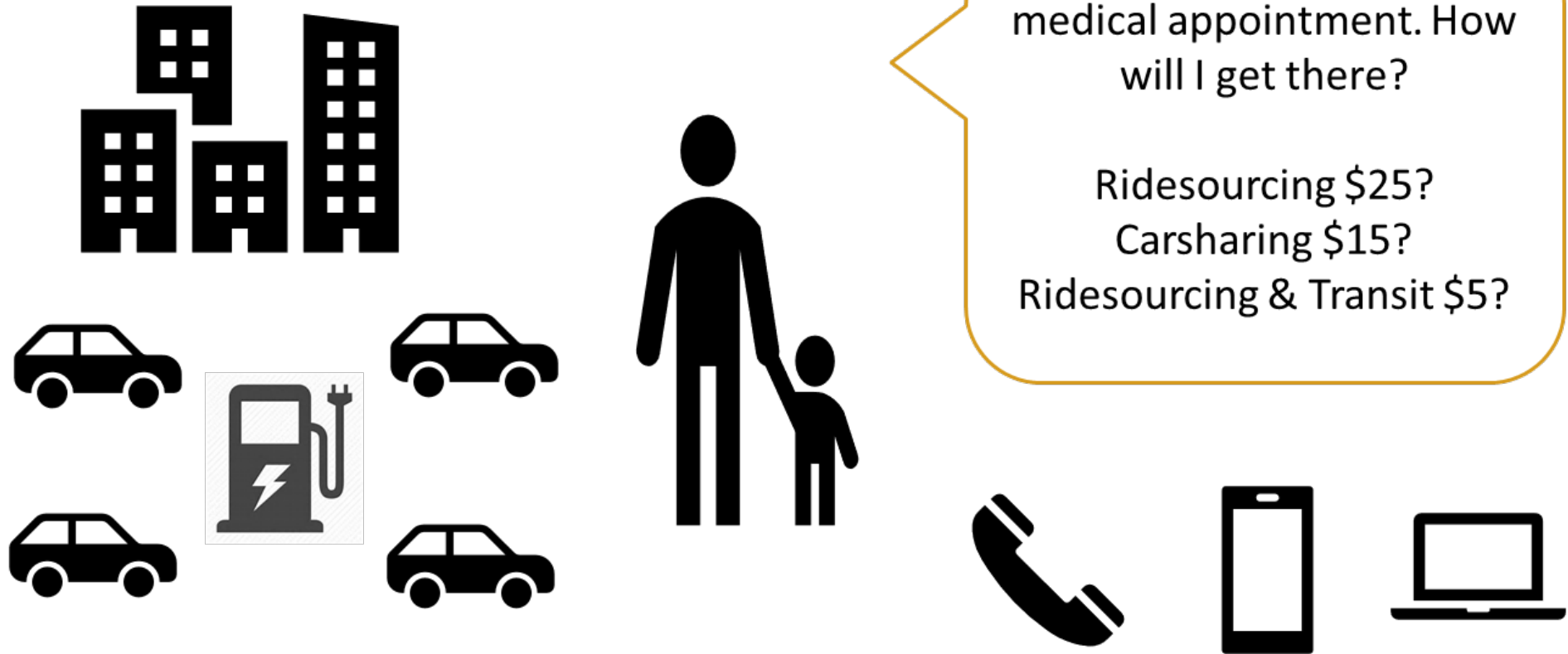
# Barriers to Accessing Shared-Use Services

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- 59% bank account
- 42% credit card
- 47% speak only Spanish

# Conclusion: Shared-Use Mobility Pilot

# Valley GO Pilot in Kern and Tulare



# Focus Groups

One resident and one non-resident (with low auto availability) focus group in each planned pilot community:


- Wasco
- Lamont and Arvin
- Dinuba, Culer and Orosi





# Participants Response to Pilot Concept


*"In my household, we are struggling with just one car and saving money to get another one to just get to places. If we had services like this, then maybe we would not have to get another car."*



*"We can't afford to buy a brand new car, so we take the risk of buying junkers. If these services provide reliable cars then maybe it would be better to use them."*



*"Car insurance, repairs, and gas really add up, so even when you find a way to get a new car it is really expensive."*



*"It is hard to get to college. Like I was 17 and if I had these services, then I would have considered not buying a vehicle."*

- Thank you!
- Questions?
- Contact: Caroline Rodier [cjrodier@ucdavis.edu](mailto:cjrodier@ucdavis.edu)
- Reports:
  - <https://ncst.ucdavis.edu/project/opportunities-for-shared-use-mobility-services-in-rural-disadvantaged-communities/>
  - [https://itspubs.ucdavis.edu/index.php/research/publications/publication-detail/?pub\\_id=2775](https://itspubs.ucdavis.edu/index.php/research/publications/publication-detail/?pub_id=2775)