A Neighborhood-Based Approach to Equitable E-Mobility

Denver’s Montbello Neighborhood

December 28, 2020
Meeting Denver’s Climate Action Plan goals

The work in Montbello stems from Denver’s overarching climate strategy.

The Challenge

The City and County of Denver (CCD) outlines ambitious goals in its 80 x 50 Climate Action Plan—80% reduction in greenhouse gas (GHG) emissions by 2050. One element of achieving this goal is promoting adoption of light-duty electric vehicles (EVs). EV goals include:

• 2025: 15% of Denver vehicle registrations are electric
• 2030: 30% of Denver vehicle registrations are electric
• 2050: 100% of light duty vehicles are electric

How does CCD best reach these goals?

Addressing the Challenge

The Denver Office of Climate Action, Sustainability, and Resilience (CASR), in partnership with a community steering committee, Guidehouse and the Shelton Group are completing the following steps:

• Develop an EV Plan (Task 1) | Deliver an EV plan that builds on infrastructure and program successes to date and leverages information and lessons learned from peer city experiences.

• Education and Outreach (Task 2) | Develop a marketing campaign and outreach to encourage EV adoption and expansion of EV charging stations.

• Equity Work (Task 3) | Better understand the unique mobility challenges of underserved communities and identify effective solutions to increasing EV adoption and use.

This report focuses on this task’s recommendations.
Community selection: Montbello

Montbello was selected as the community of focus for Task 3 because of its low neighborhood equity index score, its active community engagement, and transportation disparities.

Several Denver neighborhoods face disparities in health and education services, food access, economic opportunities, and mobility infrastructure. While many neighborhoods are good candidates for the Task 3 pilot project, Montbello was ultimately selected for several reasons.

Predominantly a community of color and ranks 54th out of 78 neighborhoods in average income.

Low to moderate car ownership and a distinct lack of access to robust public transportation networks and EV charging.

Residents pay above average in transportation costs compared to their income.

A very engaged community: multiple Registered Neighborhood Organizations (RNOs) and other community-based organizations (CBOs) have built strong relationships with Montbello residents.
Best practices in equitable mobility planning

There are organizations the CASR can turn to when structuring this pilot. These groups offer trainings, resources, databases, and frameworks aimed specifically at incorporating equity into mobility.

Resources and Organizations

- Greenlining Institute
  › Electric Vehicles for All: An Equity Toolkit
  › Mobility Equity Framework: How to Make Transportation Work for People

- Urban Sustainability Director’s Network
  › Shared-Use Mobility Toolkit for Cities

- Forth
  › Equity in Practice: Developing a City Transportation Electrification Roadmap

Key Considerations

- Low-income communities often suffer the greatest burden from traditional transportation technologies and are last to receive the benefits of electrified mobility.

- Equitable transportation increases access to clean, affordable mobility options in a way that supports social and economic empowerment for a community.

- Equitable transportation goes beyond single occupancy vehicles to the entire mobility landscape of a community. Micro-mobility, public and mass transport, and active mobility, must all be considered.

- Transportation solutions will only be equitable if they are developed with the community, not for them.
Pilot project examples

Pilot projects in low-income neighborhood take many forms and incorporate different mobility modes and technologies based on the needs and preferences of each individual community.

Pilot Project Types

- Carshare programs with a variety of service areas, from single apartment sites to entire cities
- Delivery as a service
- Fleet electrification
- Shuttle service
- Electric micro-mobility
- Job training and workforce development

Key Learnings for CASR

- Leverage existing groups, services, or trusted community members and integrate EVs into their initiatives
- Community input should guide the design and implementation of the pilot
- Conduct continual impact assessment for the duration of the program in the form of member surveys, key performance indicator data collection, or other feedback-gathering strategies
Engaging the Montbello community

Guidehouse and the CASR team designed stakeholder engagement centering on community voices and social equity to develop e-mobility pilot recommendations.

The targeted engagement strategy had the following aims:

- **Highlight the priorities, challenges, and aspirations** of community leaders and community-based organizations living and working in Montbello to inform potential e-mobility solutions
- **Understand current work** by City staff, local and regional institutions, and other organizations to address transportation inequities in Denver and Montbello
- **Learn from practitioners** in the transportation and e-mobility equity space about leading practices, lessons learned and emerging approaches
- **Identify potential community-based partners** for project design and implementation, as well as targeted project beneficiaries
The team relied on remote engagement strategies, such as phone-based interviews and leveraged snowball sampling to recruit additional participants.

Being mindful of the extra burden COVID-19 imposed on communities, the team planned for longer response times and flexible scheduling.

A human-centered design approach allowed space for participants to talk about the challenges COVID-19, racial injustice, and other pressing inequities present to them and their community.

The project team designated a budget to compensate community members for their input at a rate of $50/hour.

Interview engagement strategies

Due to the ongoing financial and public health impacts of COVID-19, the project team designed a flexible, targeted, and human-centered community engagement strategy to minimize burdens on participating community members and prioritize relationship-building.
## Interview findings and insights

### Expressed concerns and needs

- COVID-19 is exacerbating existing community issues, including housing affordability, financial stability and health disparities.
- A successful pilot project should strive to be “intersectional” – addressing multiple issues while prioritizing groups most directly impacted by COVID-19.
- A single pilot project alone will not address all the inequities facing the Montbello community – complementary efforts will need to be deployed to address community priorities and concerns.

### Solutions considerations

- Multiple barriers—ranging from privacy concerns to digital literacy to perceptions of safety and comfort—could prevent access to mobility solutions and benefits.
- Solutions should minimize barriers to access and maximize safety, comfort, and ease of use.
- Clear community benefits include access to critical services, access to key destinations, increased transit integration, and increased safety and comfort.

### Community engagement and messaging

- Past projects by the City and other government entities have damaged trust in institutions and relationships with the Montbello community.
- To repair trust and build goodwill with the community, the project must center on community needs, be co-designed and implemented in partnership with the community, and strive for community ownership and empowerment throughout all project stages.

### Active community efforts

- Several community-based groups are doing important work in the community focused on: food access and security, youth empowerment, support for the elderly, community programming, mobility independence.
- E-mobility pilots in Montbello can bolster work already happening in the community by trusted community groups.
- Several community groups are well-positioned as partners (and could stand to benefit from the City’s resources and support).
Pilot project opportunities

Based on the expressed needs and priorities of the Montbello community, six types of e-mobility pilot projects were identified.

- **Active & Micro-Mobility**: Micro-mobility addresses mobility needs for those who want the autonomy of personal mobility while providing more active mobility options.
- **Education & Job Training**: E-mobility offers a wide variety of education and job training opportunities that create awareness and access to new e-mobility technologies while empowering communities to thrive economically.
- **Services**: Service-based pilots address the access issues common to mobility-poor areas that have trouble reaching healthcare, groceries, and other critical services by bringing those services to people.
- **Carshare & Other**: Carshares provide access to electric vehicles without the upfront and operational cost of owning a vehicle while creating a community-based resource.
- **E-Shuttle**: Shuttles augment poor or erratic public transportation networks by filling first-mile last mile gaps and connecting more remote passengers to community hubs.
- **Cross-sector Partnerships**: Cross-sector partnerships consist of greater stakeholder engagement, greater funding, and increased capacity building and are candidates for future work as CASR’s e-mobility work expands.
Pilot Implementation Steps
CASR should strive to engage Montbello throughout the pilot design and deployment process.

- **Startup & Launch**
  - Re-engage partners and advisors
    - Investigate high-potential partnerships
    - Develop internal pilot requirements and goals
    - Release RFQ

- **Pilot Design**
  - Co-design pilot with selected community partner
    - Create shared pilot goals, timeline, and KPIs
    - Develop outreach and communication strategy

- **Pilot Delivery**
  - Deploy technology and begin collection
    - Manage data and feedback
    - Continuously monitor to improve processes

- **Pilot Evaluation**
  - Deliver six-month program report
    - Evaluate collected program metrics and feedback
    - Engage stakeholders to assess results, improve, and scale
Developing equitable e-mobility

01 Project background & approach
02 Analogous inspiration: Best practices & pilot projects
03 Immersion: Montbello walk audit
04 Learn from experts & people: Engaging the community
05 Equitable e-mobility pilot opportunities
06 Recommendations and next steps
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Project background & approach
Meeting Denver’s Climate Action Plan goals

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How does CCD best reach these goals?

Addressing the Challenge

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This report focuses on this task’s recommendations.
The Equity Index compares equity outcomes across neighborhoods through several equity indices.

Key Equity Metrics

- **Socioeconomics**: Considers education and poverty indicators
- **Built Environment**: Considers access to parks and food.
- **Access to Care**: Considers access to prenatal care
- **Morbidity**: Considers childhood obesity levels
- **Mortality**: Considers life expectancy

When it comes to EVs, a recent Corona Insights survey fielded low-income Denverites found that only 30% said they had plug-in access near their home.

Charging stations are concentrated in Denver neighborhoods facing fewer inequities.
Selecting Montbello for an equitable e-mobility project

The team selected Montbello as the community of focus because:

• Montbello is home to many people of color facing poverty and other quality of life disparities. The Montbello neighborhood is predominantly a community of color (84%+) and ranks 54 out of 78 Denver neighborhoods in average income.

• Montbello experiences mobility disparities. The neighborhood has low to moderate car ownership and a distinct lack of access to robust public transportation networks. As a result, residents spend an above average amount in transportation costs as compared to their income.

• Montbello is a highly engaged community. Multiple Registered Neighborhood Organizations (RNOs) and other community-based organizations (CBOs) have strong relationships with Montbello residents.
Socioeconomic characteristics of Montbello

Montbello is a lower-income neighborhood in the traditionally underserved Far Northeast area of Denver.

Location: Far Northeast Denver

Population (ACS 2017): ~36,176

Census Tracts: 9801, 83.04, 83.05, 83.06, 83.12, 83.86, 83.87

Race/Ethnicity (by Census Tract – US Census 2015):

- People of Color: 84% - 90.9%
- Latinx: 57.4% - 66.5%
- Black: 19.8% - 29.1%
- White: 9.1% - 16%

Median Income (Far NE Area Plan 2019): $48,250
- Ranked 54 of 78 Denver neighborhoods

Other Characteristics (Far NE Area Plan 2019):
- Language: 55% speak Spanish
- Immigration: 30% foreign born
- Occupation: 20% employed in construction
Disparities facing the Montbello neighborhood

The Montbello neighborhood has limited access to transportation, education, and public health resources.

Montbello has low to moderate car ownership, signaling limited transportation options among residents.

Children in Montbello have limited access to schools, both in terms of proximity and density of schools.

Montbello residents have limited access to full-service grocery stores and parks.

Maps 1 & 2 from https://geospatial.denver.maps.arcgis.com/apps/MapJournal/index.html?appid=e333ca7679ec40c2a3e4f4490e3b111743#.
Map 3 from: https://www.arcgis.com/apps/MapJournal/index.html?appid=2f30c73e83204e9682a14680a62a18e.

Guidehouse
Mobility disparities facing the Montbello neighborhood

Montbello residents experience high transportation costs and poor transit connectivity.

Montbello residents spend an above average percentage of their income in transportation costs, suggesting a significant transportation cost burden.

There is poor transit connectivity in Montbello compared to Central Denver and areas along major transit lines.

Source: https://htaindex.cnt.org/map/#

Guidehouse
A Four-Part Community-Based Approach

Learnings for this project were the result of a design thinking approach that emphasized community engagement.

Learnings from pilot projects, best practices, lessons learned across the country

An on-the-ground walk audit in the Montbello community

Interviews with SMEs from public, private, and non-profit sectors focused on equity & EVs

Targeted interviews with community leaders and community-based organizations (CBOs)
Analogous inspiration: Best practices & pilot projects
Considerations for CASR’s equitable e-mobility pilot

**Greenlining Institute**
- Incorporate equity everywhere
- Prioritize pilots based on equity
- Engage the community every step of the way

**Forth Mobility**
- Consider equity in both strategy and pilots
- Show equitable mobility in action to be the model for future work

**Urban Sustainability Director’s Network (USDN)**
- Leverage a suite of e-mobility strategies
- Consider transit to maximize GHG benefits

**Smart Columbus**
- Establish community member liaisons
- Create local job opportunities for community members

**Sacramento: Our Community Carshare**
- Design alternatives to personal technology access
- Understand usage patterns before selecting vehicles
- Anticipate long timelines for partnership contracts

**BlueLA: Low-cost EV carsharing & transit integration**
- Collaborate with known community ally
- Widespread community outreach is the backbone
- Conduct continual impact assessments

**Huron, CA: Rural electric ridesharing services**
- Solutions should fit established habits and systems
- Be open to pilots using non-traditional business models
- Look for areas where co-benefits emerge

**Portland: Cully Car Sharing Pilot**
- Solutions should reduce families’ annual transportation costs
- All outreach should put accessibility at its forefront
- Prevent barriers to pilot through equitable program structure
Immersion: Montbello walk audit
The Montbello walk audit: Experiences on the ground

Pam Jiner of Montbello Walks led the project team on a guided tour of the pedestrian experience walking from the Montbello neighborhood north of Interstate 70 to the Peoria light rail station on the University of Colorado A Line.
The Montbello walk audit: Key findings & learnings

Key Findings
The walk audit highlighted the many challenges facing pedestrians in Montbello, including:

• Incomplete walking paths
• Poor signage to access light rail
• Steep grades to cross Peoria St bridge over the RTD line
• Lack of restroom facilities for light rail and bus passengers
• General lack of safety, comfort, and accessibility measures, leading to poor pedestrian experience

Learnings for CASR
• Public agencies need to consider the “user experience” of all people in Montbello, regardless of the mode of transportation – pilot projects in Montbello should place an emphasis on accessibility and inclusion
• In many cases, basic infrastructure is missing in Montbello; foundational enabling infrastructure must be addressed in tandem with pilot projects
• Efforts in Montbello should bring in multiple transit agencies, as pilot projects alone will not address the underlying infrastructure and service disparities in the community
Learn from experts & people: Engaging the community
Engaging the Montbello community
Incorporating leading practices centered on community voices and expertise

Guidehouse and the CASR team designed stakeholder engagement centering on community voices and social equity to develop e-mobility pilot recommendations.

Because of the COVID-19 pandemic, the team took a targeted engagement strategy with the following aims:

- **Highlight the priorities, challenges, and aspirations** of community leaders and community-based organizations living and working in Montbello to inform potential e-mobility solutions
- **Understand current work** by City staff, local and regional institutions, and other organizations to address transportation inequities in Denver and Montbello
- **Learn from practitioners** in the transportation and e-mobility equity space about leading practices, lessons learned and emerging approaches
- **Identify potential community-based partners** for project design and implementation, as well as targeted project beneficiaries
Interview engagement strategies
Flexible one-on-one interviews and incentives for community participation

Due to the ongoing financial and public health impacts of COVID-19, the project team designed a flexible, targeted, and human-centered community engagement strategy to minimize burdens on participating community members and prioritize relationship-building between the project team and interview participants.

Remote and accessible
The team relied on remote engagement strategies, such as phone-based interviews with optional video conferencing, and leveraged snowball sampling to recruit additional participants.

Flexible and accommodating
Being mindful of the extra burden COVID-19 imposed on communities, the team planned for longer response times and flexible scheduling, such as after regular business hours.

Human-centered and timely
The human-centered design approach taken during community interviews allowed space for participants to talk about the challenges COVID-19, racial injustice, and other pressing inequities present to them and their community. Interview questions and techniques let participants guide the conversation, highlight personal and community priorities, and limit the influence of biases from the project team.

Compensated and mutually beneficial
Recognizing the value of the unique expertise brought by community members, the project team designated a budget to compensate community members for their input at a rate of $50/hour. Interview compensation showed participants that the project team valued their time and insights.
Exploratory interviews
Identifying lessons learned and leading practices in Denver and other communities

The project team’s initial engagement focused on understanding the “lay of the land” in the mobility equity. The team prioritized interviews with thought leaders and experts tackling environmental justice and equity concerns through transportation innovation and mobility projects.

In total, the project team interviewed over 30 individuals representing 16 organizations, including local and state government agencies, non-profits and advocacy groups, and other transportation and mobility stakeholders.

The project team sought to learn more about:

- **Existing efforts in Denver** and other communities to tackle mobility-related disparities
- **Leading practices** around equitable engagement, planning, and implementation of mobility pilot projects
- **Key findings** from innovative e-mobility projects deployed in Denver and in other communities
## Community interviews

Centering community voices and expertise to inform potential solutions

To elevate community voices and capture their priorities, the project team interviewed leaders and community organizations in the Montbello neighborhood. These leaders and organizations primarily work with and serve community members who are facing a multitude of barriers to affordable, reliable, and safe transportation options, including communities of color, the elderly, and people living in poverty.

Interviewees came through existing relationships as well as interviewee referrals. The interviews engaged 14 individuals representing 6 Montbello CBOs and advocating for multiple segments of the community facing transportation barriers.

The project team sought to:

- **Understand challenges** the community is facing—both mobility and non-mobility related
- **Hear from leaders and community organizations** about their priorities for Montbello—and what support they seek
- **Identify current or future efforts** to tackle inequities in Montbello that could be strengthened through new partnerships

### Community leaders

- Advocates for:
  - Communities of color
  - Students & Youth
  - People with disabilities
  - Elderly
  - Low-income communities
  - Immigrants

### Community-based organizations

*Discussed Montbello 20/20 priorities with Chair during Walk Audit*
Expressed concerns & needs

Exploratory Interviews
- Isolated community
- Poor air quality & pollution
- Youth violence
- Critical services are inaccessible
- Gaps in infrastructure
- Workforce development
- "Making ends meet"
- COVID-19 exacerbating existing issues
- "Green gentrification"
- No micro-mobility options
- Healthy food deserts
- Digital divide

Community Interviews
- Food access for seniors
- Gentrification threatening housing stability
- Reduction in RTD services
- Mobility is a huge barrier for elderly
- COVID-19 impacting engagement and outreach
- Access to educational opportunities (e.g., afterschool programs)
- Light rail stop is extremely difficult to access
- Transit reliability and quality of service
- Violence and safety, esp. among youth
- Mental health
- Bicycle and pedestrian safety
- Healthcare access and affordability

Key Findings
- COVID-19 is exacerbating existing community issues, including housing affordability, financial stability and health disparities
- Transportation and mobility are intimately tied to community quality of life, including access to critical services

Learnings for CASR
- A successful pilot project should strive to be “intersectional” – the project should aim to address multiple issues or barriers while prioritizing groups most directly impacted by COVID-19
- A pilot project alone will not address all of the inequities facing the Montbello community – complementary efforts will need to be deployed to address community priorities and concerns
Solutions considerations

Key Findings
- Multiple barriers—ranging from privacy concerns to digital literacy to perceptions of safety and comfort—could prevent access to mobility solutions and benefits.

Learnings for CASR
- Solutions should minimize barriers to access and maximize safety, comfort, and ease of use.
- Clear community benefits include:
  - Access to critical services
  - Access to key destinations
  - Increased transit integration
  - Increased safety and comfort
Interviews summary

Community engagement & messaging

Exploratory Interviews

- E-mobility organizations have traditionally been homogenous
- Need to repair trust with communities
- Poor engagement by transit providers
- Many projects happen "to" the community and not "with" them
- Support community groups and build off of existing efforts
- Prioritize community decision-making in transport
- Co-creating solutions with community
- Previous projects have brought undue burdens and created animosity (e.g., I-70)
- Goals should include building trust and community ownership

Community Interviews

- Outreach via FB and word of mouth
- Community groups have worked to build trust
- Balancing competing priorities and groups
- Dignity, compassion, and patience
- Community leaders can mobilize the community
- Community empowerment and capacity-building
- Past "outside" initiatives have failed due to lack of communication and outreach

Key Findings

- Past projects by the City and other government entities have damaged trust in institutions and relationships with the Montbello community

Learnings for CASR

- To repair trust and build goodwill with the community, the project must center on community needs, be co-designed and implemented in partnership with the community, and strive for community ownership and empowerment throughout all project stages
Active community efforts

Exploratory Interviews

Montbello has strong community groups and involvement
- Food pantries
- Ongoing bike lane and roadway safety improvements
- Strong organizing led by MOC and MB 20/20
- MOC FreshLo Initiative
- Virtual outreach

Community Interviews

CO Young Leaders involved in food pantries, gardens, murals
- Struggle of Love leading toy drives, school supplies giveaways, sports and mentoring, events
- NETC has provided shuttle services, bus passes, donations
- Club de Bicicletas Accidental offering family-centered cycling
- MOC leading FreshLo, The Hub, and multimodal loop
- Multiple groups leading food pantries & delivery
- Many community events
- Conectoras providing rides, information, social connection to elderly
- ELK provides outdoor education, recreation, and other opportunities for youth
- Youth safe zones
- Groups walks, active living events

Key Findings
- Several community-based groups are doing important work in the community focused on:
  - Food access and security
  - Youth empowerment
  - Support for the elderly
  - Community programming
  - Mobility independence

Learnings for CASR
- E-mobility pilots in Montbello can bolster work already happening in the community by trusted community groups
- Several community groups are well-positioned as partners (and could stand to benefit from the City’s resources and support)
Equitable e-mobility opportunities
Defining the “why”
What is the problem we are trying to solve?

Montbello has a limited number of reliable, safe, and affordable transportation options...

• Leading to a lack of access to:
  › Healthcare
  › Educational opportunities
  › Jobs
  › Affordable and healthy food
  › Community centers

• Which is exacerbating (or being exacerbated by):
  › Impacts of COVID-19
  › Financial instability
  › Undocumented status
  › Language barriers
  › Safety concerns
  › Public health disparities
  › Lack of trust

"Living in MB is expensive for your health and your wallet"
"Many see ‘improvements’ as done for outsiders by outsiders"
"Mobility issues prevent me from being able to do as many extracurriculars"
"People tend to bike on sidewalks because the road is too unsafe"
"Lots of people will suffer if bus routes keep getting cut"
"Food access is a critical concern in MB, especially with Covid"
Micro-mobility is a way to address several mobility needs for those who want the autonomy of personal mobility but can’t or don’t want to drive a single-occupancy vehicle. These solutions also address the expressed desire for more active mobility options, however, they may not be as suitable for Montbello’s elderly population.

### Pilot options

<table>
<thead>
<tr>
<th>E-scooter or e-bikes connecting schools to afterschool activities or centers</th>
<th>E-Bike “library” at rec center or other service location</th>
<th>Lead group bike or scooter events with e-mobility available for loan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-bike or e-scooters connecting residential centers and key services or places of work</td>
<td>Fleet of e-bikes or e-scooters owned by a CBO that are loaned out to members</td>
<td>Implement micro-mobility solutions as an alternative to walking</td>
</tr>
<tr>
<td>Establish e-bike or scooter hubs that encourage riders to use less busy streets</td>
<td>Fleet of e-bikes or e-scooters at schools that are loaned out to students</td>
<td>Donate e-mobility technology for giveaways as local events</td>
</tr>
<tr>
<td>Install e-bike or e-scooter docking stations at or near bus stops</td>
<td>Connect existing bus stops to the LR with e-bikes or e-scooters</td>
<td>E-bike with panniers and docking station at RC and Walmart</td>
</tr>
</tbody>
</table>

### Active & Micro-Mobility

Active & Micro-Mobility is a way to address several mobility needs for those who want the autonomy of personal mobility but can’t or don’t want to drive a single-occupancy vehicle. These solutions also address the expressed desire for more active mobility options, however, they may not be as suitable for Montbello’s elderly population.
Pilot options

As an emerging market, e-mobility offers a wide variety of education and job training opportunities. In addition to creating awareness and access to new e-mobility technologies, these pilots help empower communities to thrive economically. Note that job training pilots should not only teach skills but also support a path to existing employment opportunities.

<table>
<thead>
<tr>
<th>Education &amp; Job Training</th>
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<tbody>
<tr>
<td><strong>Middle/high school trade/shop classes on EVs, e-bikes, or other e-mobility technology</strong></td>
</tr>
<tr>
<td><strong>High school/college internships in the e-mobility or clean mobility space</strong></td>
</tr>
<tr>
<td><strong>After school programming on EVs, e-bikes, or other e-mobility technology</strong></td>
</tr>
<tr>
<td><strong>Educational programs for kids or families on the air benefits of e-mobility options</strong></td>
</tr>
<tr>
<td><strong>Donate used tech to school trade/shop classes to teach skills on e-mobility maintenance</strong></td>
</tr>
<tr>
<td><strong>Job training programs for jobs or skills that support e-mobility industry, such as EV maintenance</strong></td>
</tr>
<tr>
<td><strong>Donate e-bike conversion kits to schools/orgs for an educational program- students keep converted bike at the end</strong></td>
</tr>
<tr>
<td><strong>Set up booths or displays at community events that build awareness around e-mobility</strong></td>
</tr>
</tbody>
</table>
A common challenge mobility-poor areas face is difficulty accessing critical services such as healthcare, groceries, and family services. While mobility solutions often focus on bringing people to those services, there are an expanding variety of business models that instead bring services to people. These pilots are especially relevant as the coronavirus pandemic causes people to change their habits and engage in social distancing.

- **Mobile health clinic** (Health e-van)
- **Community-based EV rideshare** (e.g., Green Raiteros)
- **Mobile food distribution** e-bike with cart
- **E-bike or EV grocery delivery service**
- **Mobile food pantry e-van** that delivers donated food or community garden produce
- **Travelling hotspot/digital access centers** in e-vans
## Pilot options

Carshares provide access to electric vehicles without the upfront and operational cost of owning a vehicle while creating a community-based resource. Other e-mobility pilots, such as mobility hubs, can encourage e-mobility while augmenting existing transportation services.

**Carshare & Other**

<table>
<thead>
<tr>
<th>EV carshare from residential center to services or workplace</th>
<th>Free parking and EVSE located near bus stops</th>
</tr>
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<tbody>
<tr>
<td>EV carshare managed by a CBO or residential property company</td>
<td>Install EVSE and free parking for electric vehicles at bus stops</td>
</tr>
<tr>
<td>EV carshare connecting LR and major residential center</td>
<td>Create an active, lighted “mobility hub” in a strategic location</td>
</tr>
<tr>
<td>EV carshare rides to food distribution events</td>
<td>Make the light rail station an e-mobility hub with e-bikes and scooters</td>
</tr>
</tbody>
</table>
Pilot options

Shuttles are a promising way to augment poor or erratic public transportation networks. Their ability to transport multiple passengers while being easier and cheaper to operate than a traditional bus or train makes them good candidates to fill first-mile last mile gaps or connect more remote passengers to community hubs.

Shuttle & Shuttle Considerations

- On-demand shuttle that can transport to requested locations
- Circulator shuttle to augment current bus routes
- Circulator shuttle that connects residential centers and key services
- Nighttime on demand “safe rides” e-shuttle
- Commuter or off-hour e-shuttle for shift workers to major workplaces
- Mobile day-care or recreation shuttle that brings kids to the Rec Center for programming
- E-shuttles to digitally connected locations (e.g., library)
- E-shuttle to food distribution events
- Provide an e-shuttle to an appropriate CBO to get kids to afterschool activities

Guidehouse
### Pilot options

These pilots require expanded stakeholder engagement, greater funding, and increased capacity building beyond the scope of the current pilot. However, while they are not short-term candidates for this current effort, they serve as inspiration for future work and the value that public-CBO-private partnerships could bring to the community.

**Healthcare and Wellness**
- Partner with major hospitals to fund an e-shuttle that takes patients to appointments
- Deploy a fleet of EVs at major hospitals that can provide rideshare services to patients
- Partner with a rideshare company to provide seniors with reduced-cost rides in EVs

**Jobs and Economic Empowerment**
- Partner with DIA to provide an employees-only e-shuttle to the airport
- Bring together rideshare and EVSE companies to provide a "refueling station" for drivers in MB with free charging and other amenities
- Partner with car companies to provide EV servicing workshops to local auto shops

**Educational Opportunities**
- Partner with schools and CBOs to implement an e-bus taking kids to after-school programming
- Seek federal funding to pilot an e-shuttle to the Rocky Mountain Wildlife Refuge for educational outdoors programming

**Community Centers**
- Create an e-mobility hub integrated into the FreshLo project
- Partner with Comcast, CenturyLink, or Dish to provide electric “technology vans” that serve as mobile hotspots, provide charging, and basic tech support, located at parks, the rec center, or other community centers

**Access to Healthy Food**
- Partner with grocery chains and rideshare companies to provide free or reduced rides to their store for MB residents
- Partner with locally-owned restaurants and small businesses to stand up an electrified food delivery service that funnels profits back into the community and employs MB residents

---

**Cross-sector Partnerships**

Guidehouse
Recommendations and next steps
**Pilot considerations**

An equity-based framework to shape pilots

Based on the challenges and priorities identified in the interviews, the project team developed pilot project considerations to help ensure project opportunities align with community goals.

CASR can consider projects at two levels:

- **Must-have**: Does a pilot project meet basic community requirements?
- **Community needs and impact**: How is a pilot project positioned to address a variety of community needs?

These considerations provide a point-in-time assessment of pilot strengths and gaps and should regularly be reassessed as community partners are engaged and new partnership and resource opportunities emerge.

### Must-haves

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Component</th>
<th>Does the pilot…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Partner</td>
<td>Transportation</td>
<td>…reduce cost burdens associated with transportation?</td>
</tr>
<tr>
<td></td>
<td>Cost Burden</td>
<td></td>
</tr>
<tr>
<td>Available Funding</td>
<td>Critical Services</td>
<td>…increase access to critical services (e.g., food, parks, public health, education)?</td>
</tr>
<tr>
<td>Public Health and Safety</td>
<td>Transit Access</td>
<td>…promote or create connections to other key transit services?</td>
</tr>
<tr>
<td></td>
<td>Living Wage Jobs</td>
<td>…create quality, living wage job opportunities?</td>
</tr>
<tr>
<td></td>
<td>Workforce Development</td>
<td>…have a workforce development, vocational, or educational component?</td>
</tr>
<tr>
<td></td>
<td>Ease and Comfort of Use</td>
<td>…offer a service that people feel comfortable using? Can people who aren’t digitally savvy, lack connectivity, or are unbanked use it?</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>…provide access to people who speak languages other than English?</td>
</tr>
<tr>
<td></td>
<td>Disability Access</td>
<td>…provide benefits to those facing physical mobility barriers?</td>
</tr>
<tr>
<td>Community Trust</td>
<td>Community Priorities</td>
<td>…align with community priorities and existing community-based initiatives? Will marginalized groups and people facing transportation barriers be the primary beneficiaries of the project?</td>
</tr>
<tr>
<td></td>
<td>Accountability and Capacity Building</td>
<td>…avoid additional burdens or negative consequences? Will it engage and empower marginalized groups in a meaningful and culturally appropriate manner?</td>
</tr>
<tr>
<td>Climate and Environment</td>
<td>Air Quality and GHG Emissions</td>
<td>…improve air quality in the neighborhood or reduce/avoid GHG emissions?</td>
</tr>
<tr>
<td>Project Sustainability</td>
<td>Fiscal Sustainability</td>
<td>…fiscally sustainable? Will it require future outside funding to remain viable? Is it likely to attract additional investment?</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td>…rely on durable technology with a long lifespan?</td>
</tr>
</tbody>
</table>

**Alignment with community needs**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Components</th>
<th>Does the pilot…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Transportation</td>
<td>…reduce cost burdens associated with transportation?</td>
</tr>
<tr>
<td></td>
<td>Cost Burden</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critical Services</td>
<td>…increase access to critical services (e.g., food, parks, public health, education)?</td>
</tr>
<tr>
<td></td>
<td>Transit Access</td>
<td>…promote or create connections to other key transit services?</td>
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<tr>
<td>Economic Empowerment</td>
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<tr>
<td></td>
<td>Workforce Development</td>
<td>…have a workforce development, vocational, or educational component?</td>
</tr>
<tr>
<td>Inclusion</td>
<td>Ease and Comfort of Use</td>
<td>…offer a service that people feel comfortable using? Can people who aren’t digitally savvy, lack connectivity, or are unbanked use it?</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>…provide access to people who speak languages other than English?</td>
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<td>…align with community priorities and existing community-based initiatives? Will marginalized groups and people facing transportation barriers be the primary beneficiaries of the project?</td>
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<td>Accountability and Capacity Building</td>
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<td>…fiscally sustainable? Will it require future outside funding to remain viable? Is it likely to attract additional investment?</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td>…rely on durable technology with a long lifespan?</td>
</tr>
</tbody>
</table>
Pilot prioritization
How to use the pilot considerations to prioritize opportunities

1. Place pilots that don’t currently meet the must-have criteria in a “parking lot” and revisit

2. Use pilot criteria framework to evaluate the remaining pilots to identify best-aligned opportunities

All options
Start with the universe of options to address the issues raised by the community to develop a long-list of potential solutions

Actionable opportunities
These are the actionable opportunities meriting further exploration

Priority opportunities
Continue to assess the high-priority pilot opportunities in partnership with community stakeholders to ensure they address community priorities
## Pilot prioritization
### Example: Assessing alignment with “must-have” criteria

| Must-haves |
|-----------------|-----------------|
| **Criteria** | **Meets criteria?** | **Considerations** | **Meets criteria?** | **Considerations** |
| Potential Partner | No | Have not yet developed relationships with local schools to discuss the possibility of an e-mobility focused trade shop curriculum. Could potentially partner with a group like Environmental Learning for Kids (ELK) to develop a concept. | Yes | Several community groups in Montbello have expressed interest in a bike library or bikes for their constituents. Groups like ELK also have experience loaning out equipment to members. |
| Available Funding | Yes | CASR has funding available to cover some upfront costs, including purchasing of e-mobility technologies. | Yes | CASR has funding available to cover some upfront costs, including the purchasing of low-cost e-bikes and equipment. |
| Public Health and Safety | No | Trade/shop classes would likely take place indoors, which would currently be considered a high-risk activity due to COVID-19. | Yes | The use of e-bikes and e-scooters would be largely outdoors, making this a low-risk activity during the COVID-19 pandemic. Training component could address concerns about user safety. |
| Affordability | Yes | Courses would be provided through local schools at no cost to students. | Yes | E-bikes could be loaned out by the CBO to members at no cost. |

Middle/high school trade/shop classes on EVs, e-bikes, or other e-mobility technology

Fleet of e-bikes or e-scooters owned by a CBO that are loaned out to members
**Pilot #1: E-bike fleet for Montbello CBO**

CASR will partner with a community-based organization (CBO) to increase the adoption of e-bikes among young residents and teach safe cycling habits.

**Pilot Summary**

**Description**

The community, particularly younger residents, expressed interest in biking as an alternative mode of transportation and particularly liked it as a fun and active way to get around. However, more support is needed to bring e-bikes to the community and grow the presence of active mobility in Montbello.

**Key Components**

- E-bike fleet managed by CBO for educational workshops and group rides
- Bicycling safety education, route guidance, and training courses
- E-bike maintenance and support

**Pilot Variations**

- E-bike library that allows members to borrow e-bikes for personal use
- Workforce development and training opportunities in e-mobility or e-bikes
- Focused program to increase the safety of bicycling infrastructure in Montbello along key routes

**Target Groups**

- Low-income middle and high school students and their families
- Young adult Montbello residents interested in active mobility

**Pilot Outcomes**

- Increase access to e-bikes for active, independent mobility
- Develop familiarity and comfort with active and e-micromobility technology
- Provide training and career development opportunities for young Montbello residents

**Partnerships**

**Community Partners**

- Environmental Learning for Kids (ELK)*, Montbello Organizing Committee (MOOC)*, Club de Bicicletas Accidental*

**Strategic Partners**

- Montbello Recreation Center, Montbello schools, Denver bike shops, e-bike companies, RTD, DOTI*, Safe Rides CALC*, Bicycle Colorado

**Potential Barriers**

- The current lack of biking infrastructure and safety concerns may inhibit e-bike uptake
- Storage and charging present additional space and cost constraints

**Next Steps**

**Project Launch**

- Refine goals with CBO around access to an e-bike fleet
- Re-engage Bicycle Colorado to draw on e-bike experience and training
- Enlist e-bike manufacturers and retailers for sourcing
- Identify funding opportunities focused on active or e-mobility
- Gather resources to support training and curriculum
- Engage with members of the Far Northeast Area Plan committee to understand infrastructure planning

"We saw much bigger turnout than expected for our community bike ride. Entire families came out to enjoy the experience. It was a huge success."

- Bike ride event coordinator

*organization previously contacted during exploratory or community interviews
## Pilot #1: E-bike fleet for Montbello CBO

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Components</th>
<th>Alignment</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
<td>Transportation Cost Burden</td>
<td></td>
<td>An e-bike library could provide many community members with a no-cost alternative to other modes of transportation, reducing the overall cost burden of transportation facing individuals.</td>
</tr>
<tr>
<td></td>
<td>Critical Services</td>
<td></td>
<td>Depends on design of the program. A well-coordinated e-bike sharing program could increase access to local services in Montbello, including schools, grocery stores, community centers, and other key locations. Would require training and awareness components, as well as partnerships with local institutions.</td>
</tr>
<tr>
<td></td>
<td>Transit Access</td>
<td></td>
<td>Depends on design of the program. A well-coordinated e-bike sharing program could include training and awareness components, along with collaboration with RTD and CASR, to increase connectivity to transit stops and make stops e-bike friendly.</td>
</tr>
<tr>
<td><strong>Economic Empowerment</strong></td>
<td>Living Wage Jobs</td>
<td></td>
<td>Depends on design of the program. Management and maintenance of e-bike fleet could employ local community members.</td>
</tr>
<tr>
<td></td>
<td>Workforce Development</td>
<td></td>
<td>Depends on design of the program. An e-mobility training or educational curriculum could be developed in concert with the e-bike fleet, leading to skills development and other learning opportunities.</td>
</tr>
<tr>
<td><strong>Inclusion</strong></td>
<td>Ease and Comfort of Use</td>
<td></td>
<td>Training and educational materials could help address the “learning curve” associated with e-bike use. Use of e-bikes would not require a driver’s license or payment.</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>!</td>
<td>Training and instructional materials should come in multiple languages to maximize access.</td>
</tr>
<tr>
<td></td>
<td>Disability Access</td>
<td>!</td>
<td>Community members facing physical mobility barriers would likely not be able to use e-bikes, but there are other ways they could potentially be included in an e-bike sharing program (e.g., trade skills, maintenance, management). Could also investigate e-bike options for people facing physical mobility barriers.</td>
</tr>
<tr>
<td><strong>Community Trust</strong></td>
<td>Community Priorities</td>
<td>!</td>
<td>Some community leaders and CBOs expressed an interest in increasing active transportation in Montbello, but several safety and comfort concerns were raised. A robust e-bike safety campaign could help address these concerns and increase buy-in.</td>
</tr>
<tr>
<td></td>
<td>Accountability and Capacity Building</td>
<td>!</td>
<td>Mechanisms need to be put in place to ensure e-bikes are not seen as a nuisance. CBO ownership of e-bike fleet and partnerships with local Montbello groups will ensure a level of community oversight and evaluation of program.</td>
</tr>
<tr>
<td><strong>Climate and Environment</strong></td>
<td>Air Quality and GHG Emissions</td>
<td>!</td>
<td>High adoption and use of the e-bike fleet among members of the CBO could lead to avoided vehicle miles traveled and an associated reduction in GHG emissions.</td>
</tr>
<tr>
<td><strong>Project Sustainability</strong></td>
<td>Fiscal Sustainability</td>
<td>!</td>
<td>Ongoing costs are likely to be low / manageable. Costs associated with charging, maintenance, and eventual replacement of e-bikes could be addressed through multiple funding mechanisms (e.g., grants, additional City funding, fundraising activities, donations).</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td></td>
<td>Depends on the quality of the e-bikes procured by the City / CBO. Requires further exploration.</td>
</tr>
</tbody>
</table>

* = Strong initial alignment  
△ = Potential issues to address
## Pilot #2: Food access support through e-mobility

Utilize e-mobility to bring affordable, healthy food to Montbello residents.

### Pilot Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Lack of access to affordable, healthy food is one of the most critical concerns expressed by Montbello community members. In response, many groups in Montbello are currently addressing food insecurity through food pantries and community gardens. A grocery delivery service will augment these efforts while ensuring residents who cannot get to the grocery store or food pantry events have access to the food they need.</th>
</tr>
</thead>
</table>
| Key Components | • E-mobility technologies (such as e-vans, EVs, e-bikes) that allow a CBO to directly deliver free or affordable food to Montbello residents  
  • Employ local resident(s) as delivery drivers |
| Pilot Variations | • Partner with one of Montbello’s community garden efforts to distribute produce with an e-van or other e-mobility technology  
  • Expand subsidized EV grocery and meal delivery services like Bondadosa |
| Target Groups | • Food insecure residents in Montbello  
  • Montbello residents without easy access to grocery stores or healthy food options |
| Pilot Outcomes | • Increase access to affordable, healthy food options  
  • Greater capacity and reach for CBOs already tackling food insecurity in Montbello  
  • Green, local employment opportunities |

### Partnerships

<table>
<thead>
<tr>
<th>Community Partners</th>
<th>Montbello Organizing Committee* (MOC), Struggle of Love*, Montbello 20/20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Partners</td>
<td>Bondadosa, Northeast Transportation Connections (NETC)*, local food pantries, Denver grocery stores and restaurants, existing food delivery services, Denver Metro Emergency Food Network</td>
</tr>
</tbody>
</table>

### Potential Barriers

| Due Diligence | • Capacity of a CBO to develop, manage, and run a food delivery service may be limited  
  • Cost of providing a fair wage to delivery driver(s) may require additional outside funding support |

### Next Steps

| Project Launch | • Connect with Bondadosa and the Denver Metro Emergency Food Network better understand what, if any, work they are doing in the Montbello area  
  • Reengage with CBOs currently managing food pantry efforts, including MOC, Montbello 20/20, and Struggle of Love, to gauge interest in a food delivery pilot  
  • Compile lessons learned from organizations with experience running similar delivery-based programs, including NETC, Bondadosa, and the Denver Metro Emergency Food Network |

*organization previously contacted during exploratory or community interviews

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“Food access is always the biggest issue perceived by the community.”

- Community member
## Pilot #2: Food access support through e-mobility

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Components</th>
<th>Alignment</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
<td>Transportation Cost Burden</td>
<td></td>
<td>A no-cost food delivery service powered by e-mobility could reduce the number of trips needed to access food, reducing the overall cost burden of transportation facing individuals.</td>
</tr>
<tr>
<td></td>
<td>Critical Services</td>
<td></td>
<td>A food delivery program run in partnership with local CBOs and food banks will help address food insecurity in the neighborhood.</td>
</tr>
<tr>
<td></td>
<td>Transit Access</td>
<td></td>
<td>Likely not a primary benefit of this program. Requires further exploration.</td>
</tr>
<tr>
<td><strong>Economic Empowerment</strong></td>
<td>Living Wage Jobs</td>
<td></td>
<td>Depends on design of the program. Local community members could be employed to delivery food to individuals and families in need.</td>
</tr>
<tr>
<td></td>
<td>Workforce Development</td>
<td></td>
<td>Depends on design of the program. A complementary workforce development or educational program could be developed around food access and e-mobility.</td>
</tr>
<tr>
<td><strong>Inclusion</strong></td>
<td>Ease and Comfort of Use</td>
<td></td>
<td>Outreach will need to include both internet- and non-internet-based components to maximize reach of program.</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>😡</td>
<td>Promotional and outreach materials come in multiple languages. Ideally the vehicle driver could also communicate with constituents who speak languages other than English (or interpretation services could also be provided).</td>
</tr>
<tr>
<td></td>
<td>Disability Access</td>
<td></td>
<td>Community members facing physical mobility barriers would likely benefit from a food delivery service that would reduce existing barriers to accessing food.</td>
</tr>
<tr>
<td><strong>Community Trust</strong></td>
<td>Community Priorities</td>
<td></td>
<td>Multiple CBOs are currently operating food banks in the community, and due to the financial impacts of COVID-19 in the community, food access remains a critical priority for community members.</td>
</tr>
<tr>
<td></td>
<td>Accountability and Capacity Building</td>
<td></td>
<td>CBO management of e-mobility delivery and partnerships with local Montbello groups will ensure a level of community oversight and evaluation of program.</td>
</tr>
<tr>
<td><strong>Climate and Environment</strong></td>
<td>Air Quality and GHG Emissions</td>
<td></td>
<td>Food delivery facilitated by e-mobility could lead to avoided vehicle miles travelled and an associated reduction in GHG emissions.</td>
</tr>
<tr>
<td><strong>Project Sustainability</strong></td>
<td>Fiscal Sustainability</td>
<td>😡</td>
<td>Ongoing costs will likely require additional funding support. Costs associated with e-mobility charging and maintenance could be addressed through multiple funding mechanisms. Staff resources required for delivery could be significant. Requires further exploration</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td></td>
<td>Depends on the quality of the e-mobility technology procured by the City / CBO. Requires further exploration.</td>
</tr>
</tbody>
</table>

= Strong initial alignment

= Potential issues to address
**Pilot #3: Supply an e-van to a CBO**

Partner with a CBO to expand transportation capacity and connect their constituents to critical services through the use of an e-van

### Pilot Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Community leaders and CBOs cited limited transportation options as a critical barrier to accessing needed neighborhood services, including services offered by CBOs. More support is needed to increase the transportation capacity of CBOs providing essential services to neighborhood residents.</th>
</tr>
</thead>
</table>
| Key Components | • CASR partners with a CBO to procure an electric van or shuttle that can be used to provide transportation to CBO constituents  
• CASR provides technical assistance around e-mobility infrastructure and maintenance  
• Creation of a workforce development program centered around e-mobility infrastructure and maintenance  
• Expansion of e-mobility partnership to include multiple CBOs  
• Hire local community members as drivers  
• Montbello residents with limited transportation options who rely on CBO services (e.g., Montbello youth, elderly residents, people without a driver's license or a personal vehicle)  
• Increase access to CBO services and activities through CBO-managed no-cost transportation  
• Increase access to the benefits of e-mobility in Montbello while developing familiarity and comfort with the technology |

### Partnerships

**Community Partners**
- Environmental Learning for Kids (ELK)*, Montbello Organizing Committee (MOC)*, Montbello 20/20*, Conectoras de Montbello*

**Strategic Partners**
- Montbello Recreation Center, Montbello schools, RTD, DOTI*, Colorado Dept. of Transportation, Colorado Energy Office

### Potential Barriers

**Due Diligence**
- E-van charging and maintenance will require technical support  
- CBO staff resources or hiring community members (at livable wage) to drive vehicle may be limited and may require additional support

### Next Steps

**Project Launch**
- Re-engage CBOs currently providing transportation services to community members to gauge interest in pilot concept  
- Identify potential e-van manufacturers and explore procurement options  
- Identify additional funding sources to support EV infrastructure installation and expansion of staff capacity

*"We are currently at capacity [in terms of transportation], so anything that could help us get students to programming would be helpful."*  
- Environmental Learning for Kids
## Pilot #3: Supply an e-van to a CBO

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Components</th>
<th>Alignment</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
<td>Transportation Cost Burden</td>
<td></td>
<td>An e-van could provide many community members with a no-cost alternative to accessing CBO services, reducing the overall cost burden of transportation facing individuals.</td>
</tr>
<tr>
<td></td>
<td>Critical Services</td>
<td>✓</td>
<td>A CBO-based e-van program will help community members access CBO services and could also be used to provide transit to other critical neighborhood services.</td>
</tr>
<tr>
<td></td>
<td>Transit Access</td>
<td></td>
<td>Depends on design of the program. CBO collaboration with RTD and CCD could help increase connectivity to transit stops.</td>
</tr>
<tr>
<td><strong>Economic Empowerment</strong></td>
<td>Living Wage Jobs</td>
<td></td>
<td>Depends on design of the program. Potential jobs associated with e-van maintenance and driving. Requires further exploration.</td>
</tr>
<tr>
<td></td>
<td>Workforce Development</td>
<td></td>
<td>Depends on design of the program. An e-mobility training or educational curriculum could be developed as a complement to the e-van, leading to skills development and other learning opportunities.</td>
</tr>
<tr>
<td><strong>Inclusion</strong></td>
<td>Ease and Comfort of Use</td>
<td>❗</td>
<td>Outreach will need to include both internet- and non-internet-based components to maximize reach of program.</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>❗</td>
<td>Promotional and outreach materials should be provided in multiple languages to maximize access to program. Ideally the driver of the vehicle would also be able to communicate with constituents who speak languages other than English (or interpretation services could also be provided).</td>
</tr>
<tr>
<td></td>
<td>Disability Access</td>
<td>❗</td>
<td>Community members facing physical mobility barriers would likely benefit from transportation provided by CBOs, but special equipment or modifications may be needed to make e-van accessible (e.g., wheelchair lift).</td>
</tr>
<tr>
<td><strong>Community Trust</strong></td>
<td>Community Priorities</td>
<td>✓</td>
<td>Multiple CBOs have expressed need for additional transportation options for their constituents. An e-van could provide a CBO with a low-cost option to increase transportation capacity.</td>
</tr>
<tr>
<td></td>
<td>Accountability and Capacity Building</td>
<td>✓</td>
<td>CBO ownership of e-van and partnerships with local Montbello groups will ensure a level of community oversight and evaluation of program.</td>
</tr>
<tr>
<td><strong>Climate and Environment</strong></td>
<td>Air Quality and GHG Emissions</td>
<td>✓</td>
<td>E-mobility transportation could lead to avoided vehicle miles travelled and an associated reduction in GHG emissions.</td>
</tr>
<tr>
<td><strong>Project Sustainability</strong></td>
<td>Fiscal Sustainability</td>
<td>❗</td>
<td>Ongoing costs will likely require additional funding support. Costs associated with e-mobility charging and maintenance could be addressed through multiple funding mechanisms. Staff resources required for driving could be significant. Requires further exploration.</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td></td>
<td>Depends on the quality of the e-van procured by the City / CBO. Requires further exploration.</td>
</tr>
</tbody>
</table>

![Guidehouse](image)

- = Strong initial alignment

= Potential issues to address
**Pilot #4: EV rideshare service for CBO**

Engage a rideshare company to provide elderly Montbello residents affordable and clean transportation to critical services

**Pilot Summary**

**Description**

Mobility issues are particularly pronounced for elderly Montbello residents. These residents must often travel long distances to get to doctor’s appointments or access other services but cannot rely on the current transportation system due to physical mobility, language, or cost barriers. When possible, several CBOs provide rides to the elderly, but they are over capacity and often rely on rideshare companies to provide mobility services to their members.

**Key Components**

- Develop a cross-sector partnership between a rideshare company and a Montbello CBO to provide no-cost green rides to CBO constituents
- Engage local service providers, such as hospitals or grocery stores, to provide further subsidized or free rides to their locations
- Service providers use a privately-owned fleet of EVs or e-vans to provide free or subsidized rides
- Elderly Montbello residents who can’t or do not want to drive and face multiple barriers to access transportation options (e.g., physical mobility, language, cost barriers)
- Increase ease of access to critical services such as healthcare or food
- Greater mobility for the elderly in Montbello who do not own or cannot drive a personal vehicle

**Target Groups**

Elderly Montbello residents who can’t or do not want to drive and face multiple barriers to access transportation options (e.g., physical mobility, language, cost barriers)

**Pilot Outcomes**

- Greater mobility for the elderly in Montbello who do not own or cannot drive a personal vehicle
- Increase ease of access to critical services such as healthcare or food

**Partnerships**

**Community Partners**

- Conectoras de Montbello*, MOC*, Montbello 20/20, Montbello Walks*, Montbello assisted living facilities

**Strategic Partners**

- Lyft, Uber, local hospitals or large hospitals serving Montbello, Denver grocery stores, other large Denver service providers

**Potential Barriers**

- Lydshare companies utilize phone apps and credit cards, causing difficulty for elderly or non-English speaking users
- Greater empathy and patience is needed when providing services to elderly populations to build trust and comfort

**Next Steps**

- Connect with Lyft and Uber to gauge appetite for a subsidized green rides pilot program in Montbello
- Re-engage with CBO’s currently running food pantry efforts, including MOC and Struggle of Love, to gauge interest in a food delivery pilot
- Compile lessons learned from organizations with experience running similar delivery-based programs

*organization previously contacted during exploratory or community interviews

"The City needs to be more accessible and focus on elderly folks' needs in the community.”
- Conectoras de Montbello
## Pilot #4: EV rideshare service for CBO

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Components</th>
<th>Alignment</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
<td>Transportation Cost Burden</td>
<td></td>
<td>An EV rideshare service could provide many community members with a low- to no-cost alternative to accessing critical community services, reducing the overall cost burden of transportation facing individuals.</td>
</tr>
<tr>
<td></td>
<td>Critical Services</td>
<td></td>
<td>An EV rideshare service will help community members access critical neighborhood services, including healthcare, grocery stores, pharmacies, and others.</td>
</tr>
<tr>
<td></td>
<td>Transit Access</td>
<td></td>
<td>Depends on design of the program. CBO collaboration with RTD and CCD could help increase connectivity to transit stops.</td>
</tr>
<tr>
<td><strong>Economic Empowerment</strong></td>
<td>Living Wage Jobs</td>
<td></td>
<td>Depends on design of the program. Potential to create rideshare jobs that employ local community members as drivers.</td>
</tr>
<tr>
<td></td>
<td>Workforce Development</td>
<td></td>
<td>Depends on design of the program. An e-mobility training or educational curriculum could be developed as a complement to the rideshare service, leading to skills development and other learning opportunities.</td>
</tr>
<tr>
<td><strong>Inclusion</strong></td>
<td>Ease and Comfort of Use</td>
<td>⚠️</td>
<td>Community members may not feel comfortable sharing personal information or using digital forms of payment. High-quality customer service will also be key as some community members may be wary of rideshare services (e.g., elderly community members). Digital ride-hailing may also prove to be an issue.</td>
</tr>
<tr>
<td></td>
<td>Language Access</td>
<td>⚠️</td>
<td>Promotional and outreach materials should be provided in multiple languages to maximize access to program. Ideally the driver of the vehicle would also be able to communicate with constituents who speak languages other than English (or interpretation services could also be provided).</td>
</tr>
<tr>
<td></td>
<td>Disability Access</td>
<td>⚠️</td>
<td>Community members facing physical mobility barriers would likely benefit from transportation provided by CBOs, but special vehicles may be needed to make EV rideshare service accessible.</td>
</tr>
<tr>
<td><strong>Community Trust</strong></td>
<td>Community Priorities</td>
<td></td>
<td>Multiple CBOs have expressed need for additional transportation options for their constituents. An EV rideshare service could provide a low-cost, point-to-point mobility option for community members lacking access to reliable and affordable transportation.</td>
</tr>
<tr>
<td></td>
<td>Accountability and Capacity Building</td>
<td></td>
<td>An EV ridesharing service will likely require partnerships with parties external to the Montbello community. Mechanisms must be put in place to ensure proper community oversight and evaluation. A community-based ridesharing service could also serve as an alternative to a partnership with Lyft or Uber but would require additional resources and planning to launch.</td>
</tr>
<tr>
<td><strong>Climate and Environment</strong></td>
<td>Air Quality and GHG Emissions</td>
<td></td>
<td>E-mobility transportation could lead to avoided vehicle miles travelled and an associated reduction in GHG emissions.</td>
</tr>
<tr>
<td><strong>Project Sustainability</strong></td>
<td>Fiscal Sustainability</td>
<td>⚠️</td>
<td>Securing electric vehicles for the rideshare program will likely require additional outside funding support. Costs associated with e-mobility charging and maintenance could be addressed through multiple funding mechanisms. CBO staff resources to manage program delivery could be significant.</td>
</tr>
<tr>
<td></td>
<td>Durability</td>
<td></td>
<td>EVs are likely to be a low maintenance option but durability will still depend on quality of EVs used for rideshare program.</td>
</tr>
</tbody>
</table>

* = Strong initial alignment  
⚠️ = Potential issues to address
Key milestones over the next year and onwards
Building partnerships, achieving “quick wins,” and working towards broader community engagement and buy-in

**Key Takeaways**
- CASR should engage the Montbello community as a true partner throughout the pilot design and implementation process
- Need for short-term investment to show commitment and get a “quick win”
- Work towards longer-term commitments with larger impact

**Startup & Launch**
- **Re-engage** potential CBO partners, CCD stakeholders (including the Office of Social Equity and Innovation), and external advisors
- **Develop** internal pilot requirements and goals
- **Release** RFQ and/or MOU

**Pilot Delivery**
- **Deploy** e-mobility technology
- **Collect and manage** data and feedback supporting KPIs
- Continuously **monitor** pilot to improve processes and increase impact

**Pilot Design**
- **Co-create** pilot design with CBO partner and advisors
- **Develop** shared timeline, pilot goals and KPIs with community stakeholders to evaluate impact on community needs
- **Develop and implement** community-based outreach and communication strategies

**Pilot Evaluation**
- **Deliver** program report evaluating first six months of pilot metrics and feedback
- **Engage** additional partners, advisors, and funding sources to **scale or reproduce** successful elements of the pilot

Source: Guidehouse
*A detailed roadmap is included on the following slides*
# Example Program Implementation Schedule

The following is an example of a year-long pilot implementation plan and key milestones

<table>
<thead>
<tr>
<th>Program Implementation Schedule</th>
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</thead>
<tbody>
<tr>
<td><strong>Start</strong></td>
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<tr>
<td><strong>1 PROGRAM IMPLEMENTATION</strong></td>
</tr>
<tr>
<td>• Startup &amp; Launch</td>
</tr>
<tr>
<td>• Internal Program Requirements</td>
</tr>
<tr>
<td>• Stakeholders Re-engagement</td>
</tr>
<tr>
<td>• RFQ/MOU release</td>
</tr>
<tr>
<td><strong>2 PILOT DESIGN</strong></td>
</tr>
<tr>
<td>• Program Design</td>
</tr>
<tr>
<td>• Goals and KPIs</td>
</tr>
<tr>
<td>• Communication and Outreach</td>
</tr>
<tr>
<td>• Customer Engagement</td>
</tr>
<tr>
<td><strong>3 PILOT DELIVERY</strong></td>
</tr>
<tr>
<td>• E-mobility Technology Launch</td>
</tr>
<tr>
<td>• Data Collection</td>
</tr>
<tr>
<td>• Pilot Monitoring and Improvement</td>
</tr>
<tr>
<td><strong>4 PROGRAM EVALUATION</strong></td>
</tr>
<tr>
<td>• Evaluation Plan</td>
</tr>
<tr>
<td>• Program Reporting</td>
</tr>
<tr>
<td>• Program Delivery Feedback</td>
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<tr>
<td>• Continuous Improvement</td>
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</tbody>
</table>
Appendix
Introducing Equity concepts

What does equity look like in practice?

There are three types of equity that must be considered throughout the Plan development.

- **Procedural Equity**: Ensuring that processes are fair and inclusive in the development and implementation of any program or policy.

- **Distributional Equity**: Ensuring that resources or benefits and burdens of a policy or program are distributed fairly, prioritizing those with highest need first.

- **Structural (Intergenerational) Equity**: A commitment and action to correct past harms and prevent future negative consequences by institutionalizing accountability and decision-making structures that aim to sustain positive outcomes.

How can EVs impact equity outcomes?

- **Inclusivity**: Incorporate marginalized groups’ voices and priorities into the planning process.

- **Affordability**: Avoid potential negative impacts of EV deployment (e.g., gentrification near new charging sites).

- **Accessibility**: Reduce or eliminate barriers to EV access for low-income groups (e.g., free charging at workplaces).

- **Health & Wellbeing**: Target communities experiencing health inequities to receive the health benefits of EV adoption (e.g., better air quality).

- **Education**: Engage marginalized groups around EV technology and its benefits (e.g. EVs as a resource in STEM education in underserved schools).

- **Green Jobs**: Ensure low-income groups and communities of color benefit from EV-related jobs and workforce development.
Overview of Equity Resources

Equity & Mobility Landscape in Denver

- Denver Neighborhood Equity Index
- Community Health Equity Map
- H + T Affordability Index
- Extreme Heat Vulnerability Index
- Community Health Assessment (CHA)
- Community Health Improvement Plan (CHIP)
- ESRI Food Desert Mapper
- Historical Redlining Grades
- Denver Mobility Action Plan

Peer City Review

- Portland (e.g. Smart Transport CBNA)
- Los Angeles (e.g., BlueLA)
- Seattle (e.g., Racial Equity Toolkit)
- Austin (e.g., EVs in Schools, Community Climate Ambassadors)
- Urban Sustainability Directors Network (USDN)
- Global Resilient Cities Network (formerly 100 Resilient Cities)

Best Practices

- Greenlining Institute
- Acterra
- TransForm
- Rocky Mountain Institute
- EVNoire
- Community Toolbox
- Shared-Use Mobility Center
- Forth
Greenlining Institute
Making Equity Real in Mobility Pilot Projects Toolkit

Description

The Electric Vehicles for All online toolkit provides various case studies and examples of policies and programs that have been successful in various communities, with the goal of serving as a guide for policymakers, advocates, and other leaders looking to design equitable EV policies.

The toolkit outlines four steps for implementing an equitable e-mobility pilot project:

1. Emphasize equity goals just as much as goals to increase mobility
2. Center pilot development and selection around community engagement, input, and decision-making
3. Ensure implementation addresses one of more identified needs in the community without imposing undue burden.
4. Involve the community in continuous pilot evaluation and improvement

Learnings for Denver

- **Incorporate equity everywhere:** The Overview provides clear guidance for incorporating equity into all stages of the pilot process.

- **Consider prioritizing pilots based on equity:** The Equity Considerations for Mobility Pilot Projects poses questions that could easily be incorporated into an equity-based Pilot Prioritization framework.

- **Engage the community every step of the way:** The Community Engagement Best Practices recommends specific activities appropriate for engagement during each step of the pilot process, though these may need to be updated to incorporate Covid-related considerations.

## Forth Mobility

**Equity in Practice: Developing a City Transportation Electrification Roadmap**

### Description

This report is designed to encourage and enable cities to keep equity front and center as they develop transportation electrification plans. It combines best practices with case studies from people and organizations that are deeply involved in the equitable transportation space. The topics addressed in this report are:

- Roadmap development
- Transportation needs assessments
- Stakeholder engagement
- Hosting community stakeholders
- Key takeaways

### Learnings for Denver

- **Consider equity in strategy and pilots:** Denver can find strategies for incorporating equity into higher-level strategy documents, not just pilot projects.

- **Show equitable mobility in action:** In-depth pilot projects provide examples of equitable mobility practices in action and can be a model for Denver’s equitable mobility work.

## Urban Sustainability Director’s Network (USDN)

### Shared-Use Mobility Toolkit for Cities

<table>
<thead>
<tr>
<th>Description</th>
<th>Learnings for Denver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared mobility is becoming an increasingly popular option for filling transportation gaps. They provide added benefits of reduced congestion, improving first/last mile travel, reducing transportation costs and creating more sustainable transportation systems.</td>
<td>• <strong>Leverage a suite of e-mobility strategies:</strong> Denver will need to implement a suite of strategies to achieve maximum GHG reductions: bikeshare, carshare, transit, carpooling, and vanpooling all greatly increase the impact of vehicle electrification</td>
</tr>
<tr>
<td>This toolkit, the result of a collaboration between the Urban Sustainability Directors Network and the Shared-Use Mobility Center, is broken into four sections to guide cities through shared mobility solutions adoption. It includes an interactive mapping tool, an integrated opportunity analysis, a shared mobility database, and an interactive benefits calculator.</td>
<td>• <strong>Consider transit to maximize GHG benefits:</strong> Vanpooling and carpooling produce approximately the same amount of GHG reduction benefit, whereas an increase in transit produces almost 2x as much GHG reduction benefit for the same number of riders.</td>
</tr>
<tr>
<td>The four parts of the toolkit can be used independently or together to create effective shared mobility goals, policies, and roadmaps for cities looking to diversify its mobility options.</td>
<td>Source: <a href="https://www.usdn.org/products-transportation.html">https://www.usdn.org/products-transportation.html</a></td>
</tr>
<tr>
<td>The Mapping tool can be found <a href="#">here</a> and the Shared Mobility Benefits Calculator for Denver can be found <a href="#">here</a>.</td>
<td></td>
</tr>
</tbody>
</table>
Smart Columbus
Smart Mobility Hubs

Description

Smart Columbus, a smart mobility initiative, is the result of the US Department of Transportations’ Smart City Challenge. The project’s mission is to “accelerate human progress through open mobility” and provide a model for other cities.

The Denver team conducted an informational interview with several individuals from Smart Columbus focused on their Smart Mobility Hubs. This aspect of the project brings physical mobility assets to centralized locations in identified “Opportunity Zones” in the region.

The team discussed outreach and engagement tactics, partnerships the team found successful, the implementation process, and evaluation strategies the Smart Columbus team employs to measure project success.

Smart Columbus’s entire process is well-documented online and can provide guidance and structure for the Denver team.

Learnings for Denver

- **Establish community member liaisons**: Hiring community members as direct liaisons proved highly successful and allowed the team to communicate directly with the community as well as stay informed on community events and needs.

- **Create local job opportunities**: Community members were also hired as shuttle drivers. In addition to supplying local job opportunities this built trust in the community and fostered community ownership of the program.

Source: https://smart.columbus.gov/
## Los Angeles

### BlueLA: Low-cost EV carsharing and transit integration

<table>
<thead>
<tr>
<th>City Information</th>
<th>Description</th>
<th>Learnings for Denver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>Begun in 2015 as a pilot project, BlueLA brings EV carsharing to low-income communities in LA. The carsharing company, a subsidiary of the Bollore Group, partnered with the LA Department of Transportation and created a system of 100 EVs and 200 chargers in LA.</td>
<td>• Collaboration with a known community ally builds trust and builds membership</td>
</tr>
<tr>
<td>Population: 4 million</td>
<td>It is a subscription-based service that gives 24/7 access to self-service stations. Participants sign up online, in the app, or with a BlueLA ambassador, who is hired from within the community. Proof of income eligibility must be shown to receive a discounted Community Membership. As of 2019, these members made up 60% of rides.¹</td>
<td>• Widespread community outreach (200 community forums and events in the case of BlueLA²) is the backbone of equitable development and implementation</td>
</tr>
<tr>
<td>EV Goal: 100% zero emissions vehicles by 2050</td>
<td>The program continues to operate in multiple LA communities and is supported by a variety of stakeholders, including the Mayor’s Office of Sustainability, the Shared Use Mobility Center, and a CBO committee.</td>
<td>• Appropriate city agencies and outside stakeholders must be engaged early and often to create a smooth implementation process</td>
</tr>
<tr>
<td>Funding: California Climate Investments grant</td>
<td></td>
<td>• Seek to hire staff or employees for the program from the local communities to increase co-benefits and leverage word of mouth outreach</td>
</tr>
<tr>
<td>Impact (Phase 1)³:</td>
<td>• 68 EVs with 110 charge points</td>
<td>• Conduct continual impact assessment for the duration of the program in the form of member surveys, key performance indicator data collection, or other feedback strategies.</td>
</tr>
<tr>
<td>• 1,367 members</td>
<td>• 8,253 total trips</td>
<td></td>
</tr>
</tbody>
</table>

¹. https://www.eenews.net/stories/1061603873
². https://cdn.locomotive.works/sites/5ab410c8a2f42204838f797e/content_entry5c40b2a4a9fa4001celfd597/5c4200e497ed1c0017771a5b/files/LA.pdf?1547830038
# Portland

## Cully Car Sharing Pilot

<table>
<thead>
<tr>
<th>City Information</th>
<th>Description</th>
<th>Learnings for Denver</th>
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</thead>
<tbody>
<tr>
<td>Portland, OR</td>
<td>The genesis of a year-long and 1,000+ hour community engagement effort, Forth worked with affordable housing nonprofit CDC Hacienda to support three Honda Fit EVs and three level 2 charging stations installed in the Cully neighborhood. The program incorporated consumer education via community meetings to teach people about carshare and driving and charging EVs.</td>
<td>• Leverage existing groups, services, or trusted community members and integrate EVs into their initiatives</td>
</tr>
<tr>
<td>Population: 653,000</td>
<td>Neighborhood residents work with CDC Hacienda to set up a Turo account that allows them to request the car through the Turo app. They then meet a CDC employee at the car, provide their driver’s license, and are given the keys and a Blink charging card. Daily rentals were subsidized and cost $10.</td>
<td>• Community input should guide the design and implementation of the pilot</td>
</tr>
<tr>
<td>EV Goal: 10k EVs in Multnomah County by end of 2020</td>
<td>Insurance and maintenance was provided by the project implementor, Forth. Vehicles were donated by Honda and Blink provided the charging stations at discount. The pilot cost $165k in its first year and was funded through private grants. In 2017 Honda agreed to continue to loan two of the three cars to the program, now run entirely by CDC Hacienda.</td>
<td>• Solutions should seek to reduce families’ annual transportation costs</td>
</tr>
<tr>
<td>Funding: Private grants</td>
<td></td>
<td>• All education, outreach, and pilot promotion should put accessibility at its forefront (e.g., translations, multiple communication channels)</td>
</tr>
</tbody>
</table>

**Impact:**
- 217 total days of car use
- 66 community rentals
- $1,252 in earnings for Hacienda CDC

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Sacramento
Our Community Carshare: Free carshare for low-income housing residents

<table>
<thead>
<tr>
<th>City Information</th>
<th>Description</th>
<th>Learnings for Denver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento, CA</td>
<td>Launched in 2017, Our Community Carshare is a pilot program resulting from a partnership between the Sacramento Metropolitan Air Quality Management District, ZipCar, and several CBOs, including the Sacramento Housing Redevelopment Authority and Mutual Housing.</td>
<td>• Engaged on-the-ground staff can help overcome certain challenges such as technology barriers (e.g., not having an email address or familiarity with smartphones), physical disabilities, or a lack of program understanding</td>
</tr>
<tr>
<td>Population:</td>
<td>The pilot consisted of carsharing sites in three affordable housing buildings, including one senior housing site. The program gave residents access at no cost for up to three hours per day and nine hours per week of vehicle use.</td>
<td>• Design alternatives to personal technology access, such as phone support or onsite kiosks</td>
</tr>
<tr>
<td>EV Goal:</td>
<td>Members signed up either online or through a printed application to receive a free key card. Community Ambassadors were approved to drive residents who were not eligible for their own key card.</td>
<td>• Understand usage patterns before selecting the vehicle type. Long-range vehicles are not necessary for daily errands.</td>
</tr>
<tr>
<td>Funding:</td>
<td>As infrastructure development was left up to the individual sites, permitting and contractor selection presented a notable challenge to project implementation. Additionally, participation in the follow-up Trip Survey feedback mechanism was low.</td>
<td>• Create a robust feedback system to constantly evaluate the program</td>
</tr>
<tr>
<td>California Climate Investments grant</td>
<td></td>
<td>• Anticipate long timelines for partnership contracts (up to a year) to prevent project delays and streamline permitting where possible</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Impact (2019)¹:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 total sites</td>
<td>• Engaged on-the-ground staff can help overcome certain challenges such as technology barriers (e.g., not having an email address or familiarity with smartphones), physical disabilities, or a lack of program understanding</td>
</tr>
<tr>
<td>262 total memberships</td>
<td>• Design alternatives to personal technology access, such as phone support or onsite kiosks</td>
</tr>
<tr>
<td>43k miles driven</td>
<td>• Understand usage patterns before selecting the vehicle type. Long-range vehicles are not necessary for daily errands.</td>
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# Huron

**Green Raiteros: Rural electric ridesharing services**

<table>
<thead>
<tr>
<th>City Information</th>
<th>Description</th>
<th>Learnings for Denver</th>
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</table>
| Huron, CA | Green Raiteros was founded with the mission to provide zero-emission social service rides that connect Huron’s rural farmworkers to essential services. The program is driven through a network of volunteers and evolved from the informal system the community had used to provide transportation from Huron to the city of Fresno. | - Solutions should fit the needs and established habits, resources, and systems of the community  
- Be open to pilots that rely on non-traditional business models, such as a volunteer transportation organization (VTO), to test the viability of an idea  
- Look for areas where co-benefits for the community emerge, e.g., increased access to essential services or employment or job skills development. |
| Population: 7,288 | Officially begun in 2018, partner EVgo provides electric vehicles to the program that the Raiteros drivers use to drive community members to hospitals, work, or important appointments. Green Raiteros operates out of a community resource center that serves as headquarters, maintenance shop, and gathering place for rides. The program targets five essential justice issues: economic, environmental, climate, health, and transportation. | |
| EV Goal: none | Community members, 25% of which do not own cars, can schedule rides via phone, online, or through an app. Drivers are provided insurance and reimbursed for the miles driven Green Raiteros hopes to expand in future phases to include reimbursement from additional partners and eventually paid trips supported by taxi scrip vouchers. | |
| Funding: CPUC and private foundation grants | Impact (2019):  
- 11 drivers  
- Over 100 clients  
- 230 trips completed | |

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# Montbello Mobility – Stakeholders

Government and NGO’s considered during the project

<table>
<thead>
<tr>
<th>Exploratory Interviews</th>
<th>Community Interviews</th>
<th>Desk Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Herndon (City Council D8)</td>
<td>Struggle of Love</td>
<td>CCD Human Rights and Community Partnerships</td>
</tr>
<tr>
<td>Stacie Gilmore (City Council D11)</td>
<td>Montbello Organizing Committee (MOC)</td>
<td>Colorado Energy Office (CEO)</td>
</tr>
<tr>
<td>Michael Hancock (Mayor)</td>
<td>Montbello Walks</td>
<td>CCD Department of Public Health and Environment (DPHE)</td>
</tr>
<tr>
<td>CCD Department of Transportation and Infrastructure (DOTI)</td>
<td>NETC</td>
<td>Denver Public Health</td>
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<tr>
<td>CCD Economic Development and Opportunity – Neighborhood Equity and Stabilization Team (NEST)</td>
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<td>Denver Regional Council of Governments (DRCOG)</td>
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<tr>
<td>CCD Office of Social Equity and Innovation</td>
<td></td>
<td>CCD Parks and Recreation</td>
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<tr>
<td>Community Active Living Coalition (CALC)</td>
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<td>CCD Community Planning and Development (CPD)</td>
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<tr>
<td>Colorado Department of Transportation (CDOT)</td>
<td></td>
<td>Candi CDeBaca (City Council D9)</td>
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<tr>
<td>Forth</td>
<td></td>
<td>Regional Transportation District (RTD)</td>
</tr>
<tr>
<td>Greenlining Institute</td>
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</tr>
</tbody>
</table>
## Montbello Mobility – Stakeholders
Philanthropic / corporate interests identified through desk research

<table>
<thead>
<tr>
<th>Market Actors</th>
<th>Transportation-specific Actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP Morgan Chase <em>(funding commitment to addressing Denver needs)</em></td>
<td>Uber <em>(funding commitment to social justice in Denver)</em></td>
</tr>
<tr>
<td>Xcel <em>(funding commitment to EVs &amp; infrastructure)</em></td>
<td>Lyft <em>(funding commitment to social justice)</em></td>
</tr>
<tr>
<td>Denver Broncos</td>
<td>E-bike companies</td>
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<tr>
<td>Denver Nuggets</td>
<td>E-scooter companies</td>
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<tr>
<td>Denver Children’s Hospital</td>
<td>EV companies</td>
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<tr>
<td>Anschutz Hospital</td>
<td>Ridesharing companies</td>
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<tr>
<td>UC Hospital</td>
<td>Denver International Airport (DIA)</td>
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<tr>
<td>Stride Community Health Center</td>
<td></td>
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<tr>
<td>Denver Health: Montbello Community Health Center</td>
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<tr>
<td>Montbello-based small businesses</td>
<td></td>
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<tr>
<td>Chambers of Commerce (Latino, Black, etc.)</td>
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<tr>
<td><strong>Large regional employers</strong> (Federal government, University of Colorado, State of Colorado, CCD, HealthONECorporation, SCL Health, Comcast, Denver Health, DIA, Kaiser Permanente)</td>
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</tbody>
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## Montbello – Issues Identified

<table>
<thead>
<tr>
<th>Exploratory Interviews</th>
<th>Community Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty accessing light rail</td>
<td>Difficulty accessing light rail (e.g., elderly)</td>
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<tr>
<td>Difficulty accessing services (e.g., bus, groceries, healthcare)</td>
<td>Difficulty accessing services (e.g., food access, healthcare)</td>
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<tr>
<td>Lack of food security</td>
<td>Lack of food security</td>
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<tr>
<td>Lack of sidewalks/bike infrastructure</td>
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<tr>
<td>Inadequate bus service (e.g., routes, bus stops, frequency)</td>
<td>Inadequate bus service (e.g., reliability, bus stops)</td>
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<tr>
<td>Lack of digital access (e.g., technology, inclusion, literacy)</td>
<td>Lack of digital access</td>
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<tr>
<td>Need for greater traffic safety</td>
<td>Concerns around traffic accidents</td>
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<tr>
<td>Not feeling safe walking at night</td>
<td>Not feeling safe walking at night</td>
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<tr>
<td>Not feeling comfortable navigating or accessing services (e.g., language barriers)</td>
<td>Not feeling comfortable navigating bus system (e.g., youth)</td>
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<tr>
<td>Lack of financial security</td>
<td>Concerns about rising cost of living</td>
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<tr>
<td>Rise in youth violence</td>
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<tr>
<td>Concerns about gentrification and displacement</td>
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<tr>
<td>Lack of micro-mobility options</td>
<td>Increased social isolation among the elderly</td>
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<tr>
<td>Lack of family-friendly mobility options</td>
<td>Concerns around mental health</td>
</tr>
<tr>
<td>Concern over poor air quality</td>
<td>Impacts of COVID-19 on essential workers (e.g., shift workers)</td>
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<tr>
<td>Need for childcare resources</td>
<td>Concerns about changing demographics</td>
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<tr>
<td></td>
<td>Lack of access to educational resources &amp; opportunities</td>
</tr>
<tr>
<td></td>
<td>Concerns around physical health / wellbeing</td>
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<tr>
<td></td>
<td>Need for personal vehicles, car-centric mobility</td>
</tr>
<tr>
<td></td>
<td>Lack of comfort or safety among cyclist</td>
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</tbody>
</table>

*Note: The table above lists issues identified through exploratory and community interviews.*
Expressed concerns and needs

Food access
- Farm school and urban farm network grow 1000s of lbs of food each year
- Walmart is the main grocery store for the MB community
- Mobile food pantries are important for the community
- So many people come to MOCs food distribution that there is often not enough space for all the cars (serve 15k ppl every time)

Physical health
- Passionate about and sees inequities in the accessibility of the neighborhood especially since she started Montbello Walks–health issues tied to not walking or moving around outside
- Many people making it day by day but living in MB is expensive (housing & transport costs, bad air quality)
- MB is changing and gentrifying, particularly with the new Avion townhomes

Gentrification and housing stability
- Gentrification, cost of living, and youth violence are challenges in MB
- There is a need to develop closer ties between different racial and ethnic groups in the neighborhood- people not knowing each other causes many of the problems

Changing demographics
- Changing demographics is a challenge for MB and the transition from a majority Black to much more Hispanic population needs nurturing
- Mobile food pantries are important for the community

Issues Affecting MB Youth
- Transportation inequities facing Montbello students – e.g., getting Northfield HS
- Mental health
- Gun and gang violence are issues in Montbello
- There is a need to develop closer ties between different racial and ethnic groups in the neighborhood- people not knowing each other causes many of the problems

Issues Affecting MB Elderly
- Healthcare access
- Healthcare appointments are critical needs
- The City needs to be more accessible and focus on elderly people’s needs more
- Accessing the train is too difficult for elderly

Education access
- Transportation is a huge barrier for youth - prevents students from participating in extracurricular activities, PT jobs, school resources
- Students coming from Montbello tend to be lower-income, students of color compared to Stapleton students

COVID-19
- Internet and video conferencing are replacing many in-person events, but tech can pose a barrier
- COVID-19 has shut down many social outlets for seniors incl. church groups, volunteering

Food access and financial stability are critical concerns during COVID-19, especially for undocumented families

Classes are remote/digital now because of COVID-19

Changing demographics is a challenge for MB and the transition from a majority Black to much more Hispanic population needs nurturing

Transportation is a huge barrier for elderly folks

The tie between transportation and education is critically important in MB

COVID-19 has significantly impacted her work since so much of it was community organizing

Transit is a huge issue for essential workers, people working shifts

Key concerns for constituents: Healthcare costs, lack of work, food, transportation

COVID-19 has shut down many social outlets for seniors incl. church groups, volunteering

Some people feel comfortable getting together in small, intimate groups in open air environments

Mobility constraints
- Accessing the train is too difficult for elderly
- Conectoras stress dignity, compassion, and patience when working with elderly

Isolation
- Older folks tend to be very isolated – events like loteria meant to build community

Healthcare
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Expressed concerns and needs

**Mobility**

- Bus stops have steadily decreased over the past 40 years and are no longer convenient.
- Lost a lot of local bus services in 2016 (lines went from 7 to 3).
- Lots of people around Elmbrook and Peoria still rely on the bus and will suffer if there are more cuts to RTD.
- Driving is the culture in MB.
- Public transportation is currently expensive and unreliable.
- Making public transit a fun and rewarding experience increases likelihood it will be used (e.g. Union Station).
- Dislike that the bus is not reliable which makes for a much longer commute.
- The buses currently stop at most frequented locations.
- Taking the bus waiting at stops after dark doesn’t feel safe.
- Bad transportation systems impede people’s ability to live a dignified life.
- Limited / poor transit options.
- Have had issues with the Park n’ Ride.
- People don’t feel safe or comfortable on transit (e.g., traveling alone, confusing routes, violence).
- Limited / poor transit options.
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**Infrastructure and Safety**

- People tend to bike on sidewalks and not on road for fear of traffic.
- Don’t have the infrastructure to bike or walk very far - lots of multi-lane roads with no sidewalks or bike lanes.
- Lack of infrastructure and speeding are big challenges for many main thoroughfares in MB.
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- Limited / poor transit options.
- Have had issues with the Park n’ Ride.
- Lack of EV infrastructure – may be a challenge.
- MB pushing for high comfort bike lanes.
- Seniors associated RTD with COVID and street crossing risks.
- Traffic accidents, lack of infrastructure for safety (e.g., crosswalks).
Pilot considerations

Key destinations

- Groceries
- Parks
- Clinics and hospitals
- Commercial corridors
- Residential areas
- Non-profits

Popular locations: Church, Walmart, planet fitness, stops on Chambers, library, rec center, ice cream shops, parks

Important shuttle stops:
- Grocery stores, pharmacies, retail jobs in GVR
- Walmart, churches, business areas, or the Taylor building (?) would be good stops for a shuttle
- Apartments on Peoria (McDonalds on Peoria), rec centers, community center

"Best places" to spend time:
- Montbello Rec Center
- Library
- Walking Outside

MB Walmart is key grocery destination

Places frequented include churches, parks for sports, grocery stores, Denver Health Care, Denver Health Clinic, Park Health Clinic, MB Library, Denver Boys and Girls Club

The parks are a nice shared resource in MB that people appreciate

Kaiser and Anschutz are two medical facilities that residents get care at

Healthcare appointments are critical needs

Key locations include: Parks (picnics), library, restaurants (McDonalds on Peoria), rec centers, community center

Walmart, churches, business areas, or the Taylor building (?) would be good stops for a shuttle

Chambers to Peoria (to get to the bank) and Colfax to Chambers

"Best places" to spend time: Montbello Rec Center Library Walking Outside

Apartment on Peoria and Albrook, Veterans Retirement Home, Walmart

MB Rec Center and Library are important resources for MB youth

MB Library

Events at the rec center or the old high school (when it was the only one) were well attended

Don't have a place to connect as a community, parks don't have places to sit

No real central location for community organization/ meetings/hang outs

MB Rec Center

Important shuttle stops:
- Grocery stores, pharmacies, retail jobs in GVR

MB Library

A bus dedicated to Montbello would seem as a very helpful proposal, especially for seniors (need timely/reliable/good customer service resource)

A circulator bus is a huge opportunity in MB

A shuttle stop should serve as a hub (e.g., active, lighting, feels safe, other transport)

A shuttle could potentially benefit youth without other transportation options

Important shuttle stops: Grocery stores, pharmacies, retail jobs in GVR

Top three factors for shuttle: connectivity, ease of access for all pedestrians, being on time, affordable

A regular schedule would be preferable for a shuttle over an on-demand service for seniors

Change / restructuring at RTD - opportunity?

Educational and training

Programs must have training, education component (cultural competency)

Essential workers

Transit is a huge issue for essential workers, people working shifts

Barriers: Being "unbanked," digital divide, privacy concerns, undocu. status

Education and training

Wealth-building

Hiring people within the community as a form of wealth-building – e.g., shuttle outreach, rides

Customer service

Accessing the train is too difficult for elderly

Transport integration

Previous transportation efforts, like "A Little Help," had some success, but still unique challenges in working with elderly

Frequency and schedule

Connecting

Safety and comfort

Healthcare appointments are critical needs

Gaps

Academy 360 – Home to many community resources

Don't have a place to connect as a community, parks don't have places to sit

No real central location for community organization/ meetings/hang outs

Pilot considerations

Implementation

Academy 360 – Home to many community resources

Events at the rec center or the old high school (when it was the only one) were well attended

Don't have a place to connect as a community, parks don't have places to sit

No real central location for community organization/ meetings/hang outs

-changing/restructuring at RTD - opportunity?
Community engagement

Communication modes
- Get the word out via community leaders, word of mouth, partner orgs (promotora model)
- Communicate via flyers, email listserv, social media (FB, IG) and word of mouth
- Many in the community are active on NextDoor
- Outreach & recruitment via FB & word-of-mouth

Communication pride and identity
- People love living in MB and love the diversity and community
- Community organizing and goal setting is a strength
- Various podcasts and storytelling projects in Montbello

Community empowerment, capacity building, and education are priorities
- The MB community tends to rally around mobility issues
- Conectoras stress dignity, compassion, and patience when working with elderly

Distrust of "outsiders"
- Past "outside" initiatives have failed due to lack of communication and outreach to the community
- MB could benefit from block captains or block work within the community since there is no longer a good central force bringing people together (used to be the high school)
- Undocumented folks in the community face additional barriers, avoid services due to privacy and distrust

Outsiders coming in and telling the community how to improve doesn’t sit well
- People have distrust when it comes to the city/govt helping them out

Gentrification & displacement – seeing improvements as “for those people”
- Community frustration when RTD Park & Ride was moved

People have distrust when it comes to the city/govt helping them out
- Community frustration when RTD Park & Ride was moved

Competing community groups and priorities – care in navigating
- Conectoras have focused on building trust with elderly residents

Bad communication
- Blocking off streets as temporary ped streets: people thought they were construction zones so they avoided them
- People have distrust when it comes to the city/govt helping them out

Partnerships and empowerment
- Hiring people within the community as a form of wealth-building – e.g., shuttle outreach, rides
- Partnering with other orgs to provide bike equip (e.g., helmets, locks, patch kits)

Family participation
- Mission: Get kids outside, doing outdoor activities for physical and mental health, spend time with family
- Participants range from 4-13 years old, along with parents

Outreach & recruitment via FB & word-of-mouth
- Partnerships and empowerment
- Hiring people within the community as a form of wealth-building – e.g., shuttle outreach, rides
- Partnering with other orgs to provide bike equip (e.g., helmets, locks, patch kits)
Active community groups and efforts

**Youth engagement**
- **CO Young Leaders** – Leadership and advocacy for youth
- **Youth-focused groups:** CO Young Leaders, CO Trust, La Piñata de Aprendizaje (children)

**Cycling**
- Bike library partnership with Bike Colorado and local schools
- **Club de Bicicletas Accidental** – informal family-centered cycling group
- Current initiative to rehome B-Cycles to MB orgs, including FAVA and ELK

**Transportation access**
- **NETC** has supported MB since 2002
- **NETC** has provided shuttle services, bus passes, donations to MB orgs
- Org. funds diverted to Lyft use during pandemic (and will run out soon)

**Organizing**
- **FreshLo** is currently the strongest presence for building diversity right now in the community
- **Conectoras de Montbello** have focused on building trust with elderly residents
- Conectoras used to gather with elderly folks frequently – now have shift to phone and virtual

**Food access**
- **New food delivery shuttle in Globeville**
- Connect constituents with food banks
- Addressing challenges through youth safe zones and food pantries

**Physical and mental health**
- Critical services: transportation, toy drives, food, school supplies, backpacks, sports and mentoring, events
- Her organization works in many areas, but her role is education, anti-violence, mental health, and mobile food pantry
- Currently a gap in mental health services for youth

**Struggle of Love:** Focus on underprivileged families and youth
- **FreshLo** will have a 10km multimodal loop to connect the community to different locations, incl elementary schools. In partnership with CALC
- **Conectoras de Montbello** have focused on building trust with elderly residents
- Conectoras used to gather with elderly folks frequently – now have shift to phone and virtual

**Ongoing efforts**
- **Bike library partnership** with Bike Colorado and local schools
- **Club de Bicicletas Accidental** – informal family-centered cycling group
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**Youth-focused initiatives**
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