

Contactless Open Payments in Transit: Status Report

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TRANSPORTATION TRACK SPONSORED BY DISCOVER

Intro to Transit Payments

Lawrence Sutton
Principal Consultant
Consult Hyperion

Consult Hyperion background



Why are Payments Important to Transit?

- Barrier to riders choosing to take Transit
- Affects all parts of the agency
- By nature of transit, riders interact twice a day

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History of Transit Payments

- Tokens
- Closed loop systems
- Open Payments

Transit with American Express

Connecting with Card Members along their Journey

A woman with dark hair in a ponytail, wearing a dark blue sleeveless top, is looking out of a bus window. The background shows a blurred city street with buildings and a sign with red Chinese characters.

INTRODUCTION

Setting the scene for effective communications

Contactless payments have arrived; Next Stop: Transit

Among Card Members surveyed that have taken mass transit in the past year:

74% strongly/somewhat agree that they **prefer a contactless payment option** for public transit and **73%** strongly/somewhat agree that using their mobile device would **save them time** while traveling.

75% strongly/somewhat agree that they would like to be able to **use the same form of payment for transit and at other merchants around the station.**

51% strongly/somewhat agree they would be **more likely to take public transportation** if they did not have to purchase a ticket and if they could **use any payment method** of their choice.

A man in a dark blue jacket and a brown leather bag is standing on a transit vehicle, using a contactless payment method on a fare reader. The background shows the interior of the vehicle with windows and poles.

THE CONTACTLESS JOURNEY

Foundation for strategic and consistent messaging

Find Your Stop on the Contactless Journey

Whether you are transitioning to open-loop or full-speed ahead on a marketing plan, consider what stage you are in when working through your marketing plans.

Are you in the **early stages** of planning your transition to contactless payments?

Are you ready to **write copy** to communicate the benefits of contactless to riders?

Are you ready to launch contactless and want to **design an ad** for riders in your area?

Working with American Express can create a Closer Connection to Card Members

Our direct relationships with both Card Members and Merchants allow us to provide our clients with unparalleled marketing segmentation and insight based on transaction data.

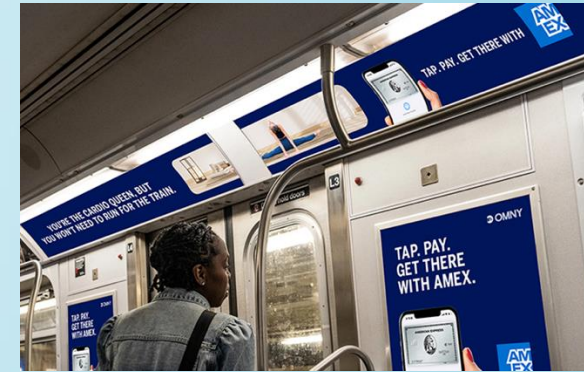
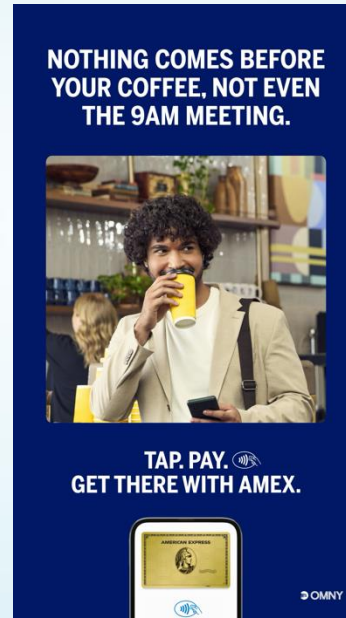


How to Create a Campaign That Stops Riders in Their Tracks

While campaign creative and activations will vary, these are some best practices that apply to contactless transit campaigns:

1. Develop a clear and actionable key message
2. Follow the customer journey
3. ***Be local***
4. Use logos and visuals for credibility

'Be Local' Case Study: MTA & the US Open in NYC



Enter Train Station

Pay at Turnstile

Wait on Platform

Train Ride

Wrapping up the trip

Summarizing some key takeaways:

1. Card Members prefer using contactless payments
2. Messaging should relate to your contactless journey
3. Localized campaigns connect with Card Members along their entire journey

Expanding and rewarding access to mobility

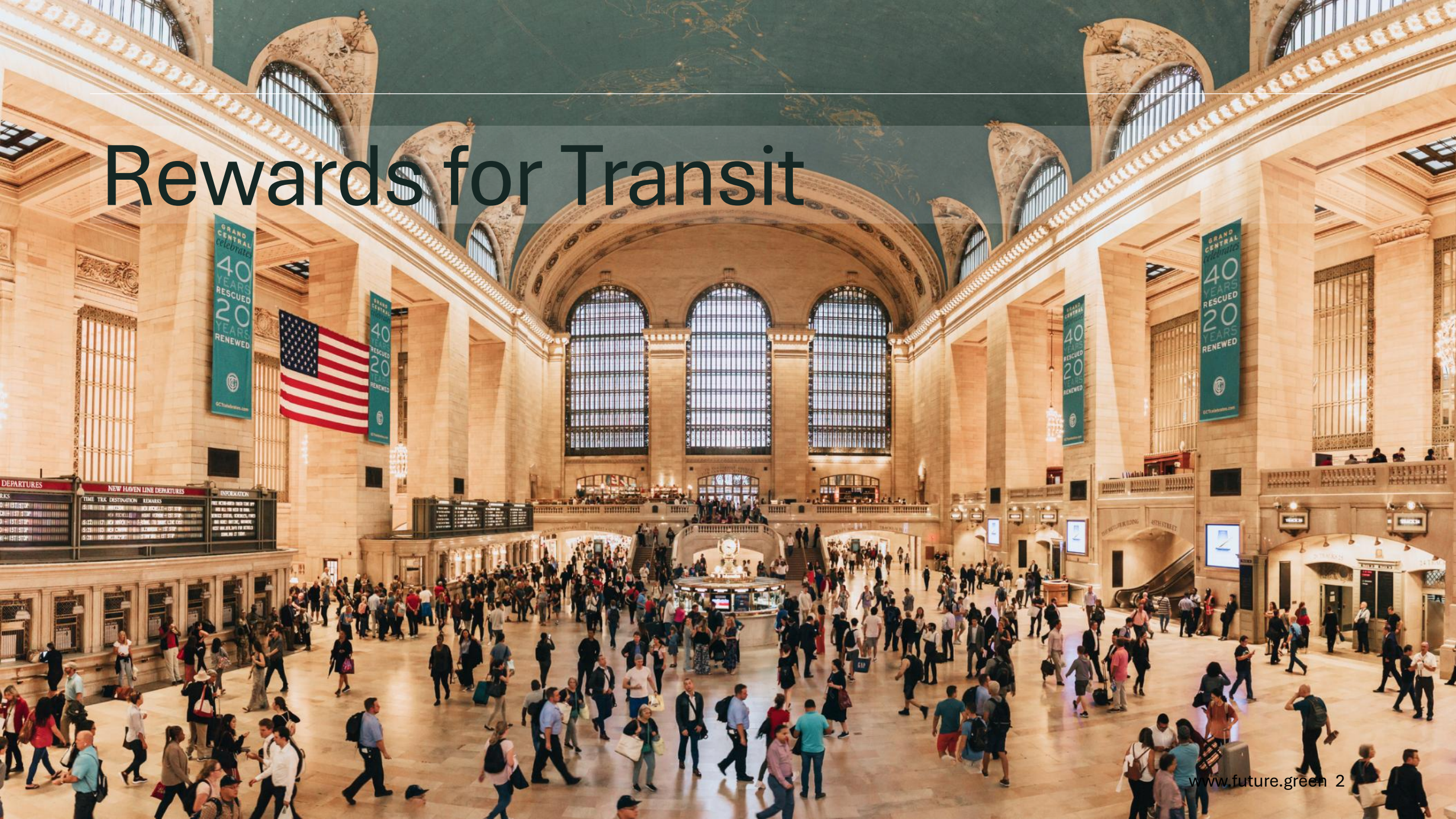
Future's incentive platform has
rewarded over 2 million rides



Future[®]



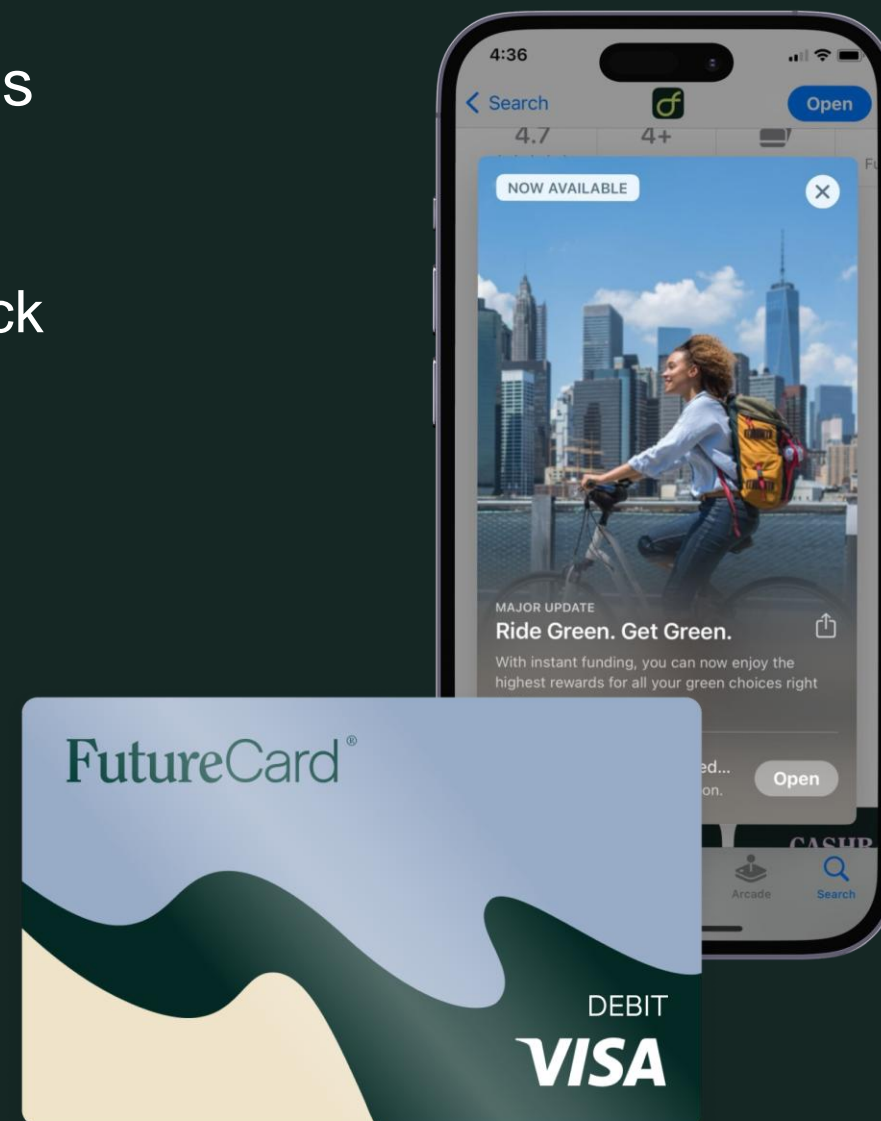
Rewards for Transit



Go Green. Get Green:

5% cashback on bills, rides and everyday savings

- FutureCard Visa Debit offers the highest cashback of any debit card in America
- 5% cashback at 50,000+ merchants
- No annual fee
- Built-in loyalty stack for frequent transit riders



Custom Loyalty Programs

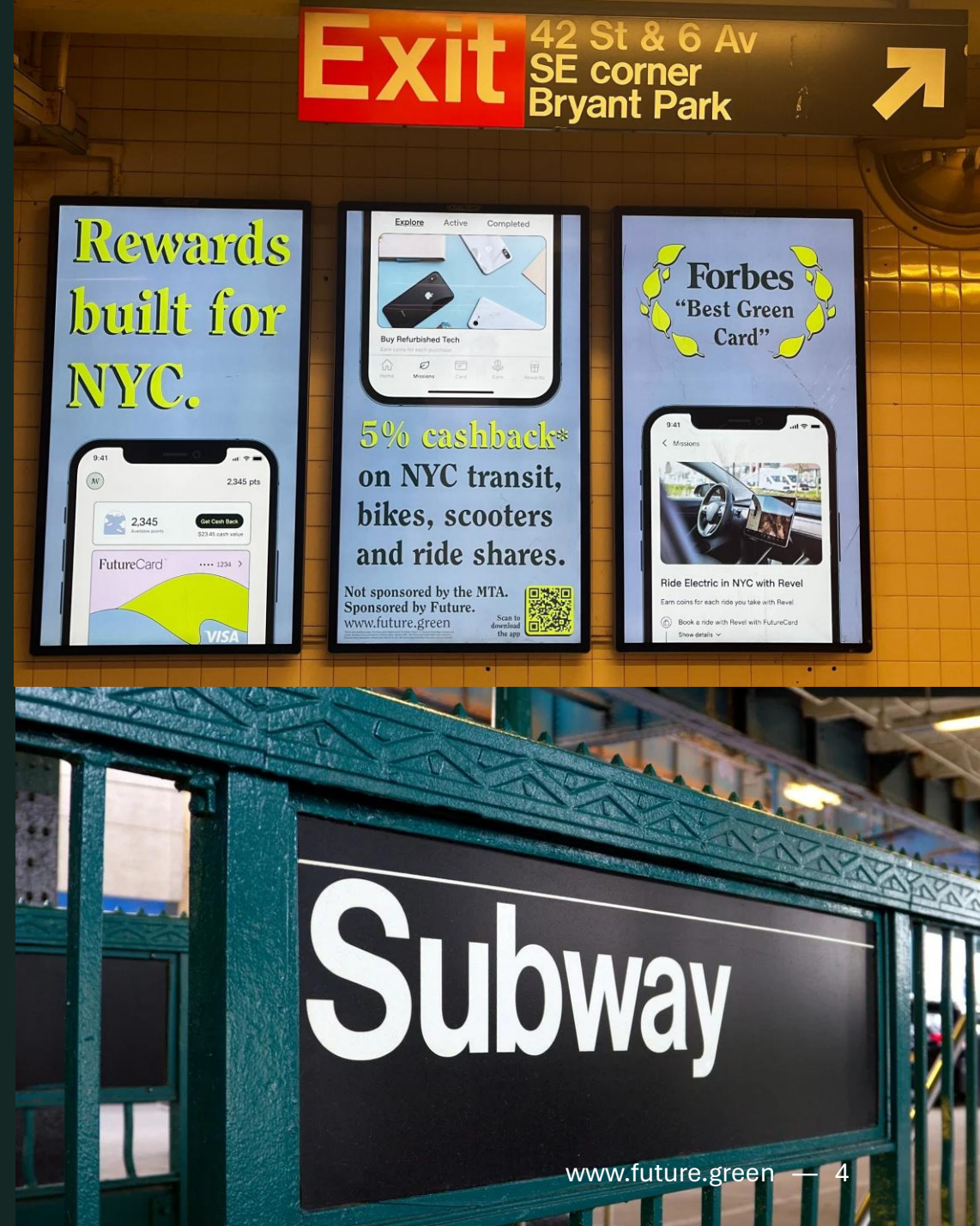
Future's rewards stack for open loop.

Case Study

In New York, Future introduced a \$5 instant bonus to members taking 12 public transit rides a week with Future.

- 47% increase in monthly rides per member to 22 rides
- A third of Future's riders now reach the 12-ride streak

"Pure magic. I'm now thrilled taking the next bus"
— App Store Review



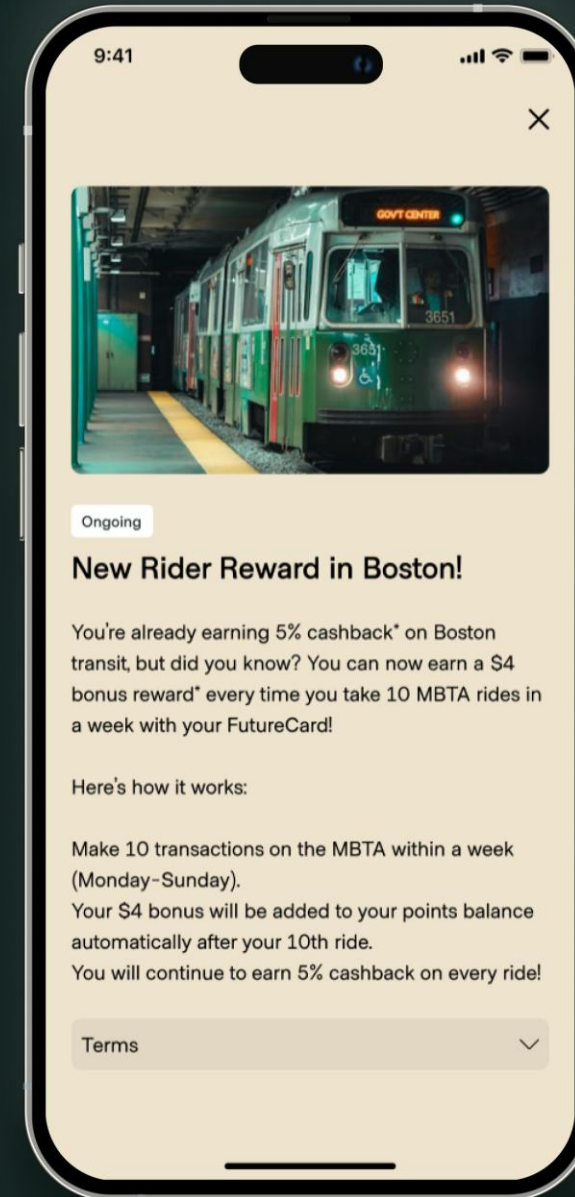
Custom Loyalty Programs

Milestones expand rewards for frequent riders

Case Study

In Boston, Future recently introduced a \$4 instant bonus to members hitting 10 rides a week.

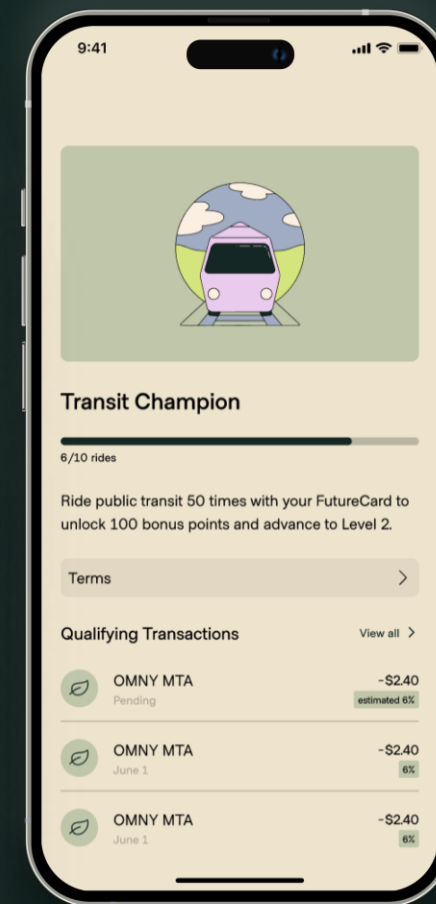
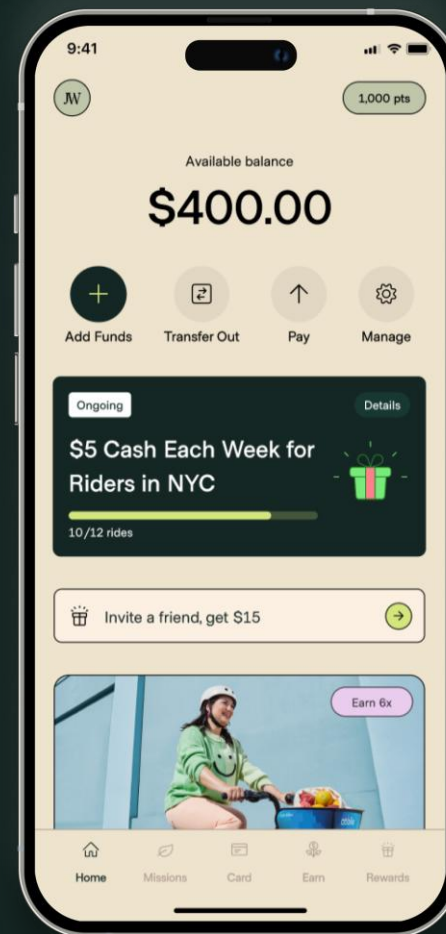
- 56% of respondents to a recent survey would be very disappointed if Future's rewards went away



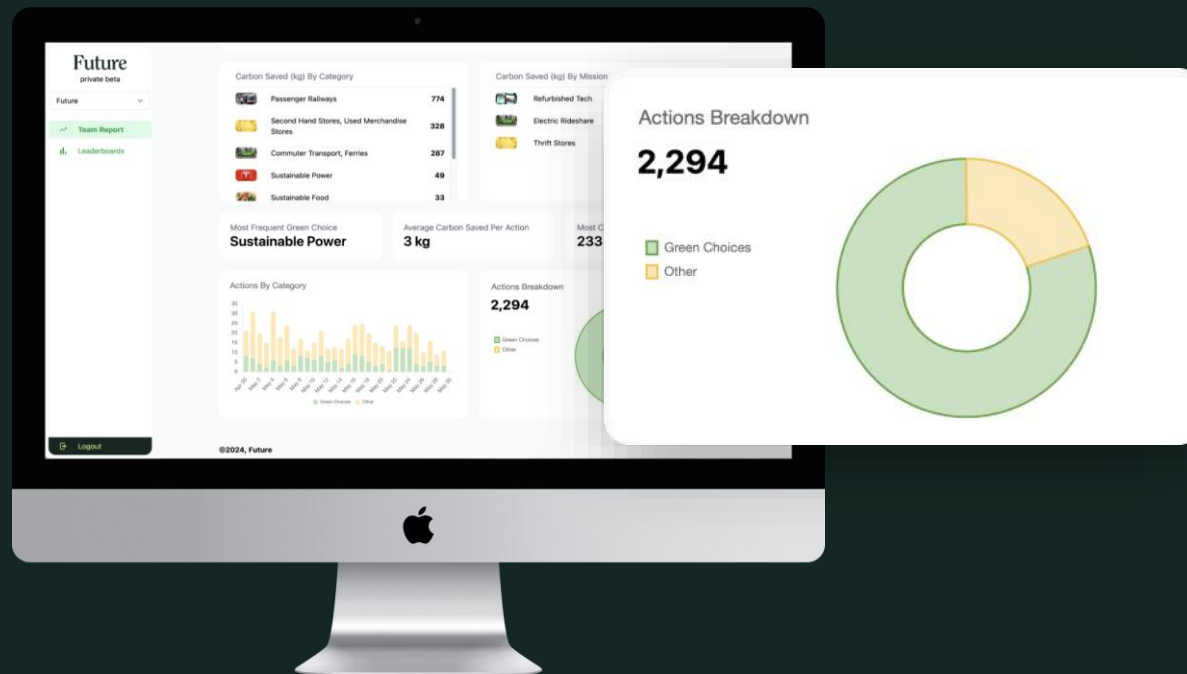
Go Green. Get Green:

Open Loop systems well-positioned to leverage incentives

- Streaks and Milestone bonuses are instant when riders tap to pay
- Variable incentives by day or time of day (e.g., Transit Tuesday or off-peak rewards)
- Rewards can be tailored to reduced fare passengers
- Ease of rewarding rides across modes
- Zero integration requirements



Partners have access to a real-time dashboard that shows mobility choices and quantifies the impact of initiatives to grow adoption.



- Tailor initiatives to grow ridership
- Test the impact of short-term incentives on long-term adoption
- Track engagement of participants in real time and in compliance with privacy policies.

Our Future members so far have

\$2.3M+

Earned in rewards

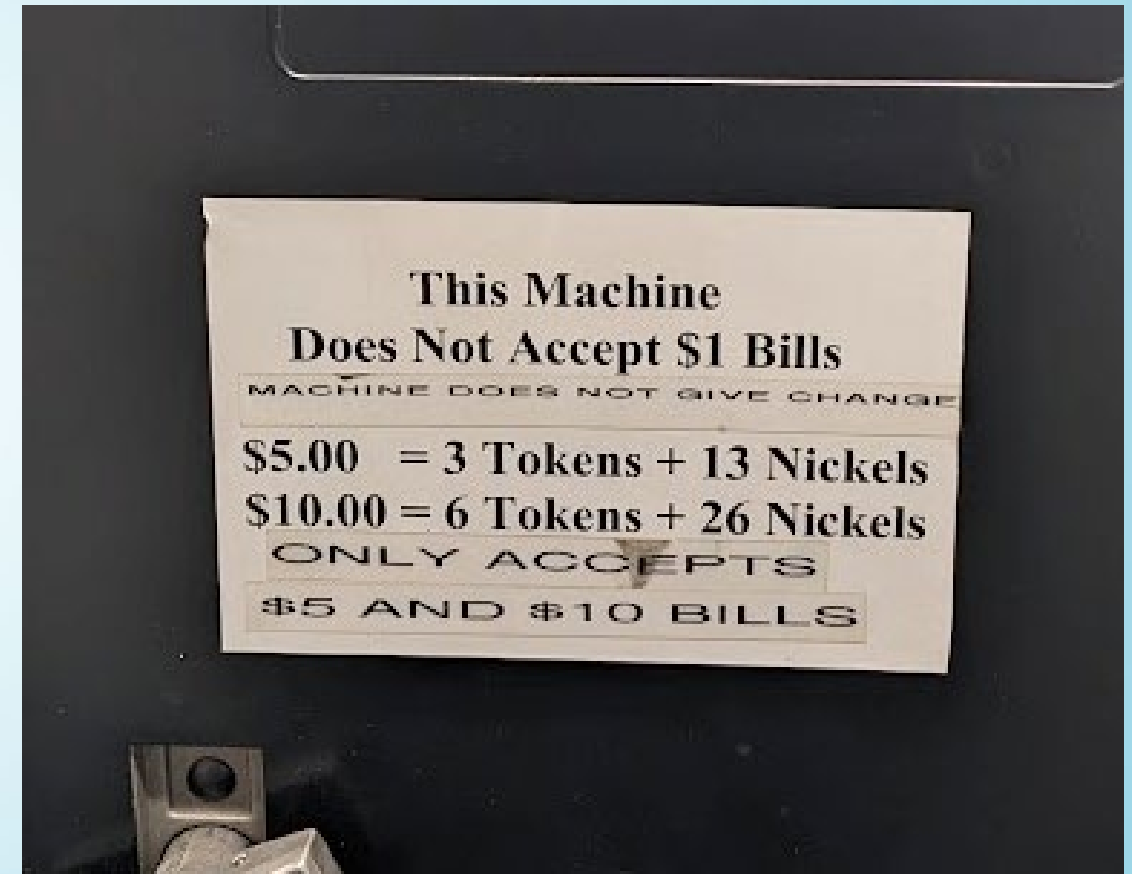
\$72M+

Saved in green choices

2M+

In green rides with
Future

Future[®]





Piloting open payments on passenger rail

Focusing on the customer—and workforce—experience



Jim Allison, Manager of Planning
jima@capitolcorridor.org

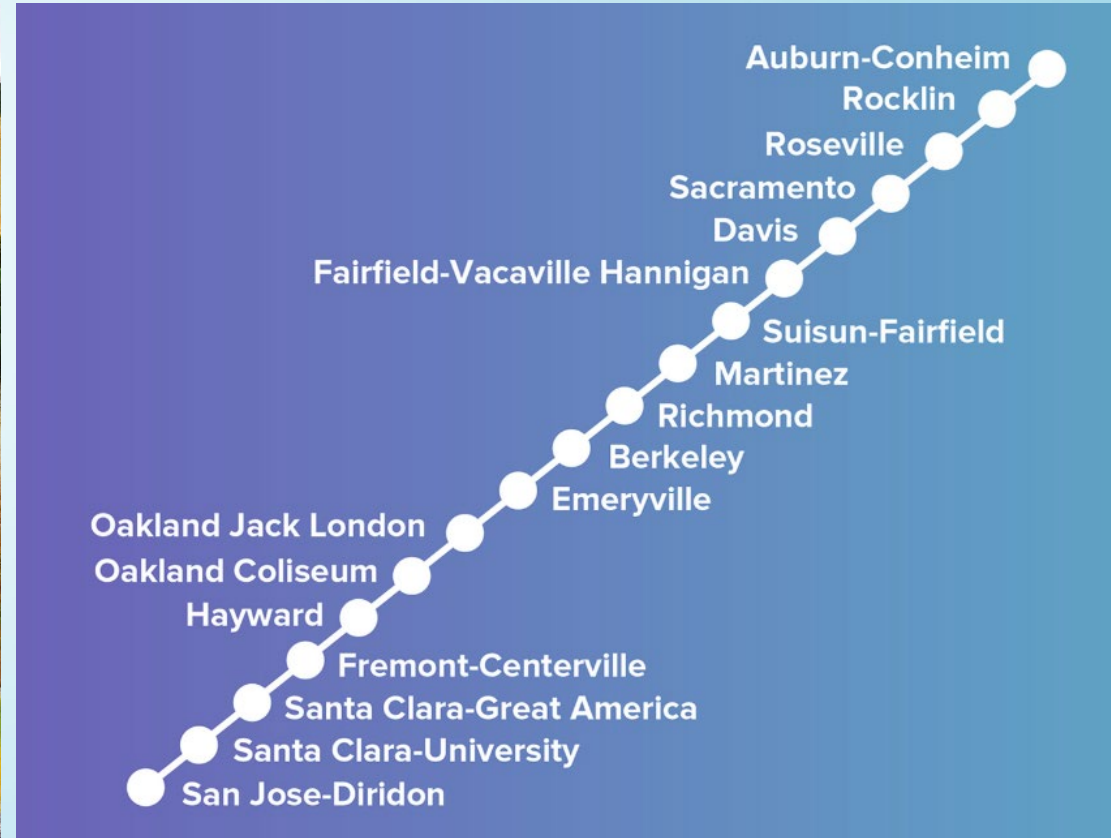


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Amtrak-operated Capitol Corridor links the SF Bay Area to our state capital



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**TAP2
RIDE**



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Getting started: Tapping State partners

CCJPA is the fiscal sponsor of Caltrans' California Integrated Travel Project (Cal-ITP), a statewide initiative designed to support public transit with:

- *A common payment system:* debit/credit cards—just like passengers pay for a cup of coffee.
- *Real-time transit data standard:* live train and bus locations on standard mobile phone journey-planning apps, such as Apple Maps and Google Maps.
- *Seamless verification of eligibility for transit discounts,* such as older adults, veterans, students.



calitp.org

hello@calitp.org



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Joining the open-loop fare payment ecosystem—with State of California contracts



Payment acceptance devices ('POS' hardware)

- 4 payment readers per double-decker train car (*CCJPA doesn't own its stations*).



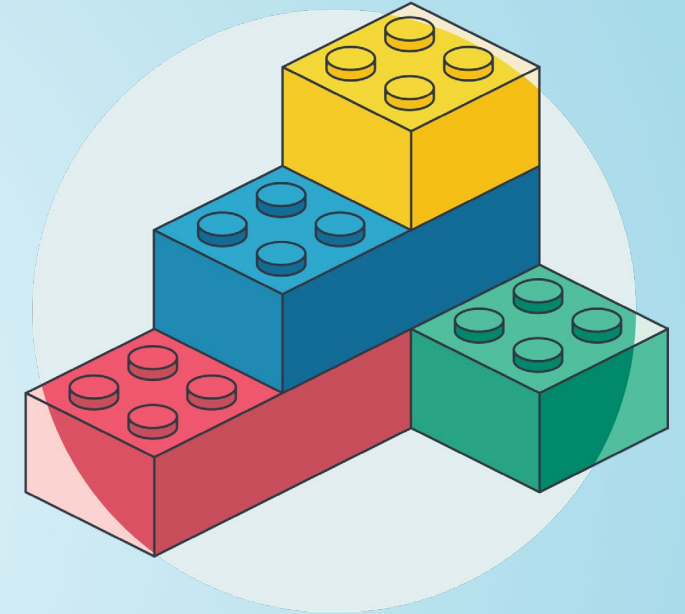
Transit processor (fare calculation software)

- Uses reader's location & train number to assess Tap On / Tap Off distance-based fare, pay-as-you-go fare caps (5th ride free), penalty if no Tap Off.



Electronic payment (EPAY) acceptance processor (acquirer)

- Moves fare money from each rider's account to CCJPA's merchant account.



California's competitively awarded contracts are available to all public transportation providers across the United States:

camobilitymarketplace.org/contracts



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Piloting Tap2Ride—1st on passenger rail line in U.S.

- **Registration** allows CCJPA to **control** the number of Tap2Riders, **connect** with them for feedback, and **generate a federally mandated manifest list**.
- Pilot allows learning the necessary internal processes to **operate a revenue collection system**—previously, Amtrak was solely in charge of ticketing / fare collection—in a low-risk environment (limited group of users).
- **Minimal disruption** to Amtrak, both corporate and conductors—**done in parallel to existing processes** on trains.
- **Learn behaviors** (of passengers, conductors, devices!), iteratively massaging comms and tuning processes.
- **Study travel patterns** and **pay-as-you-go fare pricing**.



CA Secretary of Transportation Toms Omishakin taps to ride aboard Capitol Corridor.



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 **TAP2
RIDE**

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The Customer Experience

- Initially, ~330 pilot participants were recruited via:
 - on-train messaging (with a QR code + registration URL next to each payment reader)
 - on-platform digital signage
 - social media, press release on news blog, newsletter
- Mix of commuters + weekend riders, all with contactless debit or credit cards (just Visa + Mastercard at first; Discover + American Express just completed L3 certification).
- Easy one-time registration with name + email address (for manifest list + ease of contacting if they forget to Tap Off).
- An emailed **Welcome Letter**, addressing FAQs + acting as 'proof of registration' in event of reader or card failure.
- Each reader has **universal symbol for tap to pay**, and pilot participants **Tap On** when boarding, **Tap Off** when their station name is visible on on reader screen.



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The Customer Experience

- **Want to see our Tap2Ride fares + see how to earn free rides with fare capping?** Just visit our Tap2Ride page.
- **Need a receipt?** Transit processor Littlepay provides a website for tracking fare payments.
- **Need a fare adjustment—because you forget to Tap Off? or a train goes out of service?** Our website has a form for requesting—and we monitor and proactively reach out to adjust down penalty fares during the Pilot.

Trips Per 30 Days

☒ One Way ☐ Round Trip

5

Origin

Davis

Destination

Oakland Jack London

Total Fare \$100.00

Savings \$35.00

Tap2Ride pilot program fares are \$2 off the full single ride fares between the same origin and destination stations. With “fare capping”, Tap2Ride participants also receive one (1) free ride after completing four (4) one-way trips between the same origin and destination stations for any given 30 day period.



Customer transactions inquiry page

MY TRANSACTIONS ⓘ

17 Jan 2023 17:29:58

441617*****5380

\$20.00

●

Fairfield-Vacaville

17 Jan 2023 17:29:58

DIRECTION ⓘ

Outbound

PURCHASE ⓘ

PRODUCT APPLIED ⓘ

NONE

FARE ⓘ

\$20.00

DEDUCTIONS ⓘ

NONE

CHARGED ⓘ

\$20.00

X

Incomplete

Max fare applied

17 Jan 2023 17:22:08

441617*****5380

\$10.50

●

Berkeley

17 Jan 2023 16:24:33

DIRECTION ⓘ

Outbound

PURCHASE ⓘ

PRODUCT APPLIED ⓘ

NONE

FARE ⓘ

\$10.50

DEDUCTIONS ⓘ

NONE

CHARGED ⓘ

\$10.50

●

Suisun-Fairfield

17 Jan 2023 17:22:08

Refunds

TRANSACTION DATE

26/01/2023

SETTLEMENT DATE

26 Jan 2023 13:14:06

REFUND AMOUNT

-\$10.50

REFUND STATUS

SETTLED

17 Jan 2023 06:15:44

441617*****5380

\$0.00

●

CCJPA

17 Jan 2023 05:34:30

DIRECTION ⓘ

Outbound

PURCHASE ⓘ

PRODUCT APPLIED ⓘ

NONE

FARE ⓘ

\$0.00

DEDUCTIONS ⓘ

NONE

CHARGED ⓘ

\$0.00

●

Martinez

17 Jan 2023 06:15:44

Displaying 1 to 3 of 3 results

Print Statement

Displaying 1 to 3 of 3 results

Print Statement



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The Conductor Experience



- During their routine Seat Check, **Amtrak conductors verify that Pilot Participants have Tapped On** (and not Off again) with a **fare inspection app**.

- Currently must use a Wi-Fi-enabled **Android phone** to verify Tap2Ride transactions via phone's NFC (near-field communication) reader.

- **Conductors also carry an e-ticketing mobile device (EMD)—an iPhone**—to scan traditional Amtrak tickets.

- **Apple** just began allowing developers to access the **NFC reader for an iOS app**, so we're working on one with our technical & payment partners + Amtrak.



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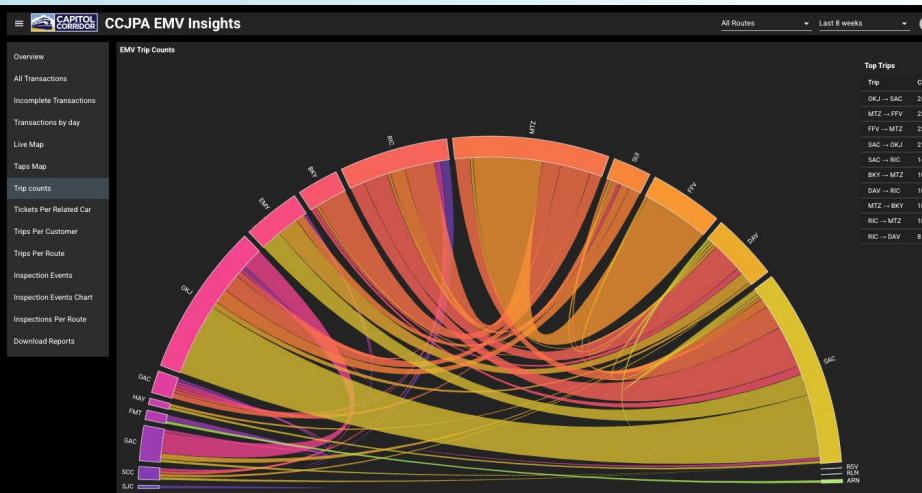


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Lessons Learned—Technical Systems

With any new system, **monitoring is needed**—we visualize data in one dashboard by pulling in APIs from:

- Payment readers:
 - Taps On / Off
 - Device health
 - Train location
- Train equipment health + route #
- Wi-Fi status
- Fare calculation software
 - Bank card insufficient funds (“Deny List”)
 - Fare adjustments



Customized Xentelligent Insights Dashboard by xentrans



Lessons Learned—Workforce

With any new system, **staff needs time to adapt**—and **easy tools to help with doing their job**:

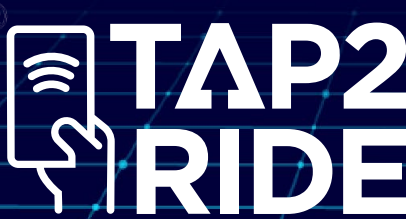
- **Amtrak**
 - **Conductors**
 - New way to pay / verify payment
- **CCJPA**
 - **Marketing**
 - New way to pay
 - Pilot recruitment
 - **Customer Care**
 - Bank card not working / replaced
 - No Tap Out vs. Train Equipment Issue
 - Fare adjustment request
 - **Finance Team**
 - New revenue source to manage
 - Fare adjustments
 - **Ops / Planning**
 - Fare products
- **Technical Partners**
 - Tracking / maintaining new devices



Customized Xentelligent Insights Dashboard by **xentrans**



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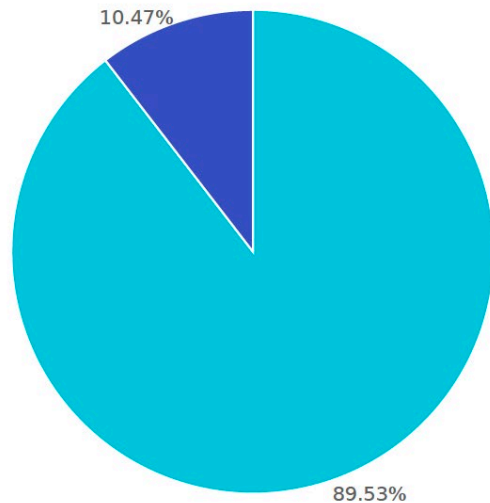
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Lessons Learned—Pilot Participant Feedback

We surveyed our pilot participants—86 responded, and here are some stats that stand out:

Would you recommend the Tap2Ride Pilot to a friend?

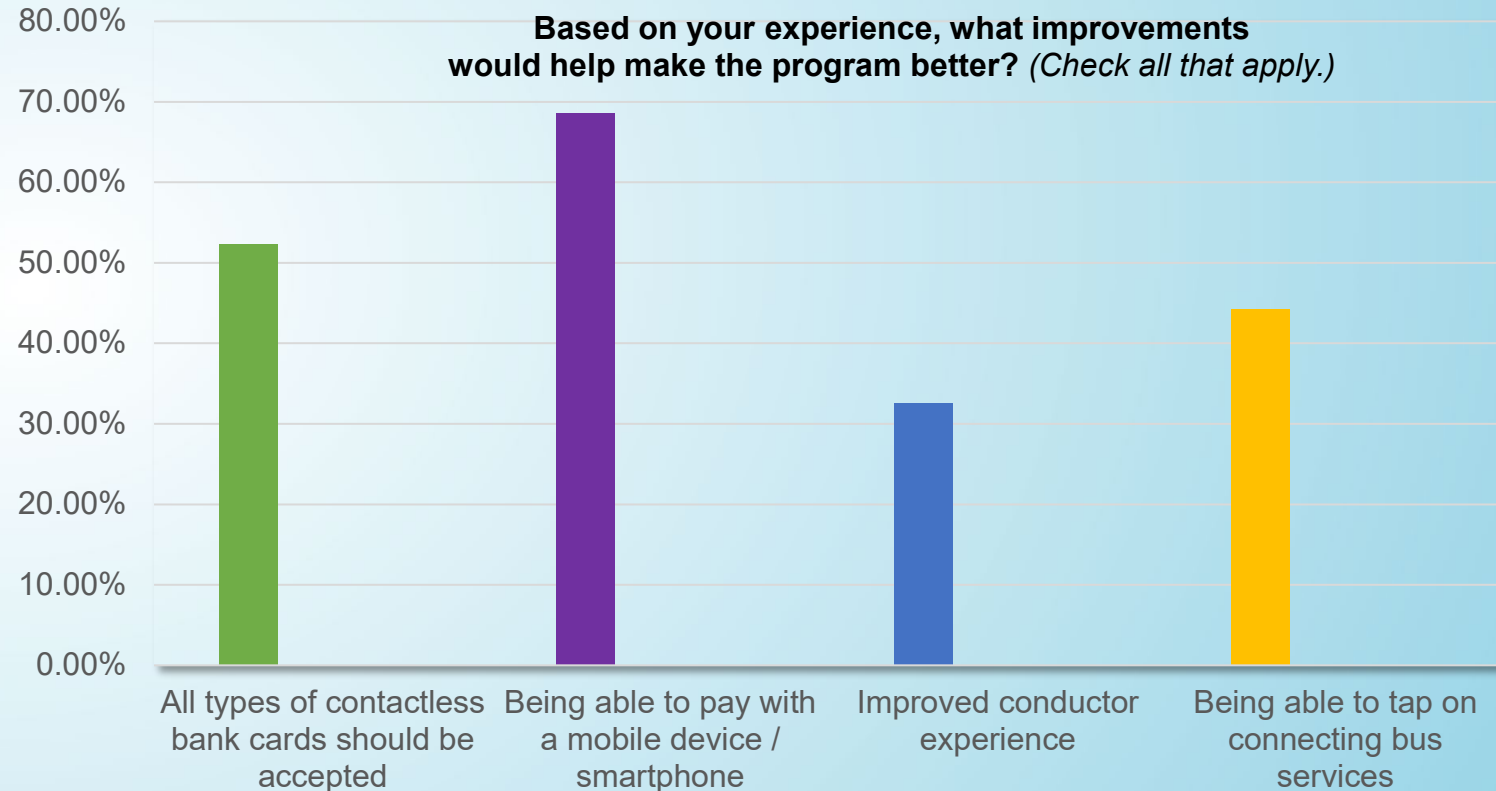
Answered: 86 Skipped: 0



Yes

No

Based on your experience, what improvements would help make the program better? (Check all that apply.)



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Lessons Learned—Pilot Participant Feedback



Commuter between multiple stations:

The benefit for me using Tap2Ride is that while I frequently use Capitol Corridor, I am often not going to the same destinations. The 10-ride ticket is limiting as I really need to solidify being between two cities in a more commuter-oriented approach. For example, my commuting standard would be Richmond to Sacramento, but I sometimes head to Davis or Martinez. **Tap2Ride has allowed me to maximize the use of Capitol Corridor** without wasting my 10-ride ticket.



Ditching the car to run errands:

Biking to the train station and hopping on board the next Capitol Corridor has become second nature to me thanks to tapping. I check the schedule and to see which train is going to work best, then pedal over to grocery shop, run errands, and meet friends and family all over the East Bay.

It really is astonishing how easy the whole experience is and how quick and hassle-free it is compared to driving.



Cycling between transit and train:

As a semi-frequent rider of Capitol Corridor, I want to voice my support for Tap2Ride. This pilot has been a very cool way to experience Capitol Corridor and **adds flexibility to where I want to get off**—which is important for me, as I'm often transferring to other transit services.

The easiest example of this is the BART transfer at Richmond, which on weekends is very difficult to time to where you're not spending 20 to 30 minutes waiting for the next BART out. Since I bring my bike, I can also choose to get off at the Emeryville station and connect to West Oakland BART if I'm going to San Francisco, or Jack London to Lake Merritt if I'm going to South East Bay. Tap2Ride gives me the ability to make this decision last second.



Typically a solo rider:

We have taken the train once as a family and I was reminded of the **extreme convenience of tapping compared to my wife's ticketing ordeal**: having to go online and buy a ticket, get an email, find her ticket on her phone, call it up, etc.



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Next Steps: 2025 Priorities

ASAP

- Launch new card **registration** (and card replacement) flow on capitolcorridor.org/tap2ride
- Recruit to **expand to 500 active participants**.

Early Q2

- Add Tap2Ride readers to **Amtrak Thruway / Connections Bus** that runs a timed transfer between downtown San Francisco and Emeryville station.

Now through Fall

- Develop and deploy **Apple EMD inspection app** for Conductors.
- Deploy **Fare Adjustment Tool** and iterate on it.
- Work with **Conductors** to provide a consistent customer experience during seat check / fare inspection.

Fall to Year-End

- Work toward **growing Tap2Ride pilot to 1K** or more participants—as all Technical, Conductor, and Customer Care tools allow for CCJPA (and Amtrak) to technically handle any number of participants.



Next Steps: Longer-Term Priorities

- Add Tap2Ride readers to **more Amtrak bus connections**.
- Work on **seamless transfers with other transit agencies** that have implemented Tap2Ride.
- Enable **family and small-group Tap2Ride** via Conductors' Apple EMD devices.
- Offer **automated discounted-fare eligibility verification**—for Seniors, Veterans, Lower-Income Californians—via Cal-ITP Benefits Tap2Ride web tool: benefits.calitp.org.



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SAN FRANCISCO BAY AREA TRANSIT FARE COLLECTION

Jason Weinstein
Director, Clipper Program
2/25/25



Spanning the Bay Area



22 Transit Operators



Mobile Phone Partners



Support regional and operator-specific fare initiatives



Clipper Executive Board provides program direction

SONOMA COUNTY

NAPA COUNTY

SOLANO COUNTY

Sonoma

Napa

Fairfield

MARIN COUNTY

San Rafael

San Pablo Bay

Martinez

CONTRA COSTA COUNTY

San Francisco

Oakland

San Francisco Bay

ALAMEDA COUNTY

Redwood City

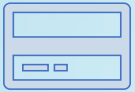
SAN MATEO COUNTY

San Jose

SANTA CLARA COUNTY

Current Clipper Functionality

New Next-Generation Clipper Functionality Has Already Been Incorporated Into Existing Clipper



All-in-one contactless card for 22 transit agencies

- \$33M+ fares collected and 14+ million rides every month, BART is 100% Clipper
- 94% customer satisfaction
- New Clipper readers substantially installed on buses and at ferry and rail facilities

Riders can pay easily with a mobile or plastic card



- Mobile cards in Apple and Google Wallets account for over 33% of Clipper rides
- Over 3.7 million mobile cards issued
- Mobile cards support near real-time purchases via the Clipper app or mobile wallet



Supports regional and agency-specific fares

- Clipper BayPass, *increase in 40% in ridership, and 74% in transfers
- Clipper START, Qualifying disabilities, Senior, Youth
- Transfer discounts between certain agencies

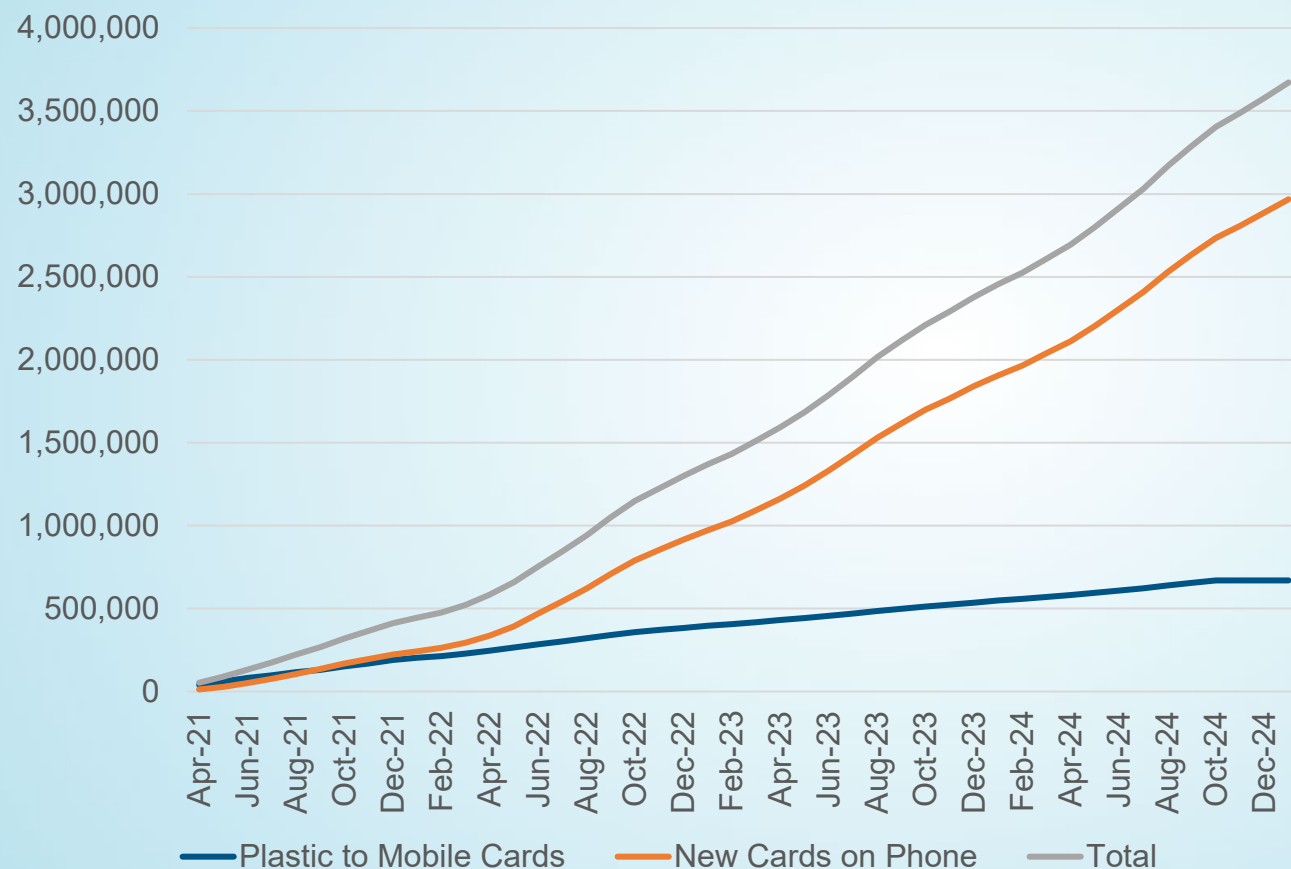
Validates first and last mile trips to/from transit



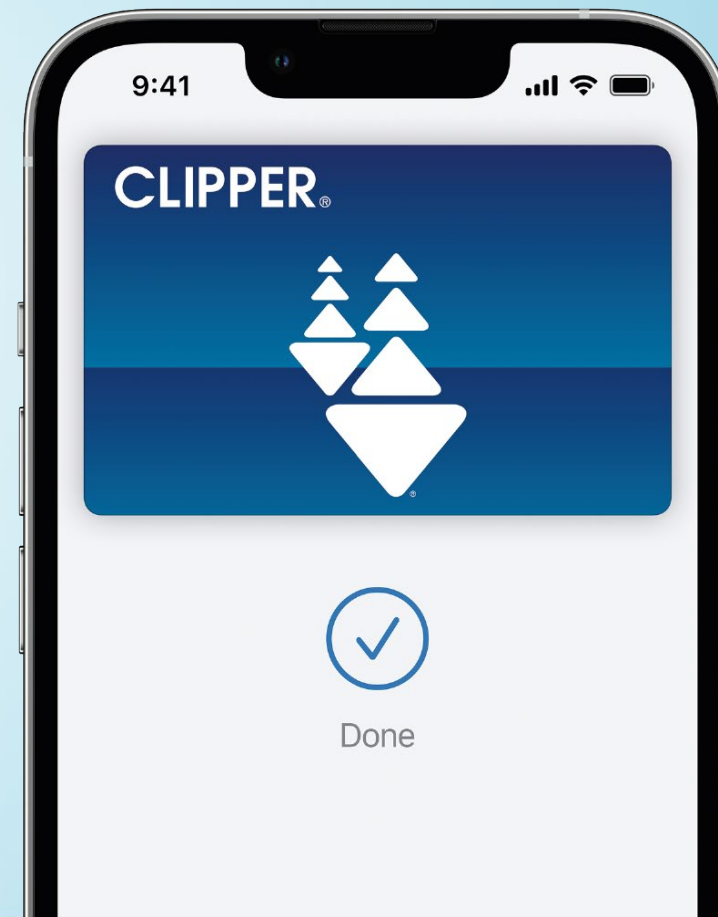
- BART Daily Fee Parking
- BayWheels
- Certain BikeLink lockers

**Data from randomized control trial at BayPass Phase 1 institutions where ~25% of students were given a BayPass and ~75% kept pre-existing single operator pass product.*

Mobile Clipper Cards



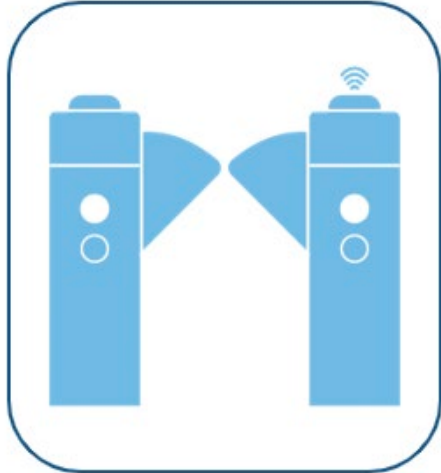
3,700,000



All New Equipment



**On-Board Card
Readers &
Driver Units**



**Clipper Rail
Gate Card
Readers**



**Platform
Stand-Alone
Card Readers**



**Customer
Service
Terminal**



**Handheld
Retail &
Inspection**

Upcoming Clipper Functionality

No-cost and reduced cost transfers*

Opportunity to grow ridership

Major benefit to low-income riders

Open payment

Riders can pay with major contactless credit/debit cards and receive the same transfer and discounts as an adult Clipper card

Clipper app upgrades

Group travel on certain operators

Near-real time purchases supported for plastic and mobile cards

Back-office and equipment

Cloud-based back-end, with new readers

Clipper account management upgrades

Manage kids, seniors, other's accounts

Secure online applications for Youth and Senior cards

**When making an inter-agency transfer, customers using Clipper receive a discount equivalent to the single-ride Clipper fare for amounts up to the region's highest local transit fare (currently \$2.75). This amount may change based on local agency fare adjustments. Funding provided for 18-24 month pilot from Transit Transformation Action Plan Implementation funds.*

Cards You Already Have

Contactless credit/debit cards

- American Express
- Discover
- Mastercard
- Visa



Clipper Mobile App

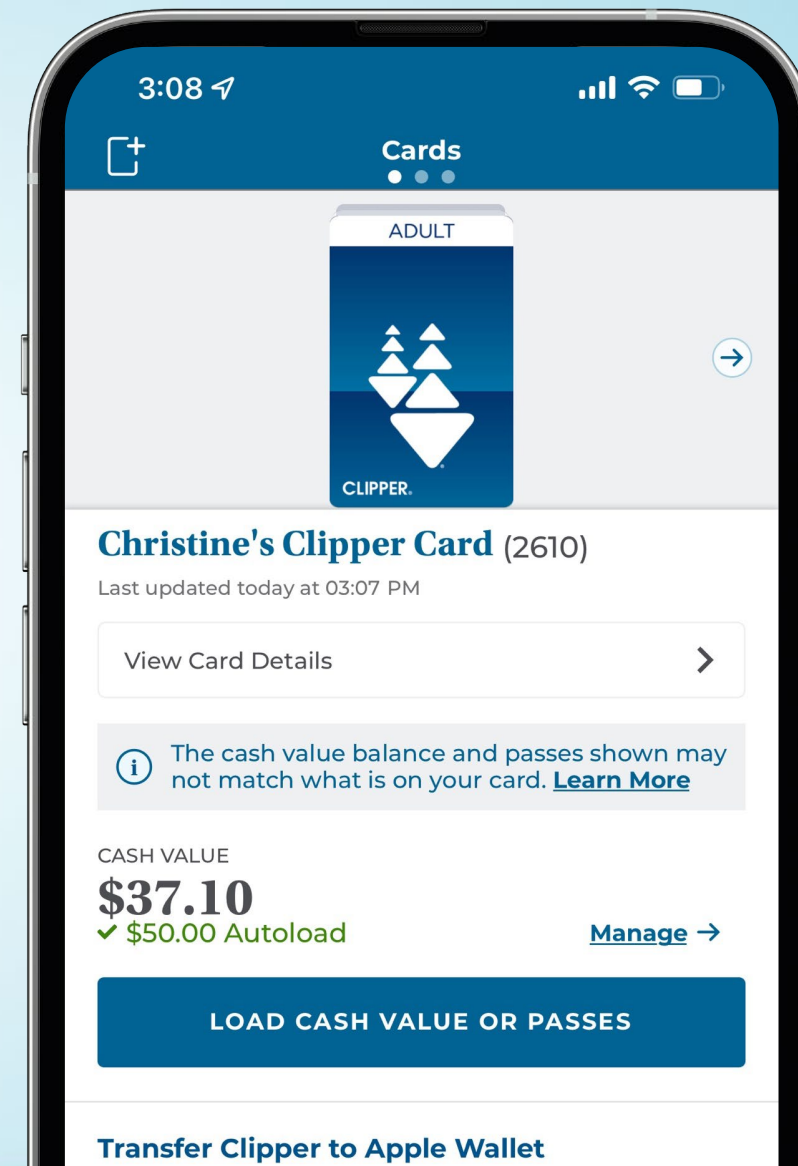
Instant Funds

See Balance

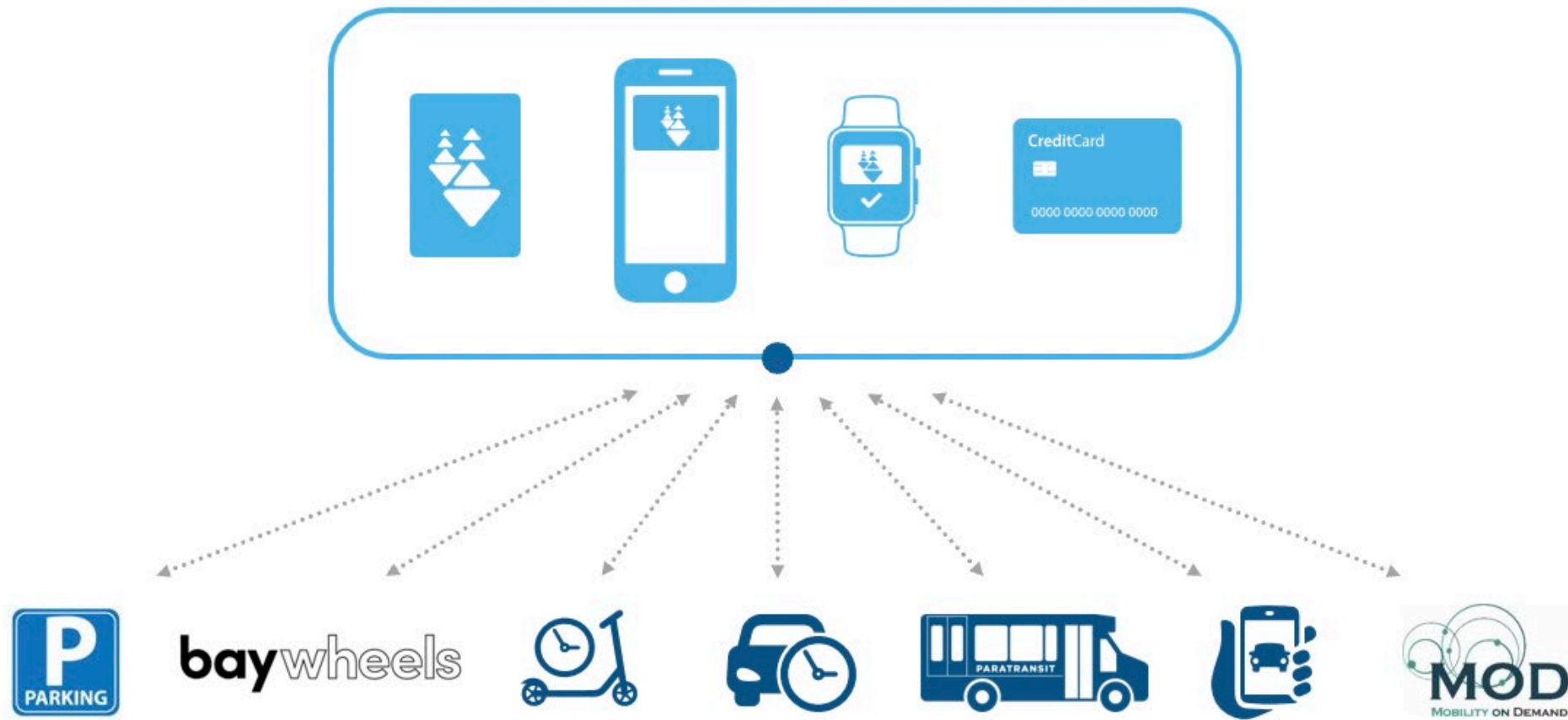
See Travel Costs

Plan Trips

Group Travel



The Way to Access Them All





Thank You

Jason Weinstein
Director, Clipper Program
jweinstein@bayareametro.gov



METROPOLITAN
TRANSPORTATION
COMMISSION