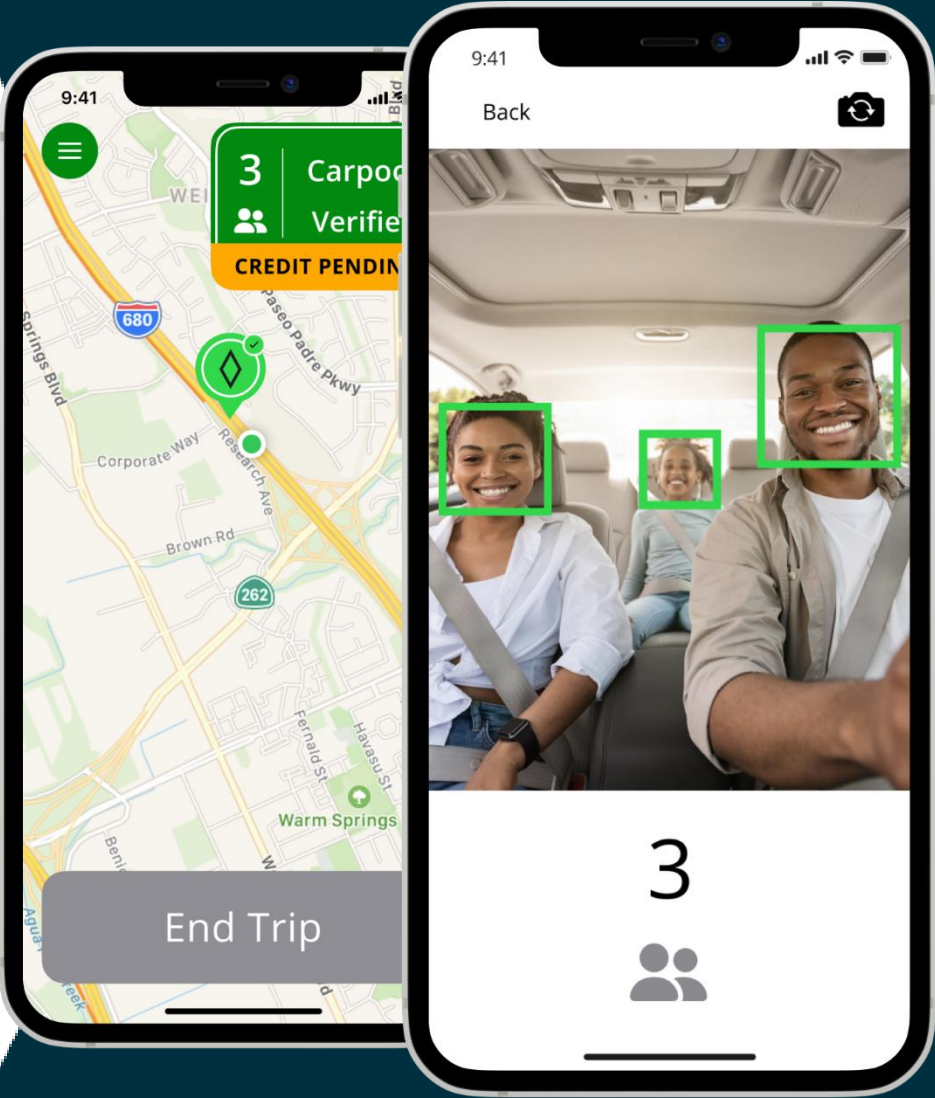


Express Carpool Check Smartphone App Pilot

February 22, 2023

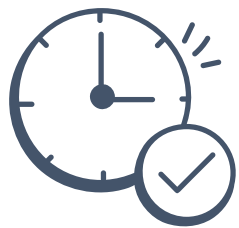


Key Points

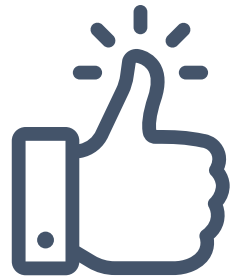
1. How the app works and how our pilot approach has evolved
2. What it may take to fully deploy the technology
3. Request for approval of I-680 Express Lanes carpool verification pilot

Why: Reducing Carpool Violations in Express Lanes

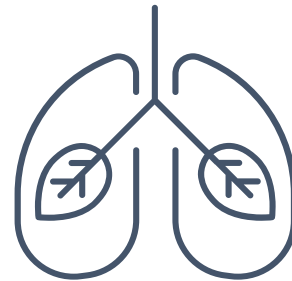
On average, 1 in 5 carpool lane users are violating occupancy requirements



Reliable travel times
for carpools and
transit



Reduce
congestion and
increase public
confidence



Support regional goals
of reducing
greenhouse gas
emissions



Reduce need for
CHP field enforcement

Opportunities at Full Scale

- Automated system to reduce enforcement need, human bias
- Transition from punitive to incentive approach
- Possibility to phase out switchable transponder



First Step: Phase 1 Pilot

- **Does app-based carpool verification work?**

How the App Works

before driving

when parked

Facial geometry
deleted at end of
trip

Home

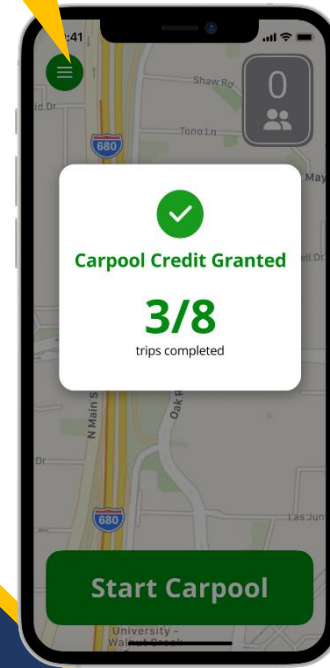
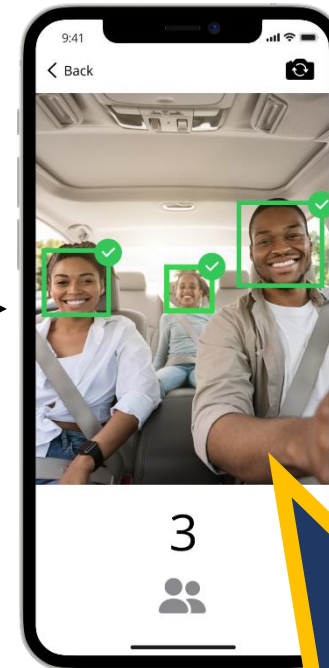
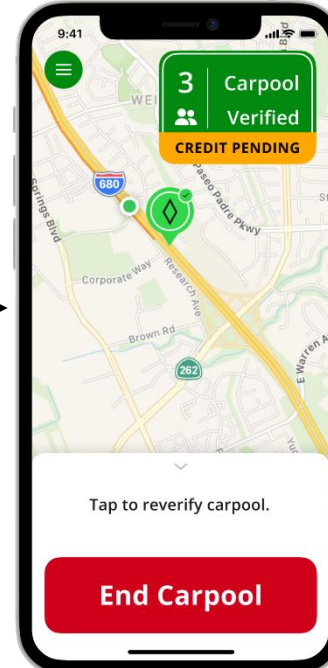
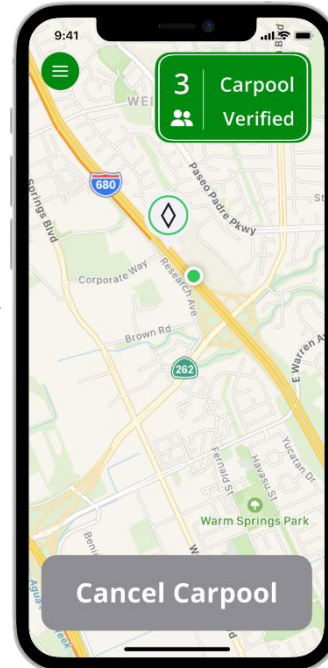
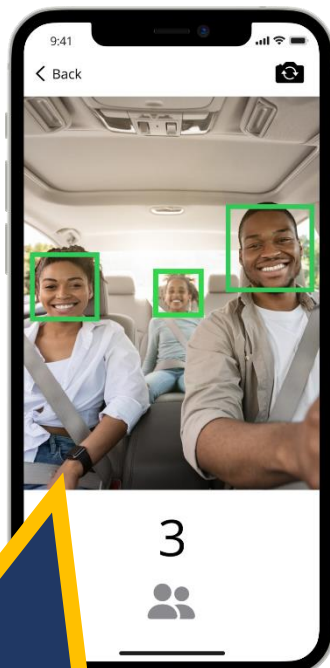
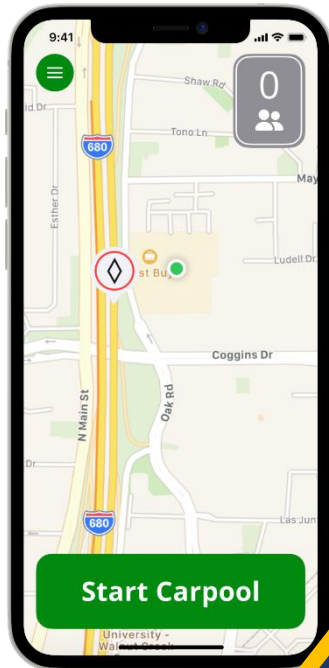
Verification
Camera

Ready to Carpool

Reverification
Required

Reverification
Camera

Carpool Credit
Granted



Camera determines number
of real faces & facial
geometry, no image captured

Generates realness and
match probabilities to validate
carpool

Use of Facial Geometry

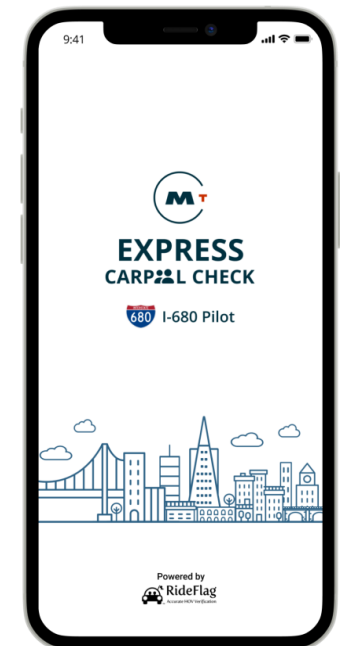
Facial geometry is used to confirm that carpool occupants at the beginning of the trip are likely the same as at the end of a trip.

The app's use of facial geometry differs from facial recognition in key ways:

- App captures only geometry/outline of face
- No image captured or stored
- Facial geometry never leaves the phone, and is erased upon completion of each trip
- Confirms likely match instead of exact match
- Cannot be used to identify a person or reconstruct a face

Stored Data Similar to Fastrak®

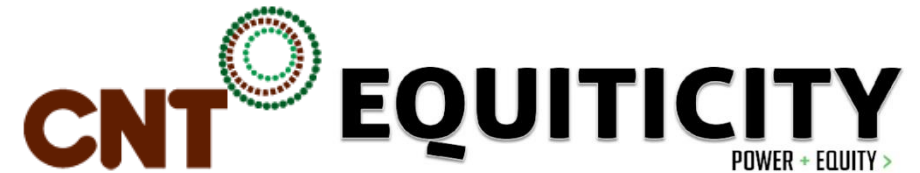
Stored Data	Fastrak®	App
Account Information (e.g. license plate, transponder, phone number)	✓	✓
Highway Trip (entry and exit points)	✓	✓
Trip Date and Time	✓	✓
Toll Tag Switch Setting	✓	
Number of Verified People and Realness/Match Probability		✓



Equity: What We've Learned

What's Important

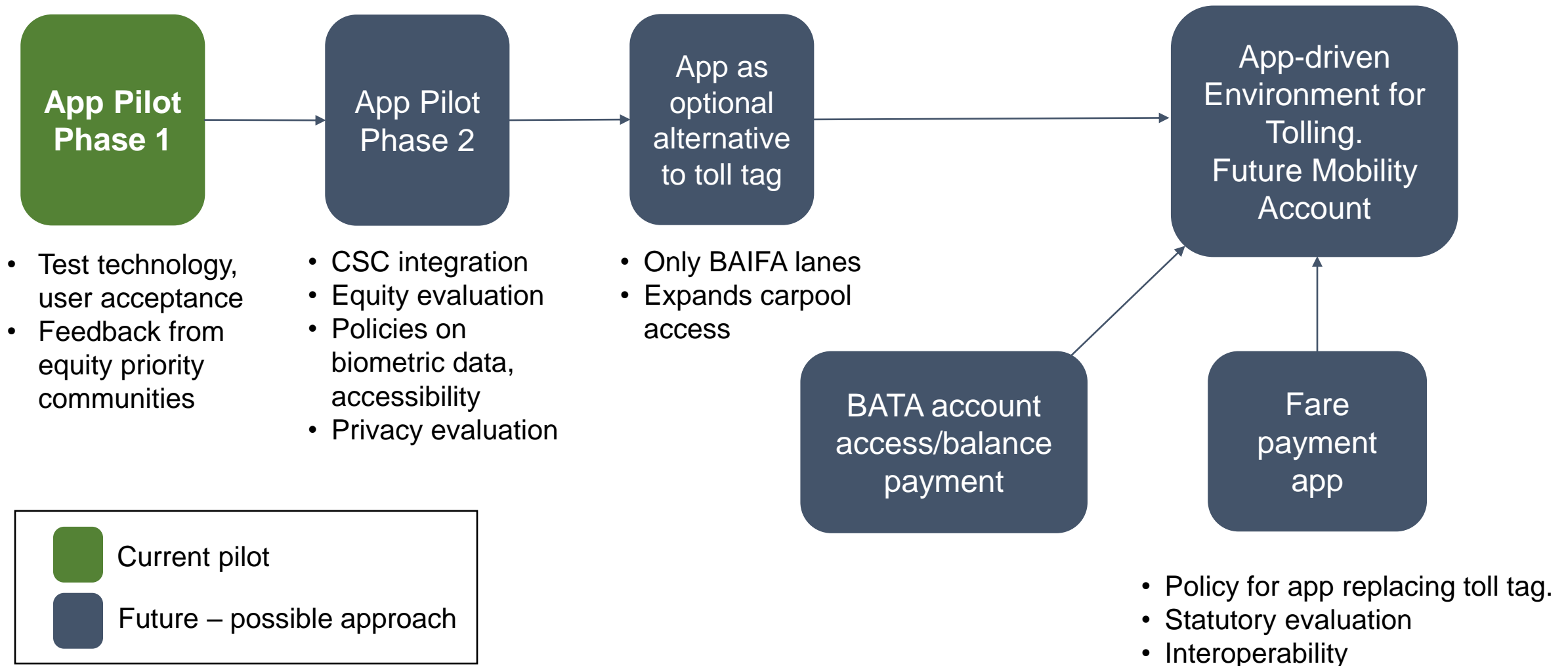
- Privacy & accessibility
- Access to Express Lanes
- Encourage Equity Priority Community participation in the pilot



**MTC Policy Advisory Council
Equity & Access Subcommittee**



Initial Step to Explore App-Driven Solutions



Phase 1 Smartphone App Pilot Approval

Approval of an I-680 Express Lanes pilot allowing enrolled carpools to use a smartphone app and valid license plate in lieu of a Fastrak® account

- ✓ Limited-term pilot (approx. 6 months)
- ✓ ~ 500 volunteers
- ✓ Participation agreement to address privacy

Phase 1 Pilot Estimated Timeline

Activity	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sept 2023
Pre-Pilot (Internal/Agency staff)	■	■	■					
Review/Finalize Participation Agreement	■	■						
BAIFA Approval of Pilot	■							
Pilot Period			■	■	■			
Post-Pilot Evaluation						■	■	■