MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

Wednesday, June 29, 2022
10:00 a.m. – 12:00 p.m.

ZOOM MEETING AND TELECONFERENCE ONLY

VIDEOCONFERENCE AVAILABLE

Zoom Meeting and Teleconference Only

TELECONFERENCE IS AVAILABLE

TO JOIN THE MEETING: https://scag.zoom.us/j/220315897
CONFERENCE NUMBER: +1 669 900 6833 US Toll (West Coast)
MEETING ID: 220 315 897

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Priscilla Freduah-Agyemang at (213) 236-1973 or email agyemang@scag.ca.gov

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 630-1402. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA
Wednesday, June 29, 2022

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The Regional Transit Technical Advisory Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.

1.0   **CALL TO ORDER**
(Joyce Rooney, City of Redondo Beach, Regional Transit TAC Chair)

2.0   **PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on** the agenda, or items not on the agenda, but within the purview of the Regional Transit Technical Advisory Committee, must fill out and present a speaker's card to the assistant prior to speaking. Comments will be limited to three minutes. The chair may limit the total time for all comments to twenty (20) minutes.

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4.4	**Mobility as a Service Feasibility White Paper Final Report**	20	50
	(Priscilla Freduah-Agyemang, SCAG)		

4.5	**Regional Dedicated Transit Lanes Study Update**	15	73
	(Priscilla Freduah-Agyemang, SCAG)		

5.0   STAFF REPORT

5.1	**2024 Connect SoCal Overview, Schedule & Updates**	5
	(Priscilla Freduah-Agyemang, SCAG)	

5.2	**2024 Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) High-Quality Transit Corridor and Major Transit Stop Process and Schedule**	5
	(Steve Fox, Senior Regional Planner, SCAG)	

6.0   ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, August 31, 2022.

Regional Transit Technical Advisory Committee (RTTAC)
of the
Southern California Association of Governments

March 30, 2022

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE (RTTAC). AN AUDIO RECORDING OF THE MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Regional Transit Technical Advisory Committee held its meeting telephonically and electronically given public health directives limiting public gatherings due to the threat of COVID-19 and in compliance with the Governor's recent Executive Order N-29-20. The meeting was called to order by Chair, Joyce Rooney, Beach Cities Transit.

Members Participating:

Joyce Rooney (Chair)	City of Redondo Beach/Beach Cities Transit
Kristin Warsinski (V. Chair)	Riverside Transit Agency
Diana Kotler	Anaheim Transportation Network
Geraldina Romo	Antelope Valley Transportation Authority
Esteban Rodriguez	Antelope Valley Transportation Authority
Alfredo Torales	Big Blue Bus
Alyssa Mendez	City of Commerce
Diana Chang	Culver City Transportation Department
Jane Chan	Culver City Transportation Department
Joe Raquel	Foothill Transit
Josh Landis	Foothill Transit
Austin Novstrup	Gold Coast Transit District
Shirley Hsiao	Long Beach Transit
Lori Huddleston	Los Angeles Metro
Teresa Wong	Los Angeles Metro
Abigail Marin	Montebello Bus Lines
Yessie Granados	Montebello Bus Lines
Anthony Rodriguez	Montebello Bus Lines
Rory Vaughn	Metrolink
Aubrey Smith	Metrolink
Derek Donnell	Norwalk Transit
Megan Walker	Omnitrans
Jennifer Nguyen	Riverside Transit Agency
Nick Echeverri	Santa Clarita Transit
Corie Zamora	Santa Clarita Transit
Ben Gonzales	City of Simi Valley Transit
Rohan Kuruppu	Sunline Transit Agency
Tyler Nestved	Thousand Oaks Transit
Dustin Strandberg	Victor Valley Transit

Gustavo Gomez	Imperial County Transportation Commission
Kurt Brotcke	Orange County Transportation Authority
Kim Tucker	Orange County Transportation Authority
Dan Phu	Orange County Transportation Authority
Beatris Megerdichian	Riverside County Transportation Commission
James Simpson	Riverside County Transportation Commission
Eric DeHate	Riverside County Transportation Commission
Nancy Strickert	San Bernardino County Transportation Authority
Josh Lee	San Bernardino County Transportation Authority
Rebekah Soto	San Bernardino County Transportation Authority
Victor Lopez	San Bernardino County Transportation Authority
Claire Grasty	Ventura County Transportation Commission
Dolores Lopez	Ventura County Transportation Commission
Michael Manville	University of California, Los Angeles
Maurice Eaton	Caltrans District 11

SCAG Staff:

Philip Law	Stephen Fox
Priscilla Freduah-Agyemang	KiHong Kim
Marisa Laderach	

1.0 CALL TO ORDER

Joyce Rooney, Beach Cities Transit, called the meeting to order at 10:05 a.m. Attending agencies introduced themselves.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 RECEIVE AND FILE

3.1	Minutes of the January 31, 2022, RTTAC Meeting
3.2	Regional Transit Operators Forum
3.3	FTA Dear Colleague Letter Transit Asset Management (TAM) Plan Update
3.4	FTA Dear Colleague Letter Public Transportation Agency Safety Plan (TASP) Update

Priscilla Freduah-Agyemang, SCAG staff, reviewed the Receive and File items and noted the Regional Transit Operators forum is available and any issues, comments and discussions are welcome.   Also, items 3.3 and 3.4 contain updated information on the Transit Asset Management and Public Transportation Agency Safety Plans.

4.0 <u>**INFORMATIONAL ITEM**</u>

4.1 <u>2024 Connect SoCal Overview, Schedule & Updates</u>

Priscilla Freduah-Agyemang, SCAG staff, provided an update on Connect SoCal 2024. She noted the Regional Transportation Plan/Sustainable Communities Strategy is a long-range vision for the region with a 25-year outlook and contains policies, strategies and projects which advance mobility, economic growth and a more sustainable region. Further, the plan will build upon and refine the elements of Connect SoCal 2020 including Core Vision and Key Connection. Additionally, it will highlight directives from the Regional Council to focus on equity, resilience, and the digital divide. The transportation vision includes maintaining our current system while evolving future directions. Economic goals include supporting a sustainable, efficient, and productive regional economic environment that provides opportunities for all residents. The framework and scheduled was reviewed leading up to the plan's final adoption in 2024.

Ms. Freduah-Agyemang, reviewed plan steps and future outlook for coordination with the RTTAC. She also reviewed transit safety target setting and the Mobility as a Service (MaaS) and Regional Dedicated Transit Lanes Study and their assimilation into the plan. Steve Fox, SCAG staff, updated the committee on High Quality Transportation Corridors. Philip Law, SCAG staff, reviewed the transit network for regional modelling.

4.2 <u>SCAG-UCLA Ridership Study Phase 2 – Neighborhood Change & Transit Ridership</u>

Prof. Mike Manville, University of California, Los Angeles, ITS, reported on the SCAG-UCLA Transit Ridership Study Phase 2. Mr. Manville stated a small and lower – income share of the population account for a greater proportion of transit riders and a small share of the land area account for most transit boardings. Additionally, if housing prices push those riders further from those places, then ridership falls. Central questions of the study explore whether rises in housing costs in a neighborhood, results in transit ridership decline. Also, explores riders who leave an area tend to ride transit less in their new locations. Mr. Manville reviewed the data collected and the methods followed. He noted ridership gains were seen around new rail lines.

Mr. Manville reported changes in neighborhoods driven by escalating housing costs tend to drive a corresponding loss in transit ridership. He reviewed underlying demographics that further support this conclusion. He next explored rider behavior after moving to a new location. He noted when riders move to lower density areas where it is more difficult to access transit, they tend to use transit less frequently.

4.3 <u>Riverside Transit Agency Fare Programs and Promotions</u>

Jennifer Nguyen, Riverside Transit Agency, reported on their fare program and promotions. She stated RTA began service in 1977 and has a service area covering 2,500 miles with 33 fixed routes as well as dial-a-ride service together served by fleet of 334 vehicles. Following the decrease in ridership due to the pandemic, fare promotions have

been offered to encourage system ridership. Free fares for youth and college students began August 2020 and will continue through July 2022. Participating colleges includes University of California, Riverside, Cal Baptist University, La Sierra University, Moreno Valley College, Mt. Jacinto College, Norco College and Riverside City College. Ms. Nyguen reported ridership trends indicate an increase in youth and college student riders during the promotion period. The October 2021 $5 fare promotion was also offered. This allowed riders to purchase a 30-day pass or 10 ticket dial-a-ride booklet for $5. This promotion sought to not only encourage ridership but to provide affordable mobility choices to those experiencing economic hardship as a result of the pandemic. RTA experienced an increase of ridership of 18% in October and 37% in November 2021. Further there was in increase in the mobile use ticketing during this time.

Ms. Nguyen stated the agency is celebrating its 45th anniversary and offering rides for 25 cents from March through April 2022 which has produced increased ridership in its first month.

4.4   SBCTA Redlands Passenger Rail Project (Arrow) Project

Victor Lopez, SBCTA, provided an update on SBCTA's Redlands Rail Project. He stated the goal is to extend transit connectivity by adding rail service to Redlands. He noted three primary procurements were put forth for the project, vehicle acquisition, maintenance facility and rail line construction. Vehicle procurement includes the acquisition of 3 diesel multiple units with passenger rail cars. Additionally, a new maintenance facility is being constructed on W. 3rd Street in San Bernardino to support the line's activities. He next reviewed rail line construction including 5 new stations. This includes a new station in Redlands and University Station. Further, 24 grade crossings were constructed as part of the rail line construction.

5.0   ADJOURNMENT

Joyce Rooney, Beach Cities Transit, adjourned the meeting at 11:25 a.m.

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No. 3.2
June 29, 2022

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Priscilla Freduah-Agyemang, Senior Regional Planner,
213-236-1973, agyemang@scag.ca.gov

Subject: Regional Transit Operators Forum

DISCUSSION:

This is to remind the RTTAC members of the SCAG regional transit operators' forum, which was introduced and launched at the January 27, 2021 meeting. The community forum is a platform for operators to discuss relevant topics related to transit in the region.

The forum is a discussion space for transit operators in the SCAG region to continue to dialogue and exchange information, share best practices and receive feedback on transit service planning, operations, emerging trends and issues, share ideas on future projects, as well as give operators the opportunity to continue to engage in meaningful discussions and peer-learning experiences on variety of transit topics.

The membership is made up of the RTTAC members and is limited to agency staff from public transportation providers in the SCAG region and designees. Other membership to the site will be by request only, pending approval by SCAG staff. Every RTTAC member should have received an email with the link to the community.

SCAG wants to ensure the best experience for all members and has included some guidelines for members of the site. The guidelines include community rules, individual and group discussion etiquette, and information on privacy.

Please contact Priscilla Freduah-Agyemang, agyemang@scag.ca.gov or 213-236-1973 with any questions related to the forum. We also welcome any comments/thoughts on how to improve the site.

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No. 3.3
June 29, 2022

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Steve Fox, Senior Regional Planner, 213-236-1855,
              fox@scag.ca.gov

Subject: 2024 Connect SoCal Regional Transportation Plan/Sustainable
              Communities Strategy (RTP/SCS) High-Quality Transit
              Corridor and Major Transit Stop Process and Schedule

SUMMARY:
SCAG staff compiles the regional High-Quality Transit Corridor (HQTC) network and identification of Major Transit Stops (MTS) with each RTP/SCS cycle every four years. This report discusses the process and schedule in advance of the release of the Draft 2024 Connect SoCal RTP/SCS in the fall of 2023.

DISCUSSION:
SCAG staff compiles the regional HQTC network and identification of MTSs with each RTP/SCS cycle every four years. SCAG's HQTC and MTS methodology was developed and vetted with RTTAC members, other California Metropolitan Planning Organizations (MPOs), the Governor's Office of Planning & Research (OPR) and other stakeholders. The HQTC and MTS methodology can be found here:https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_transit.pdf?1606002122#page=83.

For the 2024 Connect SoCal RTP/SCS, the base year is 2019, and the horizon year is 2050. SCAG staff is currently compiling the draft 2019 base year HQTC and MTS network and will send it to the county transportation commissions (CTCs) and transit operators for review in early July 2022. SCAG staff will also ask transit operators to identify transit corridors which they expect will be operating as HQTCs in the future.

2024 Connect SoCal HQTC/MTS Schedule

Below is the anticipated schedule for the 2024 Connect SoCal RTP/SCS HQTC and MTS network development and review process.

1. Identify Draft 2019 Base Year HQTC Network. SCAG staff identifies and compiles the draft 2019 base year HQTC network. - June 2022

2. Send Out Draft 2019 Base Year HQTC Network to Transit Operators and CTCs. – SCAG staff sends out email to transit operators and CTCs identifying the draft 2019 base year HQTC network at the transit operator level for review. – July 5, 2022

3. Transit Operator and CTC Review of Draft 2019 Base Year HQTC Network. – Transit operators and CTCs review draft 2019 base year HQTC network and identify future HQTC corridors. – July 5, 2022 to July 29, 2022

4. SCAG Updates Draft 2019 Base Year HQTC Network. – SCAG staff updates and finalizes the draft 2019 base year HQTC network and compiles future HQTCs based on transit operator and CTC feedback. – August 2022

5. Draft 2050 Horizon Year HQTC Network. – SCAG staff sends out draft 2050 horizon year HQTC network to transit operators and CTCs for review. – June 2023

6. SCAG Updates Draft 2050 Horizon Year HQTC Network. – SCAG staff updates and finalizes the draft 2050 horizon year HQTC network based on transit operator and CTC feedback. – July 2023

7. Draft 2024 Connect SoCal Released. – Fall 2023

NEXT STEPS:

SCAG staff will update RTTAC members on the HQTC and MTS process and schedule at future meetings.

Southern California Association of Governments
June 29, 2022

About MST

- *$53M annual operating budget*

- *162 heavy-duty buses, trolley replicas, mini-buses*

- *4.5M Annual Passengers (Pre Covid)*

- *Pre COVID-Operating in 4 counties (1/5th of California Coast)*

- *Fares based on route-distance. ($1.50, $2.50, $3.50, $12.00)*

What is Cal-ITP?

Managed by Caltrans for CalSTA, the California Integrated Travel Project (Cal-ITP) is a statewide initiative designed to support transit in California, including:

- a **common payment system** (debit/credit cards and mobile wallets)

- **real-time data standard** (GTFS)

- **seamless verification of eligibility** for transit discounts

Making paying for transit as easy as paying for a coffee

CAL ITP Benefits

Paying for a coffee

From a transit rider's perspective, **paying for transit should be as easy as paying for a coffee:** whether ordering an Americano or a green tea, customers know they can instantly pay by tapping their contactless bank card or smart device, no matter which coffee shop they visit, or where.

Paying for transit

Today in California, though, riders can't pay for transit like coffee. Instead, they typically pay in cash, purchase a daily, weekly or monthly pass, or buy a reloadable transit fare card. They need to know the fare in advance and make sure they have enough money in their pocket or loaded onto their card before boarding.

Selling transit like coffee

Letting riders pay their fare using what's already in their pockets saves time and money, while reducing operating expenses for transit providers.

Why is paying for the bus so difficult?

- **Traditional monthly passes are sometimes too expensive for low-income passengers**

- **Paying cash provides the least discount to transit passengers**

- **Accepting cash provides the greatest expense to the transit operator**

- **Closed-Loops Systems (Clipper, TAP, Compass, Ventra, OMNY, Orca, Oyster, Octopus…):**

  - **Extremely expensive to install and maintain**
  - **Only work within a limited geographic area**
  - **Generally, can only be used to purchase a single product**
  - **While app-based closed-loop systems are becoming more common, "app fatigue" is real**

- **90% of US transit customers expect a contactless payment option moving forward**

Why can't I use the same card to buy my coffee to also pay for my mobility services using existing financial infrastructure?

Contactless Fare Payments Demo

- Demonstration by Caltrans CA Integrated Travel Program (Cal-ITP)
- Project kickoff May 2020
- New devices onboard MST fixed route buses (120), excludes ADA paratransit
- Tap to ride using Contactless credit, debit, or enabled device
- Tap on and off and pay for only distance travelled
- Fare capping - daily, weekly, monthly
- Discount fares for seniors, veterans, and disabled

Monterey-Salinas Transit @MST_TransitNews · 23h

Paying for a bus ride just got easier: Today MST becomes the first public transit agency in CA to add open contactless fare payment technology to its buses. Now riders can tap to pay their fare on an MST bus—just like they tap to pay for a coffee, lunch, or anything else.

💬 1   🔁 22   ❤️ 31

Monterey-Salinas Transit @MST_TransitNews · 23h

MST riders can use a Visa or Mastercard contactless credit/debit/prepaid card or mobile wallet to pay a fare + only pay for the distance traveled when tapping on when boarding / off when exiting—max $10/day + pay-as-you-go 7- & 31-day caps: mst.org/contactless-pa...

💬 1   🔁 1   ❤️ 5

Monterey Salinas Transit
Weekly Contactless Trips
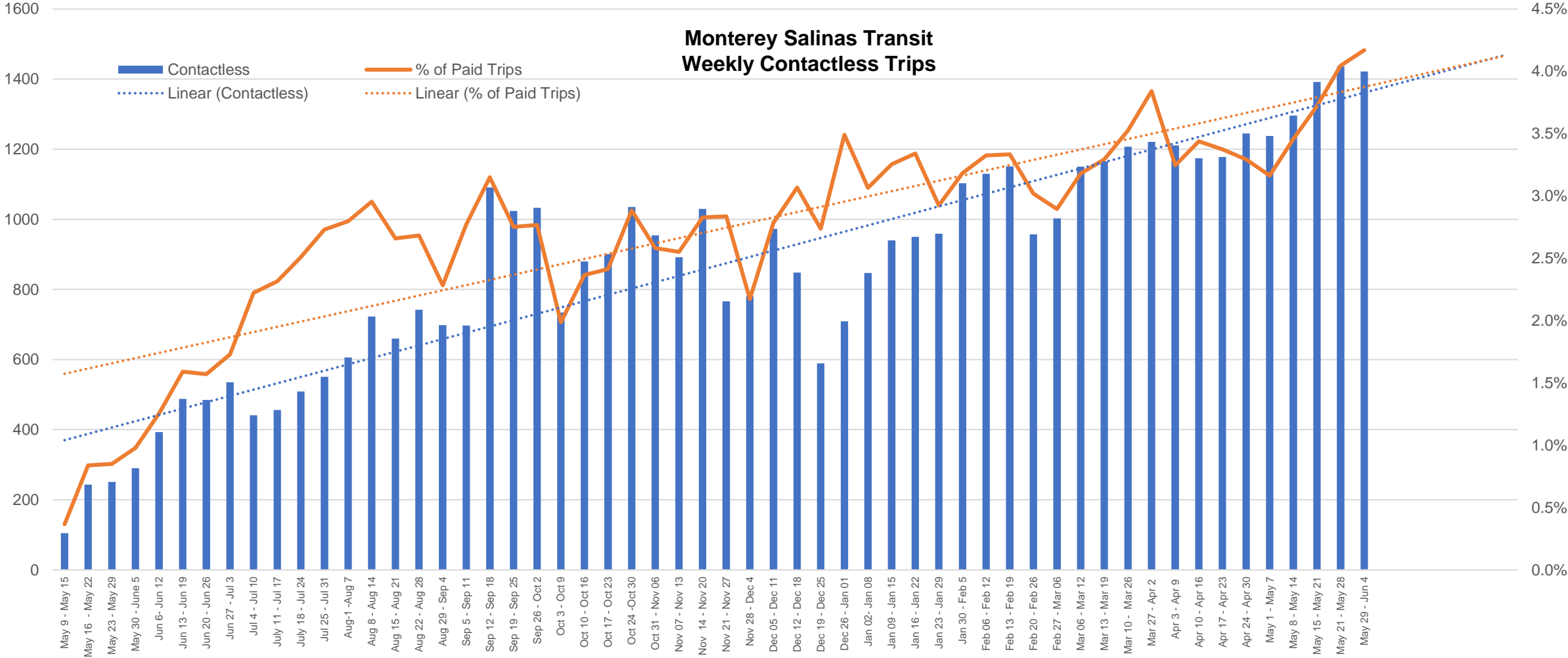
# What about the un/underbanked riders?

- According to APTA, 55% of transit users nationwide have annual household incomes under $50,000

- According to Federal Reserve, households making less than $40,000 annual income are 5X more likely to be unbanked.

- Federal Deposit Insurance Corporation (FDIC) estimates that transaction fees for unbanked or underbanked average $3,000 in annual costs per person

Transit as a financial inclusion pathway

- CashApp is an option for riders who do not have a contactless way to pay. No bank account needed; customers only need an email, phone number, or State ID to open an account

- Can be used not just on MST but also anywhere Visa/Mastercard accepted

- Account is digital or customers can request a physical debit card

- Customers can load paper money into their account for a $1 fee at 1,000s of retail locations (such as Walgreens, 7-Eleven, Family Dollar) or have paychecks and tips directly deposited to their account.
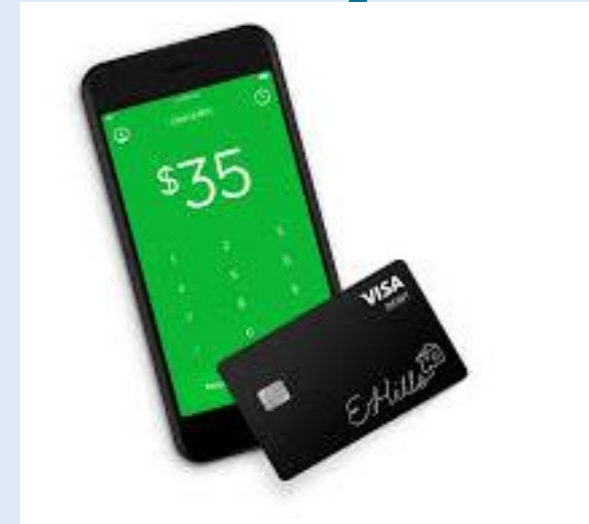
Cash App

Early result: MST riders are using this option

- Cash App - 4% of contactless transactions

- **30%** of Cash App debit cards tapped on MST since May are **new customers** using the Cash App for the first time

- Cash App customers using the cash deposit network are **2x more likely to not have a bank account** or debit card linked to their Cash App account

- Cuentas MasterCard has started an independent marketing push in Salinas
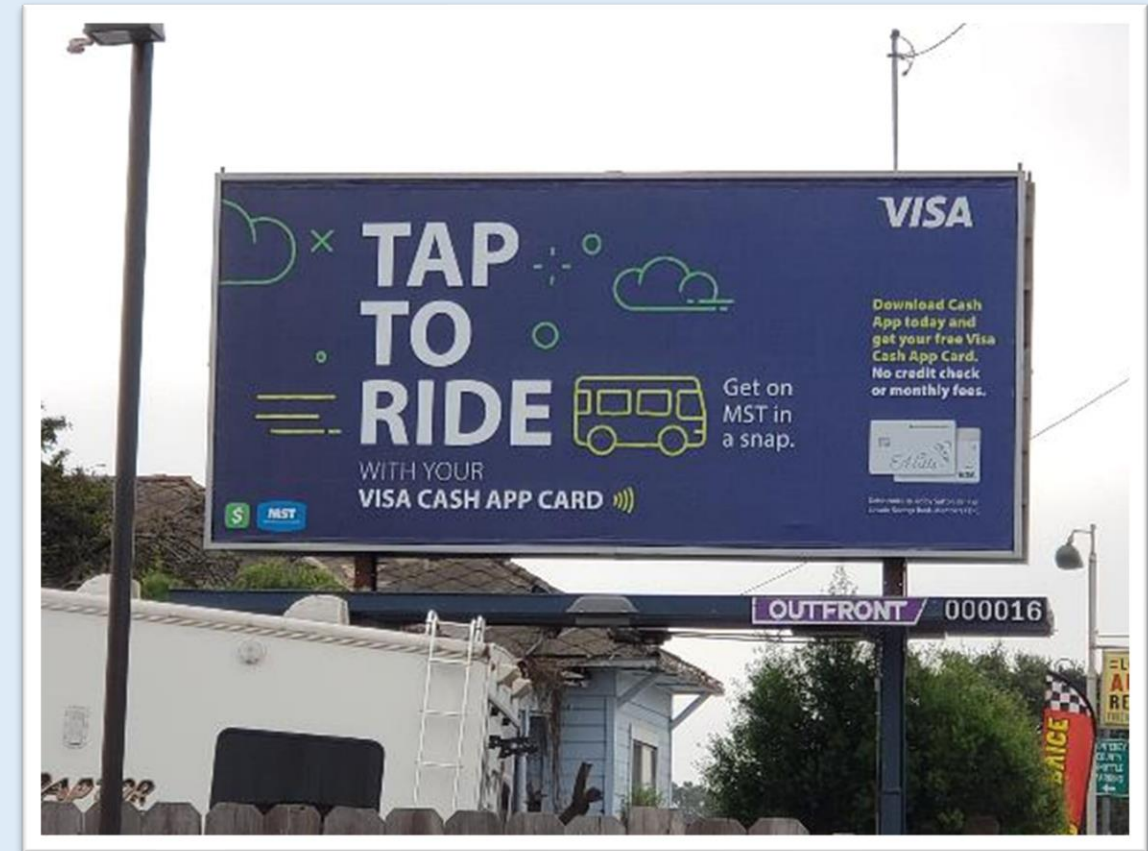
What's next for MST Contactless Payments

- Re Launch Discount Eligibility Verification tool using Login.gov.

- Conclude demonstration June 30, 2022.

- Begin promotional activities to raise awareness.

- Open system to AMEX and Discovery contactless payment schemes

- Procure additional services and equipment from statewide Cal-ITP Procurement

- Begin deployment on ADA paratransit and mobility services, including taxi vouchers.

- Add local community colleges and universities to discounted contactless fare program.

- Continue experimenting with the technologies to determine new, innovative uses

California Mobility Marketplace

Cal-ITP offers access to statewide contracts, technical support, and mobility information.
-> visit www.camobilitymarketplace.org
-> email hello@calitp.org

What else would you like to see included in the marketplace?

Accessible Autonomous Vehicle (AAV) Pilot Update

Bill Tsuei
Director of Information Technology
Tsuei@accessla.org

access

AAV Pilot Overview

Access AAV project focus on seniors and ADA Riders. Three functional focus areas:
1. Purpose-Built Accessible Autonomous Vehicle
2. Human Machine Interfaces (HMI)
3. Operational Safety

access

Purpose-Built AAV

FTA Transit Bus Automation Strategic Partnership – Accessible Autonomous Vehicle (AAV) Pilot

- Awarded $125,000 on August 2, 2019
- Partnered with Lilee Systems in San Jose & Sunset Vans in Corona, California
- AAV has been built in October 2021
- Vehicle is FMVSS, ADA, Buy America Compliance and Altoona tested
- Vehicle roadshows:
  - Late October: 2021 CalAct Fall Conference
  - Early November: 2021 APTA EXPO
  - Early January: 2022 CES
  - Late summer: LA Regional Demo
  - September 2022: ITS World Congress

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Vehicle In Progress Photos
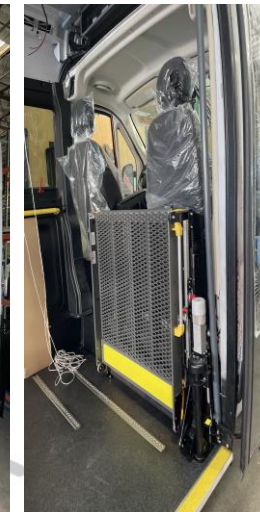
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Vehicle Photos

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AAV - HMI

HMI focus on rider experience with the combination of hardware & software:

- On-Board Hardware: WiFi, GPS, HD Cameras, Display & Voice Communication
- Rider Software: Account Based Smart Mobile App based on WMR launched in 2018

FTA Mobility for All Grants – Accessible Traveler Mobile App (ATMA)
- Awarded $330,000 on June 5, 2020
- 18 month project began late June 2021
    - Major Functions:
        - Mobile Ticket/eWallet
        - Trip Planner
        - Mobile Reservation
        - Wayside guidance
        - Driver Communication

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AAV - HMI

ATMA focuses on assistive technologies and is compliant with WCAG & Section 508 requirements
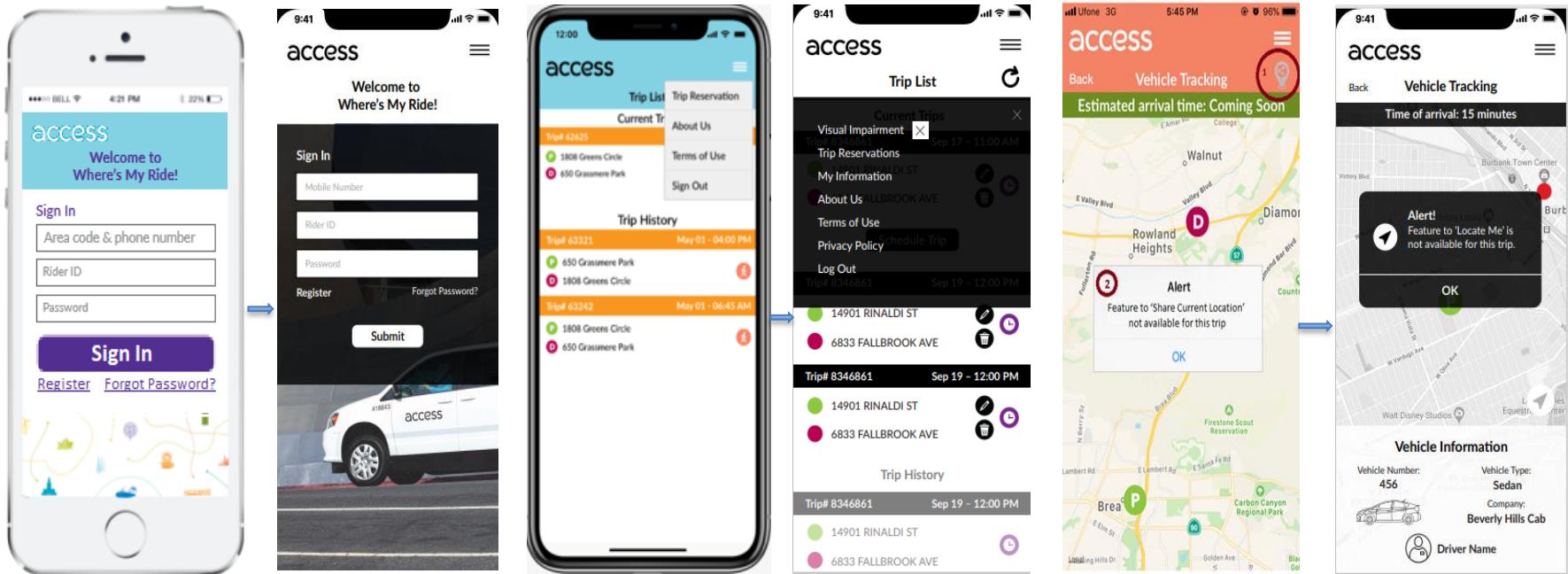
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Operational Safety

Operational Safety emphasizes on two areas:

- Vehicle Safety
  - SAE Level 4 autonomy
  - Cyber Defense: Centralize vehicle connectivity, include telematics, with VLAN & subnet
  - SafeRide - Real Time Vehicle Status Monitoring System
    - ODB II codes
    - On Board visualization
    - Low latency 4G/5G multi-carrier connectivity
    - Vehicle intervention capability
- Operational Control Center
  - Same concept as rail operational control center
  - Vehicle remote control capability
  - Remote voice communication

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Operational Safety

Challenges

- Funding Sources
- Infrastructure Readiness
- Labor Acceptance
- Rider Confidence
- Cost Per Vehicle
- Cyber Security
- Liability
- Politics

access

Contact

Q & A

Bill Tsuei
tsuei@accessla.org

access

www.scrttc.com

**Southern California Regional Transit Training Consortium
dba
California Transit Training Consortium**

CTTC

Jane Leonard, Interim Executive Director

SCAG Regional Transit TAC
June 29, 2022

SCRTTC Mission & History

**Advance the skills of our transit workforce…
…preparing for the future.**

- Established in 2004 by Jim Ditch (Long Beach Transit) and collective agencies in LA County Region - California 501(c)3 Non-profit Corporation

- Concern about maintenance safety and training for the new advanced alternative fuel technologies in transit buses and infrastructure

- Founders initiated this collaboration for training research, development and delivery based on a new Learning Model

- Consortium partnership of 34 Transit Agencies, 17 Community and Technical Colleges, 7 Private Partners … and growing

SCRTTC

CTTC Funding Sources

- Los Angeles County Bus Operations Subcommittee (LA BOS) – covers member fees of all 17 Los Angeles County transit agencies
  - Majority of training delivery funds
  - Competitively sought every three years with FTA 5307 cycle
- Non-BOS Transit & College Membership fees
- Private Industry Partnerships
- FTA Innovative Workforce and other FTA Grants
- California State Grants
- Leveraged funding partnerships with colleges & transit agencies – identify SCRTTC in grant applications

SCRTTC

Transit Technology Training

- Requires constant upgrade of workforce skills to remain current with advancements in transit technologies and safety requirements

- Critical for transit agency adherence to Zero Emission Vehicle mandates

- Aligns with cultural shift from "Mechanics" to "Technicians"

SCRTTC

Transit Technology Training

- Evaluation via Needs Assessment, Skill Gap Analysis and Strategic Planning – completed 2021 – and ongoing

- Prioritize workforce training needs through collaboration

- Development team - 1 transit and 1 college Subject Matter Expert (SME)

- Beta testing, evaluation and validation

- Train-the-Trainer (T-t-T) results in SCRTTC Certified Instructors; Certificates Issued

SCRTTC

CTTC Training Delivered as of June 15, 2022

89,280 Training Hours
6,388 Participants

CTTC Distance Learning

eLearning Courses Developed & Delivered - Virtual Instructor Led Training (VILT) and Online Self-led Courses:

- DVOM
- Electrical I
- Battery Electric Vehicle Safety & Familiarization
- Cummins INSITE
- Cummins 8.9 CNG Engine - Levels I and II
- HVAC I
- CNG Vehicle Safety
- Brakes I & II
- Project Management
- Leadership Management

SCRTTC

CTTC In-person Learning
Courses Developed & Delivered:

- Electrical II
- Electrical III
- Electrical IV
- OSHA Safety Compliance
- High Voltage (original)
- Leadership Series
- FTA Transit Instructor - Train the Trainer
- Commercial Vehicle Inspection

SCRTTC

Courses for Development & Delivery

- High Voltage (updated)
- Hydrogen Fuel Cell Technology
- Regulatory Compliance (CEO/Management)
- Electrical V (updated)
- CNG Engine Diagnostics

SCRTTC

SCRTTC Strategic Plan

- Develop robust online learning modality using digital suite, interactive forums and "community of practice" platforms for maximized benefit to stakeholders

- Utilize existing academic and private partner resources to further develop instructional design opportunities

- Expand reach to broader membership throughout California

- Explore funding resources in other regions, based on the LA BOS model

- Continue annual education scholarships through the James A. Ditch Education Fund

SCRTTC

Thank you!

Questions?

Jane Leonard

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scrttc.com ▪ jimditchclassic.com

Southern California Association of Governments
Remote Participation Only
June 2, 2022

To:	Transportation Committee (TC)	**EXECUTIVE DIRECTOR'S APPROVAL**
From:	Priscilla Freduah-Agyemang, Senior Planner (213) 236-1973, agyemang@scag.ca.gov	*Kome Ajise*
Subject:	Mobility as a Service Feasibility White Paper Final Report	

RECOMMENDED ACTION:
Information Only - No Action Required

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
The Mobility as a Service (MaaS) Feasibility White Paper is assessing the feasibility of implementing MaaS within the SCAG region, including the identification of challenges and opportunities, key policy issues and potential solutions, leading to the development of an implementation guide, to advance Connect SoCal's goals of improving mobility, sustainability, and air quality. Staff previously shared key findings from the study research and the draft key strategies and implementation guide. This report further provides an update on recent progress including preliminary updated MaaS strategies, implementation guide and the final report.

BACKGROUND:
The 2020 Connect SoCal identified Key Connections that lie at the intersection of land use, transportation and innovation meant to advance policy discussions and strategies to leverage new technologies and create better partnerships to increase progress on the regional goals. One of these Key Connections is Shared Mobility and MaaS, emphasizing that the future of travel will be shaped by technology and the ability of residents to easily choose from and use a variety of travel options.

For the purposes of the white paper, and to provide clarity and build a strong framework, the project team and the Advisory Group agreed to define MaaS as, "*MaaS integrates transportation services into a single mobility platform that provides competitive alternatives over private vehicles, to promote universal basic mobility, encourage mode shift, and foster sustainable travel choices.*".

MaaS allows travelers to research and compare different transportation options from one screen and plan, book and pay for their trip and encourage use of multi-modes including access to buses, bikes, trains, taxis, ride-hailing, ridesharing and new micro-mobility options such as e-scooters. Maas can equitably offer customized mobility options for all persons, if effectively implemented, and can help to address some of the equity challenges related to mobility, access to opportunities, trip payment and trip planning for low-income residents.

PRELIMINARY FINDINGS:

Staff previously shared findings of the literature review and case studies, existing conditions analysis, key highlights from the Advisory group interviews and meetings, key challenges and opportunities for MaaS in the SCAG region and goals and objectives identified to address the key challenges and harness the opportunities. Staff subsequently shared the draft key strategies and implementation guide with TC in April.

The previous update to TC also included the key framework elements – infrastructure, data and technology, management and operations, governance, institution, finance, and equity and public engagement – established to guide the study. These framework elements informed the preliminary research and findings of the whitepaper and are the organizing framework for the key strategies and implementation guide included in the final report.

Based on the overall study tasks and findings, the project team developed the proposed final key strategies and guide to advance the implementation of MaaS in the SCAG region. The final strategies were refined based on feedback from the Advisory group. While the strategies are kept at a high level to function as regional guidance from SCAG, each strategy should be tailored to an individual pilot or implementation based on the scale, geography, and local context.

Table 1 summarizes the proposed strategies and potential responsible parties:

Table 1: Proposed Key Strategies and Responsible Parties

Strategies	Responsible Parties
Infrastructure	
1. Develop mobility hubs throughout the SCAG region	Lead: CTCs Support: SCAG
2. Develop associated payment and digital infrastructure	Lead: Transit Agencies Support: Private Companies, all levels of government, and Cities
Data and Technology	

Strategies	Responsible Parties
1. Encourage and provide incentives for cities and local transit agencies within the SCAG region to leverage Cal-ITP's support and start open-loop payment demonstrations. Test shared product systems and post-payment solutions.	Lead: Transit agencies, interested cities or other local jurisdictions. Support: Caltrans, SCAG
2. Take advantage of the State's Leveraged Procurement Agreements for both equipment and bank processing services as a group.	Lead: Transit agencies, interested cities or other local jurisdictions. Support: Caltrans
3. Make the implementation guide developed from this study available and/or create individual toolkits of this study for public transit providers.	Lead: Transit agencies, interested cities or other local jurisdictions. Support: SCAG, CTCs
Management and Operation	
1. Leverage a comprehensive technology vendor product catalog to be developed by State or SCAG to determine and tailor the management structure and meet the local pilot needs.	Lead: The State government and SCAG Support: Cities and transit agencies
Governance	
1. Create policy incentives for other transportation providers to have an open API ready for data sharing and system integration.	All levels of governments
2. Promote infrastructure standards such as mobility hubs and curb space for future integration across the region.	Lead: CTCs Support: SCAG
3. Promote data standardization and secured data sharing. Build on existing standards and principles such as GTFS, GBFS, MDS, and the Mobility Data Interoperability Principles.	Lead: SCAG. Support: Transit agencies, interested cities or other local jurisdictions, CTCs.
Finance	
1. Any form of funding should be explored, including agreements with private investors or local retail sponsoring campaigns in exchange for in-app promotions.	Lead: Transit agencies, interested cities or other local jurisdictions. Support: Federal Government, Caltrans, SCAG, CTCs, private companies.

Strategies	Responsible Parties
Institutional Practice	
1. Leverage the Advisory Group from this study to explore options to establish a dedicated forum to understand shared roles and responsibilities, leadership, and management for a future MaaS system.	Lead: SCAG Support: CTCs, State Government, local jurisdictions
2. Launch county-led regulations and policies to encourage fare policy integration at the regional level	Lead: CTCs Support: SCAG, Dedicated MaaS Forum.
Equity and Public Engagement	
1. Dedicated sessions discussing MaaS in regional public forums. Continuing direct public engagement to ensure MaaS investments support community needs and regional equity goals.	Lead: SCAG Support: Cities, CTCs, transit agencies, and community organizations
2. Create account-based subscription model with individual account that can be shared with friends and family. Discounts and subsidies can be applied for disadvantaged community families.	Lead: Transit agencies, interested cities or other local jurisdictions. Support: SCAG, CTCs

Implementation Guide

The implementation guide consists of a proposed timeline/schedule for MaaS deployment in the SCAG region, a suggested checklist for agencies who are considering or starting a MaaS pilot, and a set of performance measures to monitor the implementation. Similar to the key strategies, the implementation guide has been updated since the last report to TC in April based on feedback from the Advisory group.

Proposed Timeline and Schedule

1. ***Continue building needed infrastructure for transit (ongoing)***

2. ***Short-term (Next two years)***
   - Develop mobility hubs throughout the SCAG region.
   - Develop MaaS associated payment and digital infrastructure.
   - Explore options of forming a forum to facilitate MaaS implementation, and execute policies.
   - Select cities to launch MaaS pilots in collaboration with Cal-ITP and test open-loop payment, subscription-based models, and multimodal bundle services.

- Explore a variety of funding sources.
- Take advantage of the State's Leveraged Procurement Agreements (LPAs)
- Make the Implementation Guide document available to public transit service providers.

3. *Medium-term (Next five years)*
   - Finalize data sharing standards and MaaS infrastructure standards.
   - Build scalable MaaS pilot models for other cities in the SCAG region.
   - Start launching county-wide pilots.
   - Identify dedicated funding resources.
   - Draft regional integrated fare policies and determine transfer policies and opportunities for revenue sharing.

4. **Long-term (Next ten years)**
   - Accomplish significant mode shift from SOVs to multi-modal trips.
   - Start launching inter-County MaaS pilots.

Figure 1: Implementation Guide Summary

Phase 1 (2022–2023): Proof of Concept Pilot Led by Cities or Other Local Jurisdictions → Phase 2 (2024–2029): County-Wide Pilot Led by CTC → Phase 3 (2030–2040): Inter-County Pilot Led by Coalition
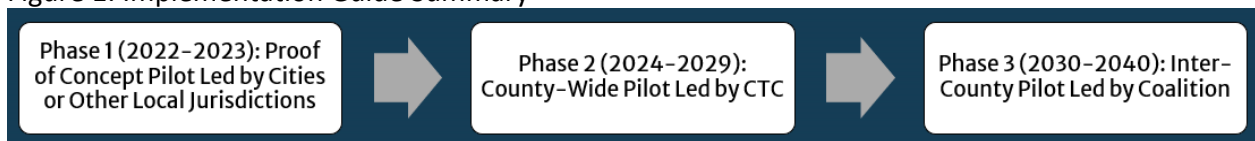
Checklist for Agencies
- Mobility hubs that can accommodate multi-modal trip planning and making
- Data reporting and sharing standards
- Product catalog of technology vendors
- P3 toolbox to facilitate partnerships
- Capability or support to launch open-loop payment systems
- Staffing plan to enable technology-oriented in-house monitoring and review of outsourced work conducted by technology vendors or consultants

Checklist for Private Companies
- An open API offered by mobility service providers
- Standardized and accurate trip information from mobility service providers
- Safety measures by mobility service providers
- The capability of offering open-loop payment system and equitable payment options by payment service provider
- Develop data sharing agreements with agencies and compliance on local regulations by MaaS platform provider

- Training and continuous maintenance provided by MaaS platform provider

Performance Measures for Measuring Progress
- Mode shift (Percentage of SOV shift to other modes)
- VMT (Total annual VMT change)
- Reduced GHG emissions (Annual total GHG reduction)
- Accessibility (Coverage ratio of transit service)
- Percentage of trips utilizing a mobility hub
- Percentage of service hours generated by private mobility providers
- Percentage of open-loop payment users vs. cash users
- Percentage of unbanked/underbanked registered users

NEXT STEPS:

Staff will incorporate comments received into the final report. The white paper findings and recommendations will inform and be incorporated into the 2024 Connect SoCal development, including the Key Connection for Shared Mobility and MaaS. Staff anticipates bringing forward additional policy discussions to the Transportation Committee during the Connect SoCal development that pertain to specific recommendations contained within the white paper, such as data sharing, a regional MaaS forum, and fare policy integration. Additionally, staff will consider potential MaaS pilot opportunities.

FISCAL IMPACT:

Funding for staff work on this issue is included in FY21/22 OWP 140.0121.10.

ATTACHMENT(S):

1. PowerPoint Presentation - MaaS Feasibility White Paper Final Report to TC_June 2 2022

Mobility As A Service (MaaS) Feasibility Whitepaper Final Report

Regional Transit Technical Advisory Committee (RTTAC)

Priscilla Freduah-Agyemang, Senior Regional Planner

Wednesday, June 29, 2022

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Mobility as a Service (MaaS) Feasibility White Paper

Background

Connect SoCal: Transit Core Vision +
Shared Mobility/MaaS Key Connection

Connect SoCal identified **Key Connections** that lie at the intersection of land use, transportation and innovation meant to advance policy discussions and strategies to leverage new technologies and **create better partnerships** to increase progress on the regional goals.
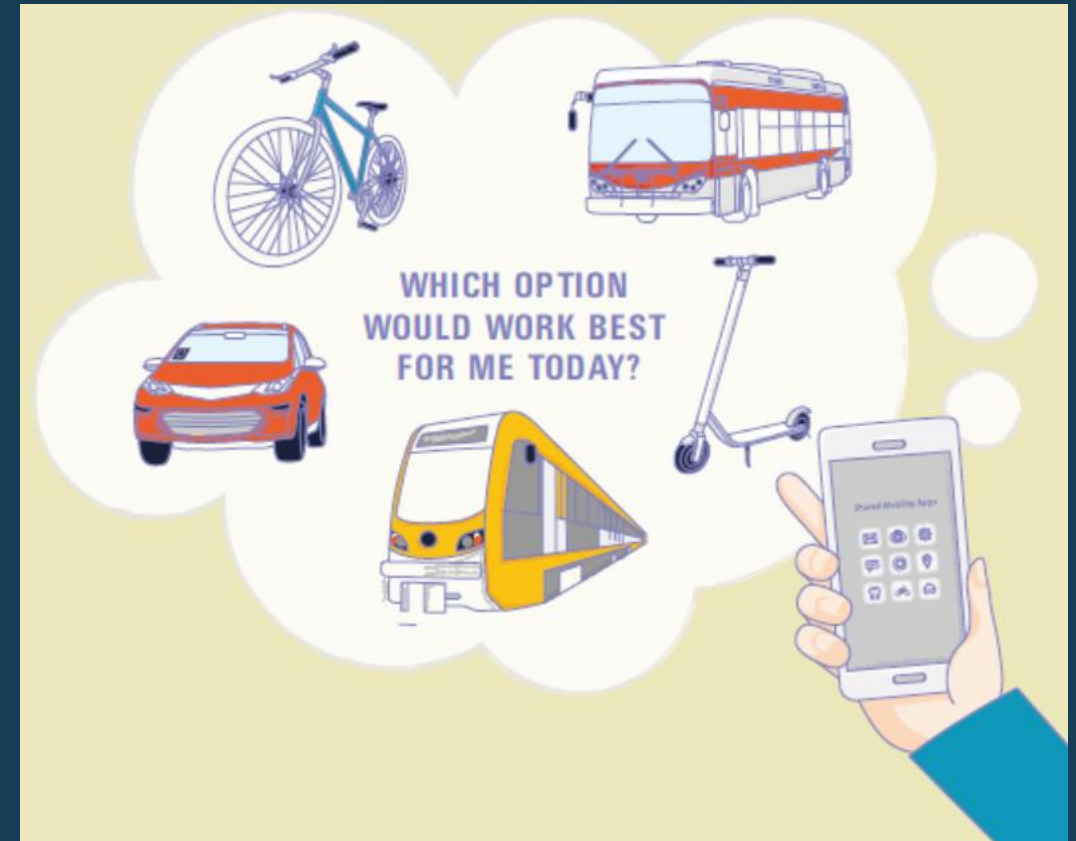
Shared Mobility & Mobility as a Service (MaaS)

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MaaS Feasibility White Paper

Study Purpose

To assess the feasibility of implementing MaaS within the SCAG region, including identification of challenges and opportunities, key institutional and infrastructure needs, and to develop an implementation guide.

Advisory Group – Caltrans, Center for Community Action and Environmental Justice, City of Los Angeles, Imperial County Transportation Commission, Investing in Place, LA Chamber of Commerce, LA Clean Tech Incubator, Metro, Orange County Transportation Authority, Riverside County Transportation Commission, San Bernardino County Transportation Authority, Shared-Use Mobility Center, Metrolink, UCLA, Urban Movement Labs, Ventura County Transportation Commission

Consultant – AECOM, Arellano & Associates

MaaS Definition

MaaS integrates transportation services into a single mobility platform that provides competitive alternatives over private vehicles, to promote universal basic mobility, encourage mode shift, and foster sustainable travel choices.

Study Timeline

JUNE 2021   JUNE 2022

ADVISORY GROUP

- Advisory Group interviews

- Advisory Group Meetings

STUDY RESEARCH

- Literature Review & Case Studies

- Existing Conditions Analysis

- Challenges & Opportunities

IMPLEMENTATION GUIDE

- Goals & Objectives

- Key Strategies

- Implementation Guide

FINAL REPORT

Key Strategies

Infrastructure:

- Develop mobility hubs throughout the SCAG region.
- Develop associated payment and digital infrastructure.

Data and Technology:

- Encourage and provide incentives for cities and local transit agencies within the SCAG region to leverage Cal-ITP's support and start open-loop payment demonstrations. Test shared product systems and post-payment solutions.
- Take advantage of the State's Leveraged Procurement Agreements for both equipment and bank processing services as a group
- Make the implementation guide developed from this study available and/or create individual toolkits of this study for public transit providers.

THE
VINE STREET
MOBILITY HUB
CONCEPTUAL PLAN

Sources: camobilitymarketplace.org, Riverside Transit Agency

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Management and Operation :

- Leverage a comprehensive technology vendor product catalog to determine and tailor the management structure and meet the local pilot needs.

Governance:

- Create policy incentives for other transportation providers to have an open API ready for data sharing and system integration.

- Promote infrastructure standards such as mobility hubs and curb space for future integration across the region

- Promote data standardization and secured data sharing. Build on existing standards and principles such as GTFS, GBFS, MDS, and the Mobility Data Interoperability Principles
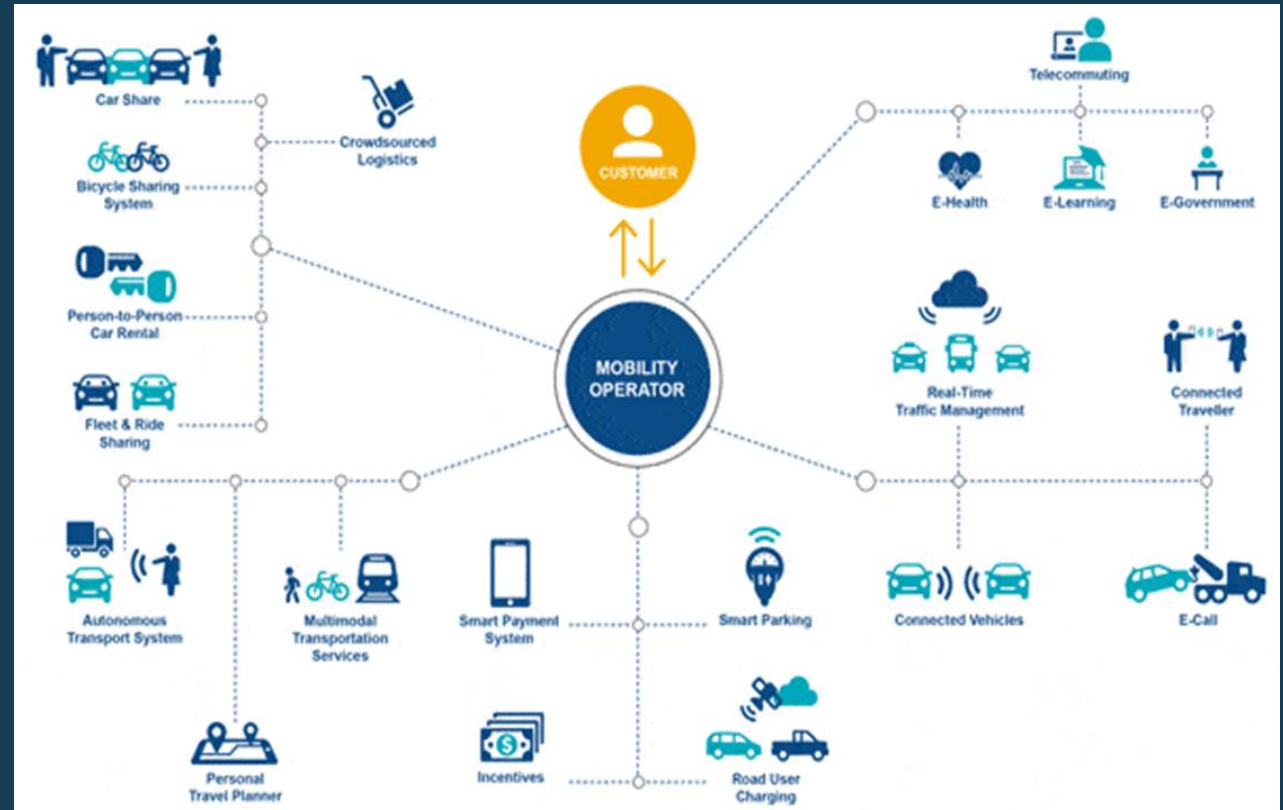
Finance:

- Any form of funding should be explored, including agreements with private investors or local retail sponsoring campaigns in exchange for in-app promotions.

Institutional Practice:

- Leverage the Advisory Group from this study to explore options to establish a dedicated forum to understand shared roles and responsibilities, leadership, and management for a future MaaS system

- Launch county-led regulations and policies to encourage fare policy integration at the regional level

Accelerating MaaS Growth: Active Mobility

Source: erticonetwork.com

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Equity and Public Engagement :

- Dedicated sessions discussing MaaS in regional public forums. Continuing direct public engagement to ensure MaaS investments support community needs and regional equity goals.

- Create account-based subscription model with individual account that can be shared with friends and family. Discounts and subsidies can be applied for disadvantaged community families.

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Implementation Guide

- **Timeline/Schedule**
  - Continue building needed infrastructure for transit (ongoing)
  - **Short-term** (Next two years)
    - Develop mobility hubs
    - Develop MaaS associated payment and digital infrastructure
    - Explore options of forming a <u>forum</u> to facilitate MaaS implementation and execute policies
    - Cities launch MaaS pilots in collaboration with Cal-ITP
    - Explore a variety of funding sources
    - Take advantage of the State's Leveraged Procurement Agreements (LPAs)
    - Share Implementation Guide with transit operators
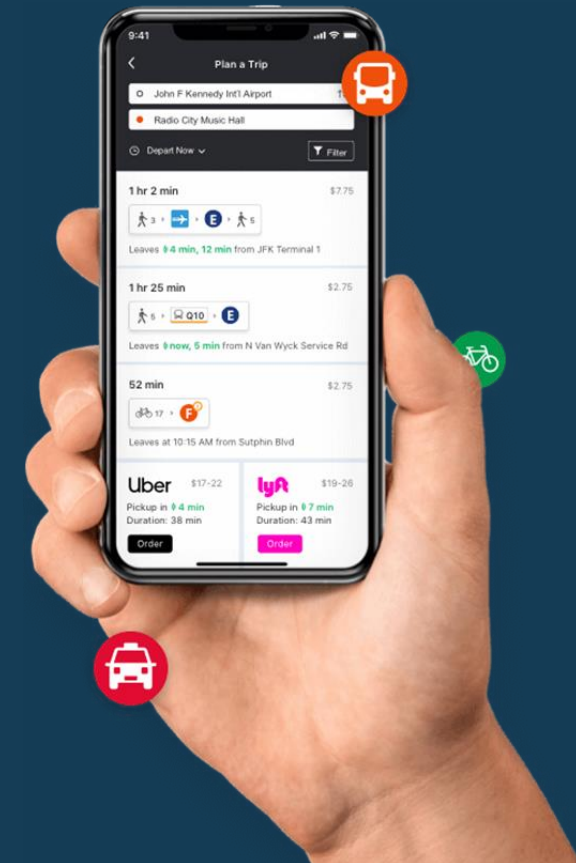
Implementation Guide – Cont'd

- Medium-term (Next five years)
  - Finalize data sharing standards and MaaS infrastructure standards
  - Build scalable MaaS pilot models for other cities in the SCAG region
  - Start launching county-wide pilots
  - Identify dedicated funding resources
  - Draft regional integrated fare policies and determine transfer policies and opportunities for revenue sharing
- Long-term (Next ten years)
  - Accomplish significant mode shift from SOVs to multi-modal trips
  - Start launching inter-County MaaS pilots.

| Short Term (2022–2023): Proof of Concept Pilot Led by Cities or Other Local Jurisdictions | → | Medium Term (2024–2029): County-Wide Pilot Led by CTCs | → | Long Term (2030–2040): Inter-County Pilot Led by Coalition |

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Implementation Guide – Cont'd
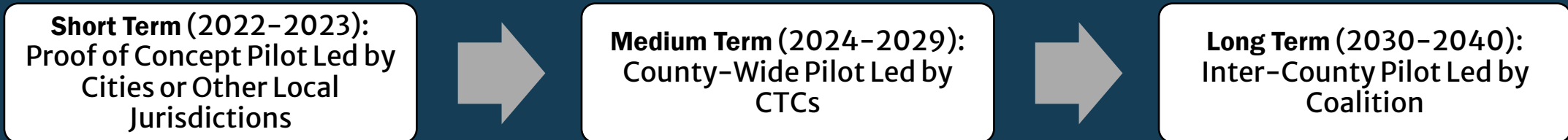
- ## Checklist for Agencies (those starting implementation)
  - Mobility hubs that can accommodate multi-modal trip planning and making
  - Data reporting and sharing standards
  - Product catalog of technology vendors
  - P3 toolbox to facilitate partnerships
  - Capability or support to launch open-loop payment systems
  - Staffing plan to enable technology-oriented in-house monitoring and review of outsourced work conducted by technology vendors or consultants

- ## Checklist for Private Companies
  - An open API offered by mobility service providers
  - Standardized and accurate trip information from mobility service providers
  - Safety measures by mobility service providers
  - The capability of offering open-loop payment system and equitable payment options by payment service provider
  - Develop data sharing agreements with agencies and compliance on local regulations by MaaS platform provider
  - Training and continuous maintenance provided by MaaS platform provider

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Implementation Guide – Cont'd

- **Key Performance Indicators** for agencies (those which have started implementation)
  - Mode shift (Percentage of SOV shift to other modes)
  - VMT (Total annual VMT change)
  - Reduced GHG emissions (Annual total GHG reduction)
  - Accessibility (Coverage ratio of transit service)
  - Percentage of trips utilizing a mobility hub
  - Percentage of service hours generated by private mobility providers
  - Percentage of open-loop payment user vs. cash users
  - Percentage of unbanked/underbanked registered users

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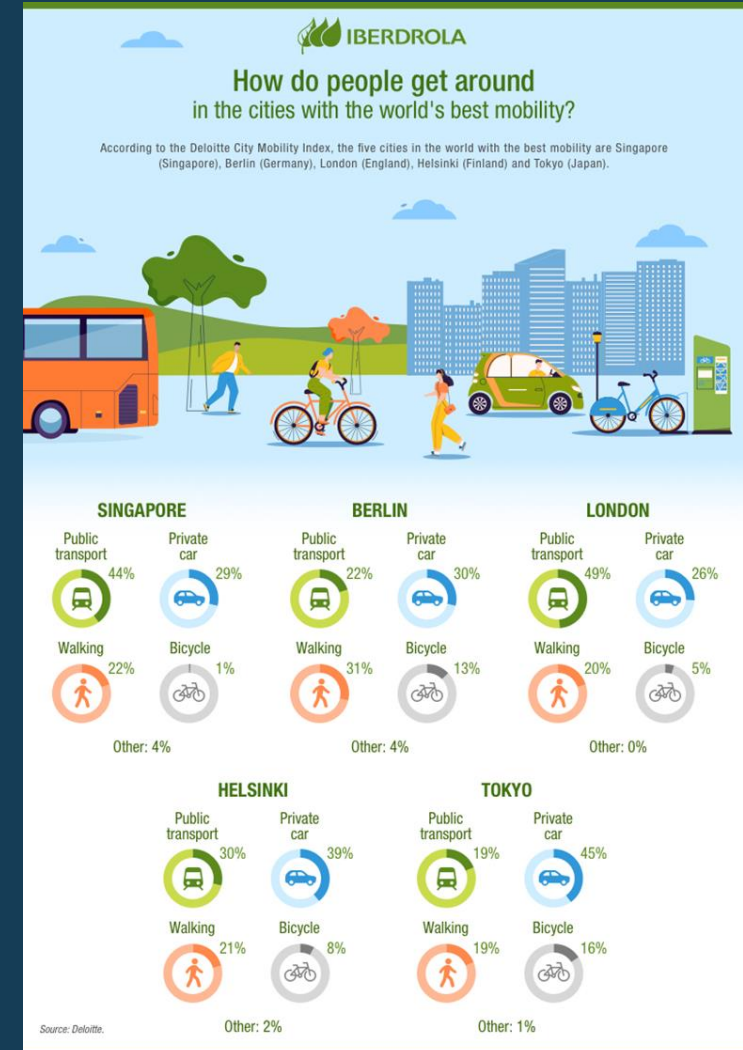
Next Steps

- Finalize study report
- Continue policy discussions at Transportation Committee as part of Connect SoCal development
  - Data sharing
  - Regional MaaS forum
  - Fare policy integration
- Update MaaS strategies and Key Connection in 2024 Connect SoCal
- Pursue pilot opportunities

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Thank you!

Questions & Comments?

Contact Info:

Priscilla Freduah-Agyemang

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To:	Transportation Committee (TC)	**EXECUTIVE DIRECTOR'S APPROVAL**

From: Priscilla Freduah-Agyemang, Senior Planner
(213) 236-1973, agyemang@scag.ca.gov

Subject: Regional Dedicated Transit Lanes Study Update

RECOMMENDED ACTION:
Information Only - No Action Required

STRATEGIC PLAN:
This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

EXECUTIVE SUMMARY:
The Regional Dedicated Transit Lanes Study will identify best practices and key benefits of dedicated transit lanes and priority treatments, and the primary factors for successful implementation; assess where these lanes may be most feasible and beneficial in the SCAG region; and provide guidance for local agencies interested in piloting dedicated transit lanes. As transit is one of the core visions of Connect SoCal, this study will advance the implementation of its goals of improving mobility, sustainability and air quality. This report provides an update on the study progress to date, including key findings from the existing conditions research and the corridor identification process.

BACKGROUND:
Transit agencies in the SCAG region and nationwide have been grappling with ridership decline before the COVID-19 pandemic, which has further worsened the challenges they face in an unprecedented manner. Addressing the ongoing ridership decline before the pandemic, the SCAG funded University of California, Los Angeles (UCLA) study, published in 2018, provided recommendations that encouraged transit agencies to convince discretionary riders to occasionally take transit instead of driving and to increase the quality of service to make transit more appealing to discretionary riders.

As the region's transit agencies look forward to post-pandemic recovery, there exists an opportunity to implement changes to redefine transit quality, delivery, and the need for more frequent service. Restoring confidence in transit among previous riders and attracting new riders

will depend to a large degree on how these transit challenges are resolved. On-time performance is also a key factor for all riders and underscores their perception of transit. With the recent rise in gas prices and traffic volumes back to near pre-pandemic levels, some transit agencies are regaining more riders on some routes.

Dedicated transit lanes and other transit priority treatments can help address transit speed and reliability on congested corridors and improve overall transit performance to make it the preferred option for travelers.

Stakeholder Engagement
Since the last update to TC, staff and the project team continued to engage with various key stakeholders including the Regional Transit Technical Advisory Committee (RTTAC), sharing project updates and the findings from the best practices and existing conditions analysis.

Recently, staff provided an update to the Riverside County Transportation Commission (RCTC) Technical Advisory Committee, San Gabriel Valley Council of Government (SGVCOG) Transportation Committee, Metro's Bus Operators Subcommittee (BOS), Metro's Local Transit Systems Subcommittee (LTSS), Ventura County Transportation Commission Transportation Technical Advisory Committee (VCTC TTAC), VCTC TRANSCOM, and shared goals and updates on the study research key findings and the initial corridor identification process. Staff and the project team used this as an opportunity to also solicit feedback on the initial corridor screening lists, which is key to the corridor evaluation and prioritization. Staff will continue to engage with regional stakeholders as the study advances.

The project team also shared the initial corridor screening lists with community-based organizations (CBOs) identified during the early stages of the study.

Technical Advisory Committee (TAC)
The third TAC meeting was held on April 19. At this meeting, the project team provided an overview of the corridor screening results for feedback. TAC members were asked to review the initial screening lists, share with other staff, departments and stakeholders within their organizations and provide feedback. Members were also given the opportunity to review the draft study transit priority best practices report.

PRELIMINARY FINDINGS – EXISTING CONDITIONS:
Supporting the regional goal of reducing greenhouse gas emissions (GHGs) in transportation, in part by reducing single-occupancy vehicle trips and increasing transit mode share, are local and county goals aimed towards mobility and equity, including measures to improve the speed and reliability of transit services throughout the region. The existing conditions analysis provides a better understanding of the existing transit priority treatments and planning efforts in the region, and the

conditions that could support future investments. This is a summary of findings from the review of transit priority goals discussed in local, county, and regional planning documents; existing and planned transit priority treatments; and related challenges and opportunities in the region.

Priority Treatments in Plans and Policies

Transit priority treatments encompass a broad set of improvements to transportation infrastructure and transit operations and policies, often incorporated to improve the speed and reliability of buses traveling within mixed-flow travel corridors.

Because priority treatments are often less capital-intensive than designing transit services in separated guideways, they are often not as thoroughly documented in stand-alone plans and policies. As priority treatments gain popularity, however, they are more frequently referenced in short- and long-range planning documents, and have compelled a number of specific policies, particularly within the State of California, which have relevance to the study.

Existing Plans in the Region that Relate to Transit Priority Treatments

The project team reviewed more than 30 plans as part of the existing conditions analysis. The purpose of the plan review was to identify projects, goals, policies, and performance measures related to transit priority treatments in the SCAG region. In general,

- **Regional Long-Range Plans** are important for understanding the context and need for priority treatments to reach broader goals for mobility, equity, health, and climate. The 2020 Connect SoCal, is the foundational document for this study, postulating the benefits of a regional network of dedicated transit lanes as a key part of reaching environmental and economic goals for the region.

- **Transit Agency Strategic and Mobility Plans** are useful for understanding goals and projects related to priority treatments. Operators across most SCAG counties have published some level of transit planning document that identifies corridors ripe for further investment, often where transit ridership is highest, or congestion is most severe. Some plans, most notably LA Metro's Bus Rapid Transit Vision and Principles Study, go as far as identifying corridors for BRT or priority investment via a ranking methodology.

- **In Active Transportation Plans**, priority treatments are mentioned in the context of ensuring bus, bike, and pedestrian facilities are appropriately designed for safety.

- **The Climate Action Plans** reviewed do not explicitly mention transit priority treatments, but the goals of these plans are consistent with the goals of transit priority planning.

KEY FINDINGS

Transit operators are focused on improving service for their existing riders and attracting new riders through better services. From their perspective, priority treatments offer a way to serve customers better and provide a faster and more reliable service. Increased bus speeds and boardings lead to lower operating cost per passenger mile. However, for most operators incorporating priority treatments on the roadway involves coordinating with multiple municipal governments, and Caltrans, and often requires coordination with many different departments within these organizations.

The following are the key challenges and opportunities identified for transit priority implementation.

KEY OPPORTUNITIES

Filling in Major Transit Gaps

Taking public transit is not convenient in many areas of the SCAG region. To combat auto dependency in low density environments, the plans suggest filling in major transit gaps, improving first/last mile conditions, addressing transportation infrastructure connectivity, and increasing awareness of public transit options. For example, LADOT notes that some of the city's biggest attractions lack any public transit access. In addition, access to outdoor recreational facilities (state parks, trails, etc.) is very limited.

Supporting Other Transportation and Climate Goals

Transit priority is rarely an end in and of itself, but a tool used to support other goals or an ecosystem of transportation treatments. For transit agencies, transit priority helps provide better service to improve the experience for current riders and attract new riders. The active transportation and complete streets plans reviewed outline how transit priority aligns with active transportation and multimodal corridors designed to maximize community benefit. Climate Action Plans contain goals to reduce greenhouse gas emissions (GHGs) and increase sustainability, typically by reducing the vehicle miles traveled (VMT) of single-occupancy vehicles. While transit priority is not explicitly mentioned, improved transit would attract more choice riders away from single occupancy vehicles (SOVs) to reduce VMT. LADOT makes a direct connection saying that to meet city and state climate goals around GHG reductions they need to increase transit ridership.

KEY CHALLENGES

Municipal Coordination

A major challenge for transit priority treatments is municipal coordination. Whether they are city or county operators, transit agencies do not own the streets and infrastructure that their routes operate on. Many transit priority treatments involve making physical changes to the public right-of-

way or traffic signal technology. Implementing improvements requires coordinating with other municipalities – including cities, counties, and Caltrans – and often multiple departments within each agency. This is especially true of corridors identified as good candidates for bus rapid transit (BRT) solutions.

Roadway Typology and Geometric Design Constraints

Plans that identified corridors for more robust transit priority treatments (like BRT) also cautioned that not all corridors have the geometric space needed to accommodate certain treatments. Infrastructure challenges include freeway overpasses, long blocks, restricted pedestrian right-of-way, and removing parking. There are geographic challenges in the SCAG region including rough and difficult terrain (steep grades, underutilized streets). Multimodal plans discuss the specific nuances for potential conflicts and synergies between transit corridors and active transportation corridors. Transit priority built along streets with bicycle and pedestrian facilities need to be carefully designed to ensure safety and quality of service are maintained.

Table 1 is a summary of opportunities and challenges captured from the plans reviewed throughout the region.

Table 1: Summary of Opportunities and Challenges

Opportunities	Challenges
• Filling in major transit gaps • Supporting other transportation and climate goals • Improve frequency, speed, and reliability of the bus network • Close gaps in regional transit network • Decrease congestion • Increase transit mode share • Leverage public tax and funding mechanisms • Improve travel times for roadway users • Improve travel times and schedule reliability; cost-effective technique to improve quality of street life • Improve regional connectivity • Reduce VMT • Lots of room to grow and attract new riders	• Municipal coordination • Roadway typology and geometric design constraints • Limited funds • Multijurisdictional nature of every county makes county and regional-wide alignment challenging

CORRIDOR IDENTIFICATION

The process for prioritizing corridors for dedicated lanes and transit priority treatments includes four (4) steps:

1. **Corridor Identification** includes reviewing previously identified local and subregional plans, leveraging existing conditions analyses for potential new corridors, and stakeholder information shared with the TAC and the project team.
2. **Corridor Screening** includes developing criteria and evaluating the corridors at a high level based on existing conditions data collected, e.g. Census demographic data, travel demand and transportation system performance data.
3. The **Corridor Evaluation** phase will add another layer of additional metrics and criteria, using the model and other data for more detailed, better defined corridors (priority segments within corridors).
4. **Prioritization,** the final step will use corridor evaluation metrics and weights, coordinated with stakeholders, to prioritize corridors evaluated in step 3.

Corridor Screening

The first step began with developing goals and priorities for what transit priority treatments should seek to accomplish. The TAC identified six (6) goal areas for treatments, consistent with goals reflected in other transit priority corridor studies and regional planning efforts.

1. Improve transportation system performance
2. Increase people throughput and attract riders
3. Improve access for equity communities
4. Promote local plans and priorities
5. Integrate with the built environment, and
6. Improve climate and health outcomes

The first two goal areas, related to system performance and moving riders, were weighed by the TAC to be the primary motivators for priority treatments, and the remaining other four areas as secondary. As a result, the first two goal areas, and the specific considerations within each goal area (including weights and metrics), were the motivating factors for screening all roadway facilities across the SCAG region into a workable list of corridors that would have the most potential benefit from priority treatment.

Out of nearly 50,000 roadway links in the SCAG region, about 100 corridors were recommended to advance across all six counties, and another 200 were identified as the next best for possible advancement. The TAC reviewed all the results to determine a final list of corridors to advance from screening into full evaluation, and to begin identifying the right potential treatments to apply on each corridor. The list was reviewed other stakeholders from counties, cities, CBOs, and transit agencies across the region.

Based on feedback from the stakeholders the final corridor screening lists would advance or possibly advance to the corridor evaluation and prioritization phase.

NEXT STEPS:

The project team is currently reviewing the comments received on the initial screening lists to identify the corridors to advance to the next phases. The team is also finalizing the transit priority best practices report, which will be published soon. Staff will continue to share updates on the study with the TC at critical milestones.

FISCAL IMPACT:

Funding for staff work on this issue is included in FY21/22 OWP 140.0121.09.

ATTACHMENT(S):

- PowerPoint Presentation – Regional Dedicated Transit Lanes Study Update

Regional Dedicated Transit Lanes Study

Regional Transit Technical Advisory Committee (RTTAC)

Priscilla Freduah-Agyemang, Senior Regional Planner
Mobility Planning & Goods Movement Dept.

Wednesday, June 29, 2022

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Study Background

- **Decline in transit ridership** (SCAG-UCLA 2018 study) and national trends

- **Rethinking mobility** and **improving efficiencies**
  - e.g. tactical transit lanes, transit signal priority

- **COVID-19 pandemic** and need for recovery

Project Purpose

Support the development of a regional network of dedicated bus lanes and priority treatments to enable enhanced transit services, improve mobility, accessibility and sustainability, and advance implementation of Connect SoCal.

The Study will :

- Identify key benefits of dedicated bus lanes and priority treatments and primary factors for implementation,

- Provide a preliminary assessment of where dedicated bus lanes and priority treatments might be most feasible and beneficial in the SCAG region, and

- Provide recommendations and guidance for local jurisdictions that are seeking to pilot or implement bus lanes or priority treatments.

Project Timeline

JUNE 2021   **SEPTEMBER 2022**

STAKEHOLDER ENGAGEMENT

- Transportation Agency Meetings

- County Meetings

- TAC Meetings

- Others

BEST PRACTICES & EXISTING CONDITIONS REPORT

- Best Practices Review

- Existing Conditions

CORRIDOR IDENTIFICATION

- Corridor Selection

- Corridor Evaluation

FINAL REPORT

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Stakeholder Engagement Efforts

- Transportation Agency stakeholder kickoff meeting

- Conducted individual county meetings with CTCs, COGs, transit operators & CBOs

- Set up Technical Advisory Committee (TAC)
  - Conducted 3 TAC meetings to date

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Best Practices and Peer Cases

Best Practices Case Studies and Research

1. **WHY** build dedicated lanes and priority treatments?

    ▪ Four key elements: Reliability, Speed, Comfort, and Convenience

    ▪ Results in faster travel times, safer traveling environments, improved schedule reliability, user confidence, convenience and experience

2. **WHERE** are lanes and priority treatments most feasible and beneficial?

    ▪ Metrics used to identify and evaluate potential corridors

    ▪ Supportive conditions and context for potential implementation

3. **HOW** do jurisdictions pilot or implement?

    ▪ Peer regions and agency stakeholders with track record of successful implementation

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Potential Transit Priority Treatments and Solutions

1. **Example Capital Improvements**
   - Transit-only lane configurations
   - Stop positioning and spacing/consolidations
   - Curb extensions (bus bulbs) and bus pullout lanes
   - Station area enhancements and level boarding
   - Bus and bicycle facilities

2. **Example Operational and Technology Enhancements**
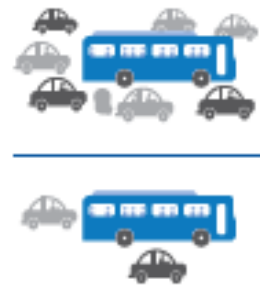   - Traffic Signal Priority (TSP) and queue jumps
   - Real-time information
   - Fare collection and all door boarding
   - Route realignment

3. **Example Policies and Other Actions**
   - Technology, information, and responsibility sharing
   - Enforcement
   - Project programming and funding

Keeps buses on time

Accommodates changing traffic

Smarter traffic signals

Comfortable stations

A distinct look and feel

Simpler fare payment

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Transit Priority Policy Examples

SB 288 – CEQA Exemptions for Transportation Related Projects

Exemptions from CEQA review requirements expanded to projects that:

- Institute or increase new bus rapid transit, bus, or light rail services on public rail or highway ROW
- Designate and convert general purpose lanes, high-occupancy toll lanes, high-occupancy vehicle lanes, or highway shoulders
- Improve customer information and wayfinding or include pedestrian and bicycle facilities
- ZE vehicle fueling or charging facilities
- Reduce minimum parking requirements
- Projects over $100K require equity analysis and community engagement

Sunsets January 1, 2023

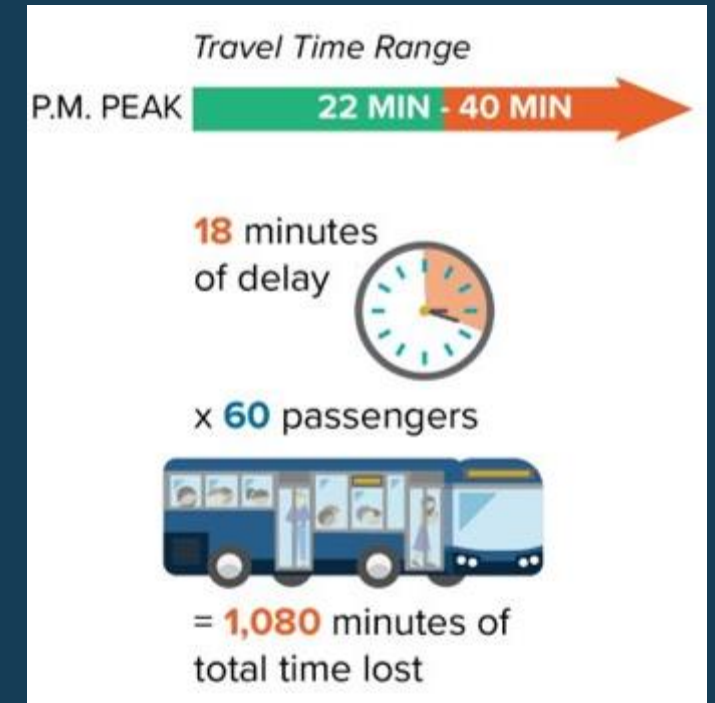## AB 917 – Video Imaging of Parking Violations

Expands current law applicable to City/County SF to include all of CA

- May install automated devices on public transit vehicles for the purpose of video imaging of parking violations occurring in transit-only traffic lanes and at transit stops

Sunsets January 1, 2027

Project Identification and Prioritization

- **Strong leadership from the top** – setting transit as a priority at the top levels of government

- **Adopt a regional network plan long**–range plan that allows you to take advantage when funding opportunities arise

- **Identify KPIs and appropriate metrics** to identify priority corridors and hotspots

- **Incorporate equity and climate impacts** within capital project planning and prioritization

- **Scalable solutions** applicable across geographies and jurisdictions

- **Foster a sense of ownership,** competency and capacity with stakeholders

- **Identify complementary treatments** and/or projects promoting complete streets, station access and connectivity


Travel Time Range

P.M. PEAK 22 MIN - 40 MIN

18 minutes of delay

x 60 passengers

= 1,080 minutes of total time lost

Example speed and reliability hotspot analysis visualization

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Project Development & Implementation

- Where possible, alleviate the burden of proof and mitigation for local stakeholders and partners

- Don't be afraid of the details to break down barriers through data sharing , conflict identification and resolution

- Develop shared design and procurement standards to expedite reviews, funding, procurement, and implementation.

- Align schedules of transit priority with implementation of complementary infrastructure and land use changes

- Capitalize on pilot project opportunities and jurisdictional willingness/ability to implement and demonstrate success

- Demonstrate and report on successes to build the business case and user confidence to continue investment and preserve ROW

- Capitalize on decreased auto traffic to pilot bus lane and transit priority during the pandemic

(2022 traffic volumes at about 80% of previous levels)
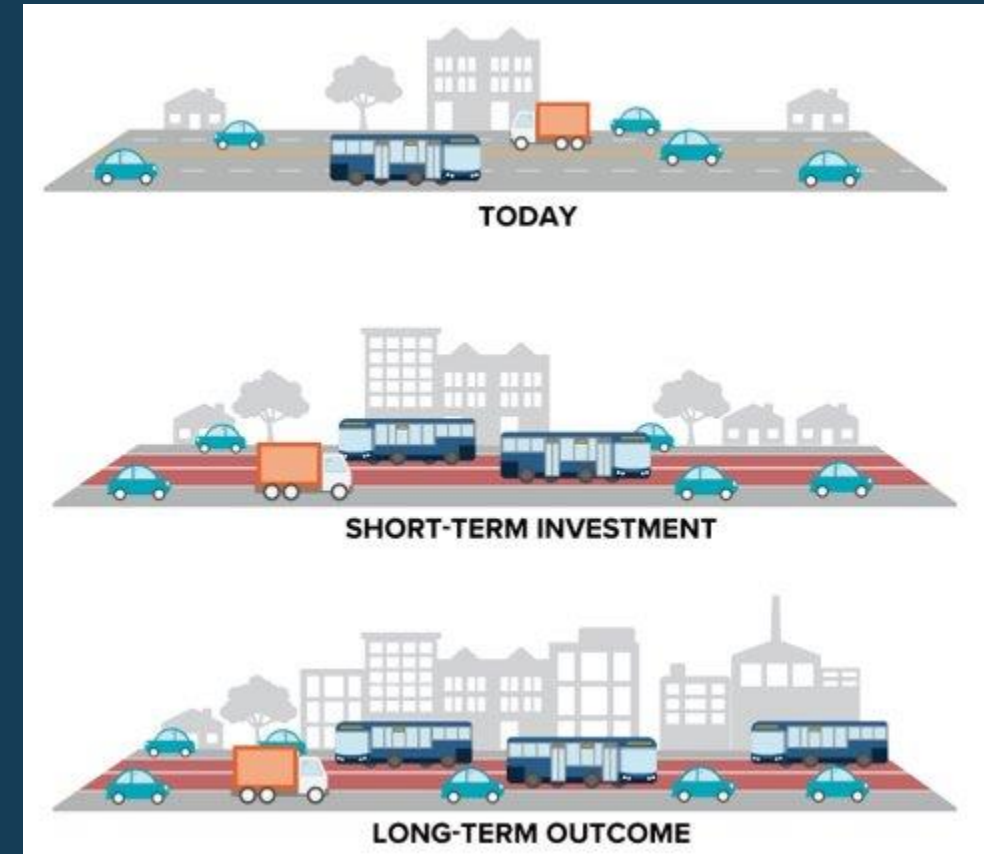
Example evolution of transit priority treatments and land uses

Existing Conditions Review

Planning Documents

- Regional short and long range plans
- Transit strategic and mobility plans
- Active transportation plans
- Climate action plans

Policy Decisions

- Planning (SB288 CEQA Exemption)
- Funding
- Operations (AB917 Lane Enforcement)
- Housing Coordination

Data Sources

- Population, employment, and equity demographics
- Land use and development
- Trip origins & destinations
- Transit, roadway, bicycle, and pedestrian features
- Transit ridership and performance
- Traffic data
- Climate and environmental data

Corridor Screening Goals, Criteria, and Methodology

Corridor Screening and Evaluation

CORRIDOR IDENTIFICATION

All corridors where bus-only lanes are appropriate

CORRIDOR SCREENING

Corridors screened by feasibility and effectiveness

CORRIDOR EVALUATION

Corridors evaluated across qualitative and quantitative criteria

PRIORITIZATION

Corridors ranked based on defined criteria and local priorities

Screen and evaluate for:

» Ridership, mode split and throughput

» Travel time and reliability benefits

» VMT and GHG

» Equity and accessibility

» Ease of implementation

» Cost, funding, and ROI

» Corridor compatibility

High Level Methodology

Step I. Identification & Screening

1. Develop goals (and relative importance) for priority treatments
2. Associate metrics and weights to each goal
3. GIS assessment of metrics for corridors throughout region
4. Alternative methods for goals or treatments that are less quantifiable
5. Develop a first list of corridors or areas that pass screening thresholds

Step II. Evaluation & Prioritization

1. Apply treatment types to screened corridors based on feasibility/suitability criteria
2. Code and run in SCAG model based on sensitivity test results
3. Calculate and weight model-derived metrics
4. Off-model calculations and adjustments as needed (minimize)
5. Review and prioritize based on goals and geographic considerations

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Corridor Screening Summary

Over 46,500 links were analyzed to arrive at a set of about 100 corridors/areas to advance to full evaluation

County	Recommend to Advance		Possible to Advance, but Likely Drop	
	Freeway	Arterial	Freeway	Arterial
Imperial	0	2	0	8
Los Angeles	7	48	22	122
Orange	5	5	4	16
Riverside	4	5	4	17
San Bernardino	3	8	5	10
Ventura	1	6	2	9
Total	**20**	**74**	**37**	**182**

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- Transit Priority Best Practices Report – Toolkit

- Corridor Evaluation (Step 2)

- Final Report by September 2022
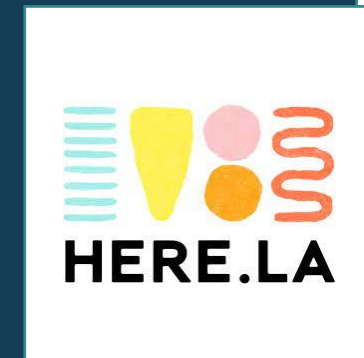
Thank you!

Questions & Comments?

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