SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
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Los Angeles, CA 90017
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MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

WEDNESDAY, MAY 29, 2019
10:00 A.M.

SCAG OFFICES
900 WILSHIRE BLVD., STE. 1700
ROOM POLICY A
LOS ANGELES, CA 90017
(213) 236-1800

HOW TO PARTICIPATE IN MEETING
ON NEXT PAGE

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Matt Gleason (gleason@scag.ca.gov)

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How to Participate

In Person

SCAG Los Angeles Office – Conference Room Policy B
900 Wilshire Blvd., 17th Floor
Los Angeles 90017
213-236-1800

Videoconference

Imperial County	**San Bernardino County**
1405 North Imperial Ave, Suite 1	1170 West 3rd Street, Suite 140
El Centro, CA 92443	San Bernardino, CA 92410
Telephone: (760) 353-7800	Telephone: (909) 806-3556

Web Meeting

Join from PC, Mac, Linux, iOS or Android:
https://zoom.us/j/220315897

Teleconference

Telephone:
Dial: 1 (646) 558-8656
Meeting ID: 220 315 897

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA
Monday, May 29, 2019

==========

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.

TIME PG#

1.0 CALL TO ORDER
(Gary Hewitt, OCTA, 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.

3.0 RECEIVE AND FILE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
AGENDA
Monday, May 29, 2019

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4.0 INFORMATION ITEMS

4.1	Mobility Solutions ***(Rhyan Schaub and Tim McHugh, Portland TriMet)***	30	39
4.2	Connect SoCal Transit and Rail Project List ***(Matt Gleason and Steve Fox, SCAG)***	20	59
4.3	Connect SoCal Modeling Update ***(KiHong Kim, SCAG)***	20	*
4.4	FAST Act Requirements on Private Sector Providers of Transportation ***(Steve Fox, SCAG)***	20	80
4.5	Connect SoCal: Emerging Transit Technologies ***(Matt Gleason, SCAG)***	20	86

5.0 STAFF REPORT

5.1	Transit Asset Management Performance Target Setting ***(Matt Gleason, SCAG)***	5
5.2	Transit Ridership Study Phase 2 ***(Philip Law, SCAG)***	5

6.0 ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, July 31, 2019.

*Agenda Item Under Separate Cover

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

Monday, April 29, 2019

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 at SCAG's Downtown Los Angeles Office. The meeting was called to order by Chair Gary Hewitt, OCTA.

Members Present:

Gary Hewitt (Chair)	Orange County Transportation Authority
Joyce Rooney (Vice Chair)	Redondo Beach Transit
Tracy Beidleman	Long Beach Transit
Ron Mathieu	Metrolink
Lori Huddleston	LACMTA
Ralph Martinez	LACMTA
Randy Lamm	LACMTA
Kristen Warsinski	Riverside Transit Agency
Jennifer Nguyen	Riverside Transit Agency

Videoconference:

Martin Tompkins	Antelope Valley Transportation Authority
Geraldina Romo	Antelope Valley Transportation Authority
David Cadena	Antelope Valley Transportation Authority

Teleconference and Web Meeting:

Eric Carlson	Orange County Transportation Authority
Kevin Kane	Victor Valley Transit
Conan Cheung	LACMTA
Claire Grasty	Ventura County Transportation Commission
Josh Landis	Foothill Transit
Herbert Higginbotham	Cambridge Systematics
Kyle Emge	Cambridge Systematics

SCAG Staff:

Philip Law	Stephen Fox
Matthew Gleason	Sarah Dominguez

1.0 CALL TO ORDER

Gary Hewitt, OCTA, called the meeting to order at 10:01 a.m.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 RECEIVE AND FILE

3.1 Minutes of the January 30, 2019 Regional Transit TAC Meeting
3.2 Transit Ridership Update
3.3 Transit Cooperative Research Program (TCRP) Report 141 and 204
3.4 Agenda Outlook

4.0 INFORMATION ITEMS

4.1 Transit Asset Management Target Setting

Herbert Higginbotham, Cambridge Systematics, reported on Transit Asset Management (TAM) Target Setting. Mr. Higginbotham stated that Cambridge Systematics will be leading a 9-month project for regional transit asset management target setting and his team will work with transit agencies in the region. Further, SCAG will aggregate regional metrics for incorporation into the 2020 Regional Transportation Plan/Sustainable Communities Strategies and the Federal Transportation Improvement Program. Additionally, a structure will be put in place for future transit asset management efforts. He reviewed the final ruling and noted that all transit providers and group TAM plan sponsors are required to produce a transit asset management plan every 4 years. Those must set and track annual performance targets for equipment, revenue vehicles, infrastructure and facilities. Additionally, annual reports are to be forwarded to the National Transit Database (NTD) and ought to include asset inventory and conditions as well as performance targets.

Mr. Higginbotham reviewed the approach to the project including working closely with local stakeholders using TAM performance target methodology with a view to future asset funding and performance scenarios. Additionally, SCAG will develop a database using the TransAM asset management platform to collect, aggregate and report regional TAM data. He reviewed the project schedule and the process of tasks concluding with a draft and final report as well as the database development process and stakeholder participation. First, meetings will be held with the county transportation commissions then with all other transit providers. He reviewed the specific items to be collected from stakeholder agencies such as asset inventories, value and condition and noted next steps for the project.

Gary Hewitt, OCTA, asked staff about future steps and what additional information will be needed from stakeholder agencies. Mr. Higginbotham responded that the data will need to be reviewed to insure completeness. He noted that an inventory as assets, prioritized investments and performance targets are key components to building the database.

Kevin Kane, Victor Valley Transit, asked about reporting to the National Transit Database and the effort needed for that reporting. Mr. Higginbotham responded

that that database has features which will assist that process and can benefit that reporting requirement.

4.2 Metro Next Gen Bus Study Update

Conan Cheung, Los Angeles County MTC, provided an update on Metro's Next Gen Bus Study. Mr. Cheung stated that market research and existing service evaluation has been completed and currently they are developing service concepts. He noted service concepts are a set of policy statements that prioritize new service goals, the design of the system framework, metrics to monitor performance and the evaluation trade-off between different service characteristics. Mr. Cheung reported that a series of well-attended community engagement events have occurred to understand travel choices including 18 3-hour workshops to engage the public and receive comments. He reviewed the concerns expressed during the workshops.

Mr. Cheung noted current system usage including weekday boardings, trip intensity per square mile in addition to trip origin and destinations. He next reviewed the approach to network design and noted it includes the end to end travel time including getting to the transit stop, the wait for a bus and the onboard experience. He reviewed examples of service areas that could be better aligned with local travel patterns. Next, frequency levels and service spans were examined as well as time riders currently need to walk, wait and ride selected lines and he reviewed the concept of hybrid routes that may mix the benefits of both rapid and local service to improve customer service. He noted these can include bus lanes, bus bulbs, transit signal priority, all-door boarding and stop location optimization. He noted the benefits of a well-designed and more efficient system.

Steve Fox, SCAG staff, asked about the bus travel time to car travel time ratio calculation. Mr. Cheung responded that cell phone data indicated travel times which can be used to estimate personal vehicle travel times on Google and compare to bus travel times.

4.3 SCAG Scenario Planning Overview and Update

Sarah Dominguez, SCAG staff, reported on SCAG scenario planning overview. Ms. Dominguez stated that scenario planning is used to support decision making in the face of uncertainty in the short and long term. She noted SCAG uses scenario planning to develop, evaluate and consider distinct pathways the region could take to meet goals of the 2020 Regional Transportation Plan/Sustainable Communities Strategy. Those goals include regional mobility, economic prosperity, healthy environment and communities as well as meeting a mandated 19% reduction in greenhouse gasses by 2035. She noted that data used for the scenarios come from SCAG's local input process to understand a specific jurisdiction's existing land use pattern, what is currently planned for in the area in addition to specific project lists received from the county transportation commissions. Additionally, goals and guiding policies are used to direct the scenarios in additional to stakeholder

outreach and feedback received mainly from the regional planning working groups. She noted that scenarios are decisional tools that can highlight impacts between different growth alternatives and their trade-offs although it is not used to predict the future.

Ms. Dominguez noted the scenarios include; Transit Priority Areas (TPAs), an area within one-half mile of a major transit stop that is existing or planned; High Quality Transit Areas (HQTAs), areas within one-half mile of a high quality transit stop; Livable Corridors, this arterial network is a subset of the high quality transit areas based on level of transit service and land use planning efforts; Neighborhood Mobility Areas (NMAs), areas with high intersection density, low to moderate traffic speeds, and robust residential retail connections and Job Centers or areas with significantly higher employment density. Additionally, there are both absolute and variable constraints. Absolute constraints include military lands, conserved land, existing open space and agricultural areas. Variable constraints include wildland urban interface, 500 year flood plains and areas with severe fire risk.

Ms. Dominguez noted that the scenarios will be presented to the public in a series of outreach workshops in May and June 2019. Further, it is intended that one scenarios will become the preferred scenario for the 2020 RTP/SCS.

Gary Hewitt, OCTA, asked if scenario planning was used for the 2016 RTP/SCS. Ms. Dominguez responded that scenario planning was used in 2016 to analyze different directions.

Joyce Rooney, Redondo Beach Transit, asked where the workshops will be held. Ms. Dominguez responded that multiple workshops will be held in each county and she will forward to the committee the list of workshops.

4.4 Connect SoCal: High-Quality Transit Corridor (HQTC) Future Corridor Identification

Steve Fox, SCAG staff, provided an update on High-Quality Transit Corridor Identification. Mr. Fox stated there has been several discussions with the committee on high quality transit corridors and the methods to be used to identify them for the 2020 RTP/SCS. He noted that recently a list of all HQTCs was distributed with a request for comments. Mr. Fox asked if members had additional comments they can be submitted by May 3, 2019.

4.5 Connect SoCal: Emerging Transit Trends and Challenges

Matt Gleason, SCAG staff, reported on emerging transit trends and challenges for Connect SoCal. Mr. Gleason stated that this part of the appendix will have four key parts, ridership, changes in new mobility, needs assessment and demographic analysis. In addition, regulatory changes will be monitored. He noted the different regulatory changes include ADA compliance and the development of a long range ADA forecast. MAP-21 rulemaking, asset management rule, safety plan rule, metropolitan planning rule and target setting as well as Air Resources Board's clean

transit rule in addition to rules that affect the implementation of new mobility technology. Mr. Gleason reviewed the Air Resources Board clean transit requirements and noted the final rule separated transit agencies by large or small based both on number of vehicles and air basin. For transit agencies operating in the South Coast Air Basin or San Joaquin the threshold is 65 vehicles in service. For agencies operating outside those air basins the threshold is 100 vehicles in service or greater. Mr. Gleason noted that there are 10 agencies in the region that will be subject to the large agency timelines. He noted that there are two components to compliance, the production of zero emissions bus rollout plan and procurement of ZEV busses. Mr. Gleason reviewed the ZEV requirements for agencies and reviewed demographic trends which may affect future transit ridership.

5.0 STAFF REPORTS

5.1 New Technology Off Model Assumptions and Analysis

Matt Gleason, SCAG staff, stated that MPOs have been assigned responsibilities in the next round of regional transportation plans relating to a more thorough quantification of methodologies for greenhouse gas emission estimations. He noted that previously MPOs had been given space to perform off model analysis of potential greenhouse gas reduction estimations. ARB has put out a methodology document and they've asked MPO to commit to a series of emission reduction estimation methodologies by the start of the outreach process mid May 2019 and reviewed the transit implication of these policies.

6.0 ADJOURNMENT

Gary Hewitt, OCTA, adjourned the meeting at 11:45 a.m.

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No. 3.2
May 29, 2019

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Matt Gleason, Senior Regional Planner, gleason@scag.ca.gov

Subject: ADA Paratransit Demand Forecast

DISCUSSION:
The Americans with Disabilities Act mandates that providers of public transportation provide alternative curb-to-curb service for seniors and the disabled within 3/4s of a mile of their fixed route transit network. In Southern California, these trips are growing lengthier. Work has begun on a study to develop long range forecasting tools for ADA Paratransit, to understand the reasons for the growth in average trip length.

BACKGROUND:
Following the passage of the Americans with Disabilities Act of 1990, The FTA adopted four regulations to implement that statute, as well as the Rehabilitation Act of 1973. In particular, 49 CFR 37 mandated the provision of complementary paratransit for qualified individuals, by providers of public transportation. This rule mandates that paratransit service shall be provided according to the following criteria:

> (a) Service Area—(1) Bus. (i) The entity shall provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route. The corridor shall include an area with a three-fourths of a mile radius at the ends of each fixed route. (ii) Within the core service area, the entity also shall provide service to small areas not inside any of the corridors but which are surrounded by corridors.
>
> (iii) Outside the core service area, the entity may designate corridors with widths from three-fourths of a mile up to one and one half miles on each side of a fixed route, based on local circumstances.
>
> (iv) For purposes of this paragraph, the core service area is that area in which corridors with a width of three-fourths of a mile on each side of each fixed route merge together such that, with few and small exceptions, all origins and destinations within the area

would be served.

Essentially, providers of public transportation services are mandated to provide complimentary paratransit service for trips within ¾ of a mile of their fixed route service. This typically takes the form of a dedicated vehicle picking the passenger up directly at their origin and dropping them off directly at their destination, at the curb. The mandate does not specify that the vehicle operator escort the passenger to or from the door.

In addition to satisfying the ADA mandate, ADA Paratransit is also an important component of the Region's integrated mobility system. This service provides mobility for seniors and the disabled, many of whom cannot provide for themselves. However, since it typically operates at a rate of one vehicle operator to one passenger, this service is incredibly labor intensive. In FY2015-16, ADA Paratransit and other demand response services compromised 18.1% of all revenue vehicle hours, but less than 2% of all unlinked passenger trips.

Given the mode's labor intensity, staff pay careful attention to it in performance monitoring activities. In recent years, a trend towards increasing average trips lengths has become apparent. Reported average trips lengths double between FY1991-2 and FY 2015-16. Subsequent to this determination, staff applied for and received a FY2017-18 Senate Bill (SB) 1 Sustainable Communities Grant. These funds will be used for to produce an ADA Paratransit Demand Forecast.

This project will include the development of a forecasting tool to provide estimates of long term demand for ADA paratransit trips, and the production of an initial forecast. There will also be significant outreach to partner agencies, and representatives of the elderly and disabled communities. Additionally, the study will address the role of new mobility services in providing service to elderly and disabled communities.

Subsequent to the grant award, Staff conducted a procurement and awarded a contract to HDR, Inc., who were the sole proposer. The Regional Council approved the final contract at its December 2018 meeting. Work has now commenced on this project. Staff have conducted a project kick off meeting, and initial outreach is underway. The project is currently expected to conclude all work by June 30, 2020.

Southern California Olli Fleet Challenge

local motors by

FLEET CHALLENGE

olli
by local motors

- Created in 2016
- First-Mile, Last-Mile
- Low-Speed (<25mph)
- Fixed-Route, Geo-Fenced
- LiDAR, Radar, GPS
- Level 4 Autonomy
- 15,000+ Validated Miles
- 4 Countries

Olli Spec Sheet

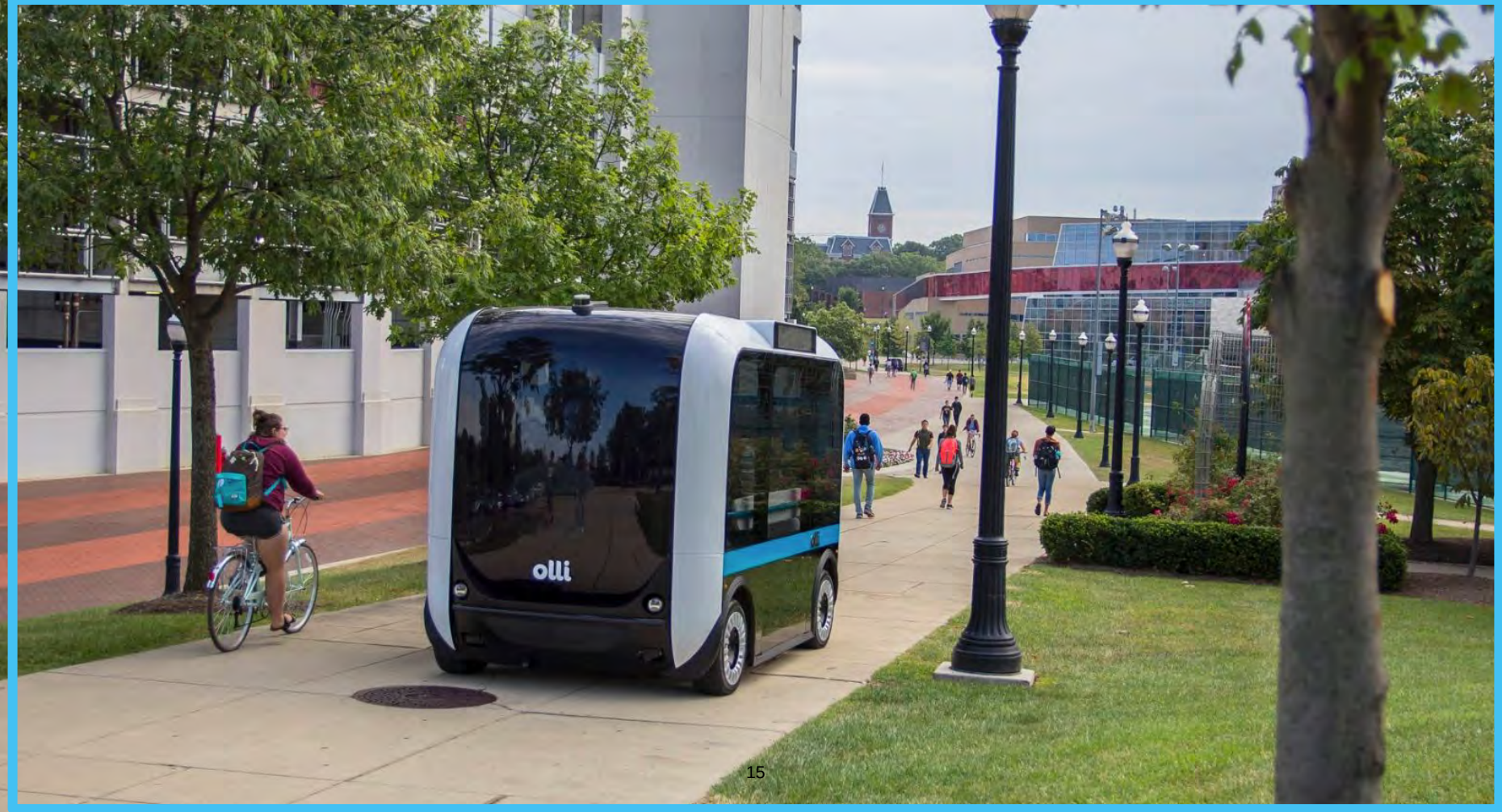

olli
olli

What Would You do With a Fleet of Autonomous Shuttles?

FLEET CHALLENGE

- Invitation to propose local use-cases for low-speed AV technology
- Winner will receive a 3-month deployment of 2-5 Olli shuttles
- Open to Southern California (counties: Imperial, Los Angeles, Orange, RIverside, San Bernardino, San Diego, Santa Barbara and Ventura)

local motors by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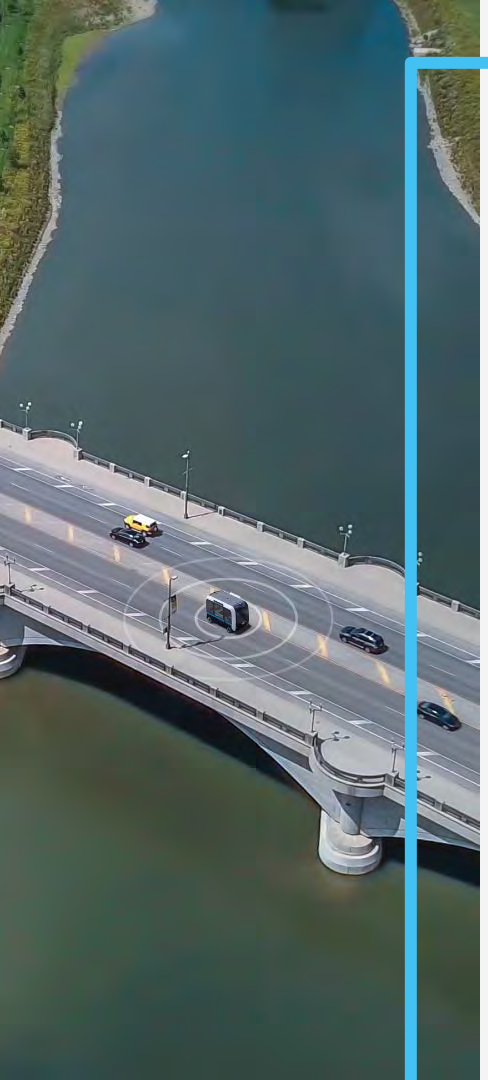

Key Requirements

Route

1. Simple is key
2. No traffic lights.
3. No roads with speeds higher than 25mph.
4. .25 mile - 3 mile loop (typical).
5. Daytime operations.

Other

1. Cost-sharing: entries must commit to a financial contribution of $88,000 minimum to support the their entry.
2. Secure garage location for overnight storage.
3. Stakeholder letters of support.

Regulatory

1. Private use-cases: provide full support for all necessary approvals (property owners, parking officials, campus police, etc.)
2. Public use-cases: provide city support and approval with all necessary temporary exemptions (including authority for street operations of a FMVSS non-compliant vehicle)

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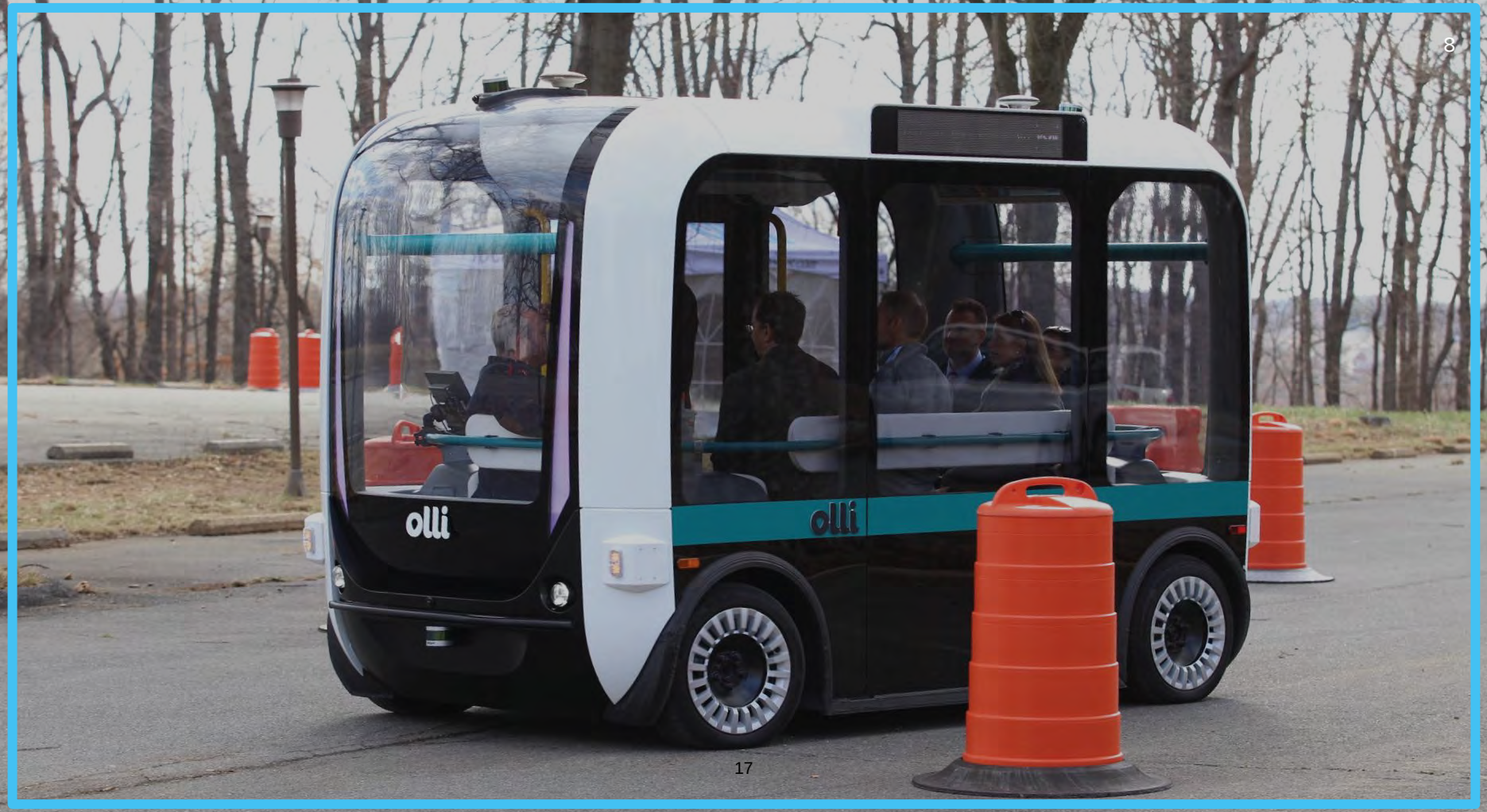
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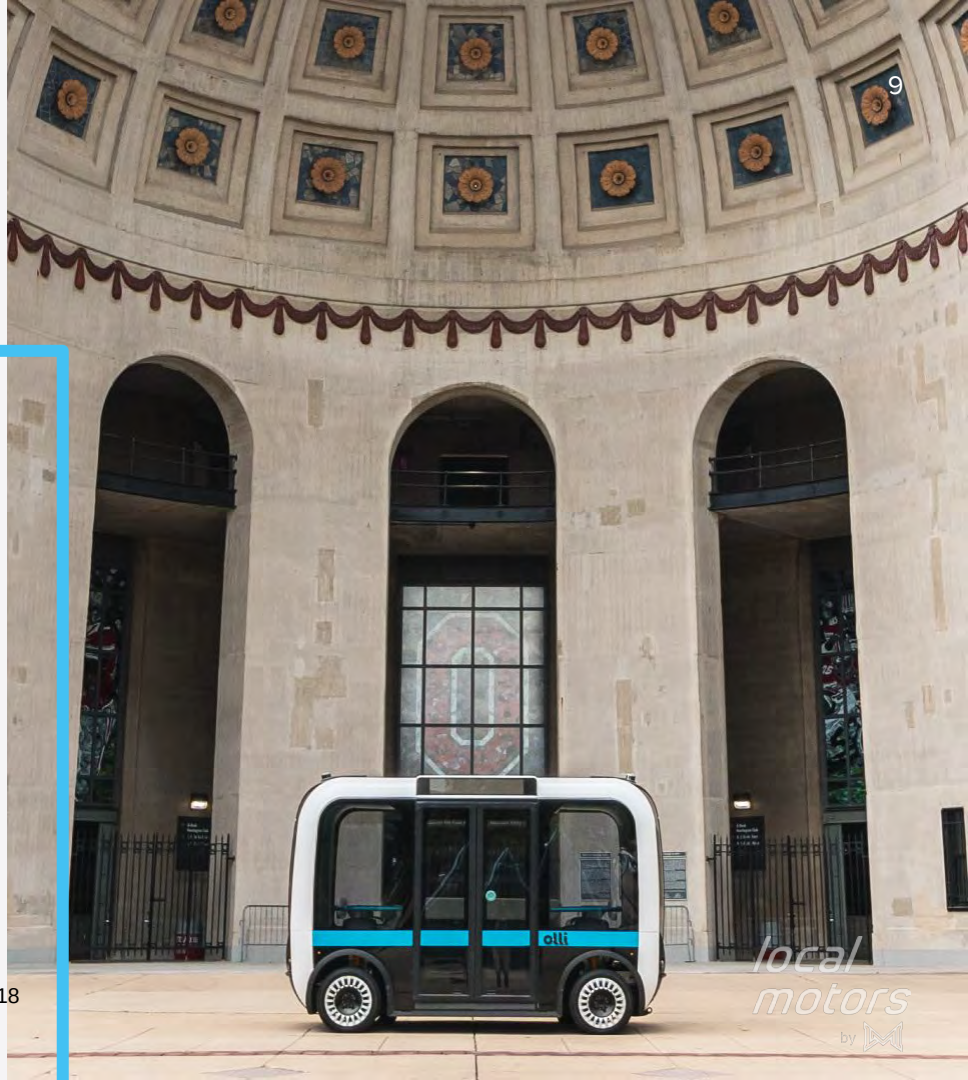
Olli Fleet Challenge

- Accepting submissions May 1, 2019 - June 26, 2019 at 5:00PM (PDT)
- Three-week validation period
- One winner announced September 4, 2019

Keys to a winning application:

- Route follows all requirements
- Variable cost contribution
- Full regulatory support
- Unique differentiation




olli

Next Steps

Go to the **Challenge Link** to view the submission form.

Download and read all of the required documents: Challenge Brief, FAQ Document, and Terms & Conditions.

Draft submission in close coordination with your account representative and submit final response before 5:00PM PDT on June 26th, 2019 at **LINK**.

Thank you.

Taylor Gygi
Regional Account Manager - West
tgygi@local-motors.com
480-245-3859

www.localmotors.com

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CHALLENGE BRIEF:

Hey, SoCal! The Olli Fleet Challenge asks '*What would you do with a fleet of autonomous shuttles?'* We are looking for the best use-case scenarios for Olli. Whether it be transporting university students from class to class or providing a safe transportation service to get you from your home to your office, we want to provide a solution that offers the greatest impact to you! The winner of this challenge will receive a deployment of a pod of Olli, sized to their proposed use-case and location. The winner will receive the Olli pod for a three month deployment. We will work with all entrants on defining their contribution to any variable costs such as, but not limited to: mapping, scoping, testing and the onboard Olli steward. Judges will look more favorably on entries that are better prepared to market and sustain such Olli deployments as an integral part of their mobility solution now, as well as in the future.

The Southern California Olli Fleet Challenge is open to cities, developers, businesses and other public or private organizations that want the opportunity to test a fleet of Olli for their desired use-case. Southern California counties included in the Challenge include Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura. Valid entries will focus on five major areas that have been identified as requirements for a successful deployment:

- People: Who in your community will interact with Olli, as a rider or otherwise?
- Place: What roads will Olli drive on, and what does the surrounding environment look like?
- Policy: How will your deployment also discover and develop the future of mobility policy?
- Partnership: Who, and how, are you going to leverage partners to think about the future of mobility?
- Product (Olli): How does your organization imagine Olli transforming mobility, placemaking and culture?

Deploying Olli in Southern California will require a willingness to work in partnership with local officials, businesses and community stakeholders who will also benefit from this deployment. We are looking for entrants who are willing and able to take on both the variable costs and technical requirements of deployment, as outlined in the challenge terms & conditions.

CHALLENGE REQUIREMENTS:

Requirements are elements of an entry that must be included in the submission. We will work closely with entrants to ensure they fully understand the requirements by providing one-on-one feedback and guidance throughout the submission period, as well as periodic challenge updates to all entrants. Once

the submission period has ended, the validation period will begin. During this time, feel free to make any final edits to your submission before the judging period begins.

We are looking for deployments that are a perfect fit not just for Olli, but for the people to whom Olli will be able to provide a service. All challenge entries need to meet the following requirements for Olli.

Technical Requirements:

- The operational area should have sufficient and reliable coverage of 4G LTE Data cellular communication to allow Olli and its systems to properly communicate.
- Olli is limited to 25 mph maximum speed, thus roadways should be selected that best match this speed constraint for operation in traffic, if any traffic is present.
- Roadways should be on average, less than 5% grade although Olli can operate on routes up to a 16% grade for brief periods of time.
- Olli is currently geared for on-road operation only. Roadways must be comprised of pavement or other hard surface roadways. No loose gravel, dirt or non-improved pathways.
- Olli requires access to sufficient 3-phase AC power to charge.
    - Voltage must be regulated between 440 VAC
    - Vehicle will draw a maximum of 16 amps on charge line
- For GPS tracking, Olli should be operated in areas that have a clear, unobstructed view of the sky, with minimal tree canopy coverage and limited high-rise building obstructions.
- Although Olli can operate at night, day operations are preferred due to increased visual clarity for the on-board safety steward and camera logging system.

Environmental Requirements / Limits:

- Olli can operate in various weather conditions, but only when human visibility is not degraded to less than 300 ft. The following conditions outline the operational limits for Olli:
    - Light to medium rainfall (defined as: maximum of .10 inches per hour to a minimum of 0.025 inches per hour)
    - Light snowfall (less than 0.5 inches of total accumulation)
    - Light blowing dust
    - Minimal fog
    - No sleet
    - No freezing rain
    - No sustained wind/gust conditions over 50 mph
- Generally, roadways should be free and clear of packed snow and standing water greater than 1” deep.
- Operational temperature range: -20° to 115°F

Key roadway attributes:

- Only roadways with a maximum speed of 25 mph
- Walking paths will be considered as long as the vehicle can be legally allowed to operate and is deemed safe.
- Two-lane roadways, or one-way streets
- Does not cross excessively higher speed roadways (> 40 mph)
- No stop light controlled intersections (stop signs are allowed)

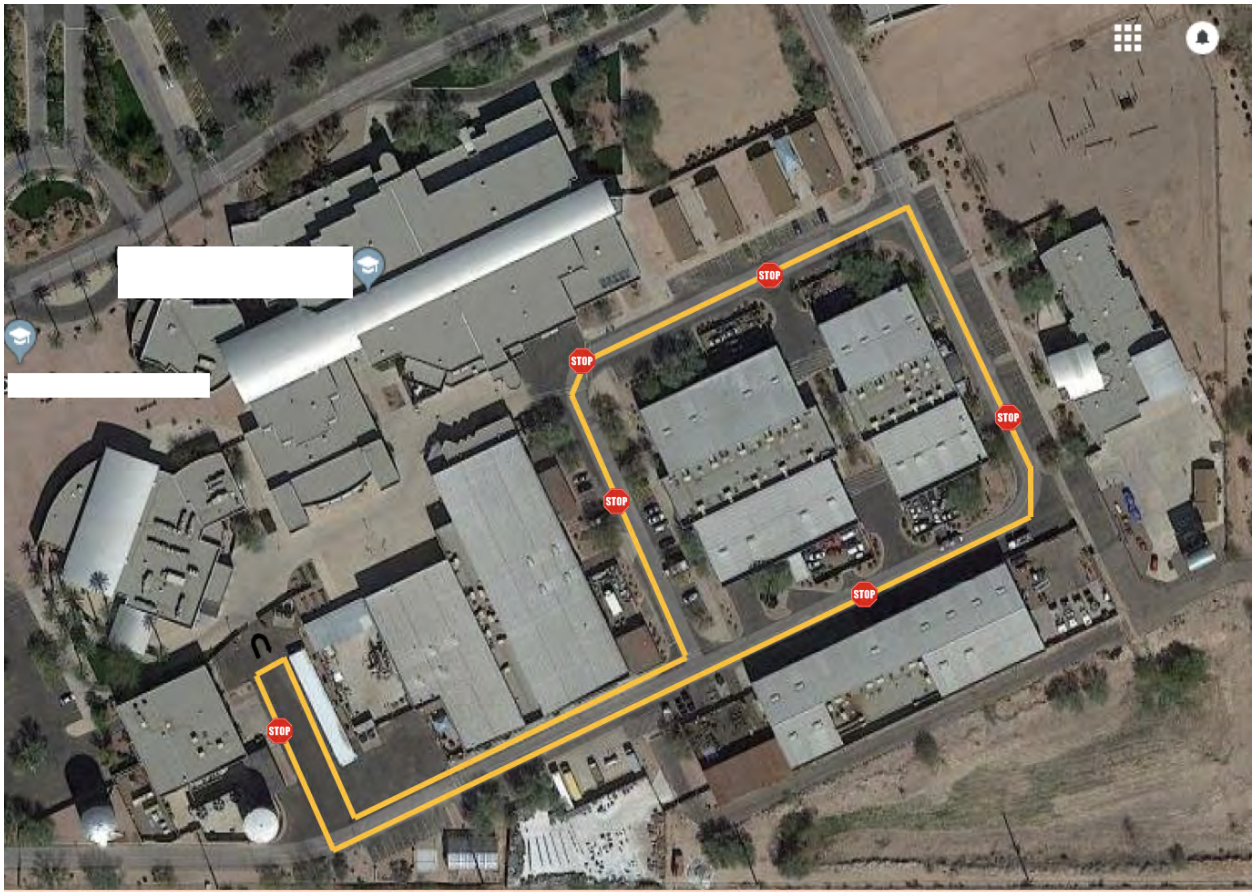
Operational Requirements:

- All passengers must be seated with safety restraints on and visible. Passengers are permitted only on the basis of state regulation and operator approval.

Deliverables

Entries should contain the following information and elements:

- **Executive summary:** A brief description of the proposed concept, including your objectives and vision for this deployment; your goals and the key metrics you will measure to know you've achieved your goals; and the value that your organization sees Olli bringing to your community and the future of transportation.
- **Description of your organization:** Tell us about your organization, including its role in the community and your organization's overall priorities beyond this deployment.
- **Objective:** What are your objectives for this deployment, and how will Olli support the goals you wish to achieve?
- **People:** Define clearly who will interact with Olli (including rider demographics), and for what purpose, and the anticipated volume of riders. Outline key performance metrics your organization is hoping to achieve in your deployment.
- **Place:** Information on your proposed micro-transit corridor and how Olli will be leveraged within this space. Detailed explanation of the route, waypoints, schedule, pick-up and drop-off locations, and other critical points that would impact the execution of the route.
- **Policy:** Clearly state how your deployment plan meets current AV policy regulations.
- **Partnership:** What resources will your organization provide to ensure the success of the Olli deployment, and what additional resources are needed? Describe any other organizations or partners you envision participating in your deployment.
- **Fulfillment of requirements**: Describe how your concept fulfills the technical, environmental and regulatory requirements listed above. This should include a description of the current state of the proposed route (e.g., traffic conditions) and what exceptions or changes will need to be made to ensure that the route can be completed effectively by Olli.
- **Estimated cost of deployment:** Describe how your organization and partners will contribute to any variable costs, such as but not limited to mapping, scoping, testing, and the onboard Olli steward based on your proposed deployment. Please identify a specific financial commitment your organization would be willing to contribute towards supporting this project. Competitive applications must identity $88,000 at a minimum, to show their support.
- **Letter of Support/Endorsement:** Endorsement from the key individuals and organizations required to ensure the success of your deployment. No more than five letters of recommendation.



- Track is .49 miles. Includes 6 stops and one u-turn.

Visual Files

- Maps, videos and photographs of the desired deployment location, with specific information on current traffic flows related to people, bicycles, cars and any other potential equipment within the geographic area of the designated deployment. For example: Google Maps.

RESOURCES

- Olli spec sheet
- Example of a map - see above

CHALLENGE JUDGING CRITERIA:

Our judges will be evaluating each submission equally on the following points:

People: The level of understanding of the use-case for Olli and the ability to communicate and connect with the people that Olli will service.
Place: Thoroughness of understanding about how the place will be transformed by Olli, illustrated through maps, identification of waypoints, traffic pattern changes, key impact metrics, etc.

Product: Your organization's interest and level of understanding of autonomous vehicles and how you will use Olli to transform your business or organization and its surrounding community, including committed financial support for the cost-sharing portion of the challenge requirements.
Partners: The quality of the partnerships that support the vision and use-case of Olli.
Policy: Support you will provide in ensuring that policy constraints and needs can be met. This can be expressed through letters of support for example, from property owners, municipal services or departments of public works.

AWARD:

- The winner will receive a deployment of a pod of Olli (2-5), sized to their proposed use case and location.
- Winner will receive the Olli pod for a three month deployment. We will work with organizations on defining their contribution to any variable costs, such as but not limited to mapping, scoping, testing and the onboard Olli steward. Judges will look more favorably on entries that are better prepared to market and to sustain such Olli deployments as an integral part of their mobility solution now and in the future.

TIMELINE:

OLLI FLEET CHALLENGE: SOUTHERN CALIFORNIA	
Challenge Launch	5/1/19 - 6/26/19
Challenge Validation Period	6/27/19 - 7/18/19
Challenge Judging Period	7/18/19 - 7/25/19
Challenge Winner Notified/Enters into Contract	7/26/19 - 8/23/19
Challenge Winner Public Announcement	9/4/19

issuance date of this notice and all laws under which such actions were taken, including, but not limited to, NEPA [42 U.S.C. 4321–4375], Section 4(f) requirements [23 U.S.C. 138, 49 U.S.C. 303], Section 106 of the National Historic Preservation Act [54 U.S.C. 306108], and the Clean Air Act [42 U.S.C. 7401–7671q]. This notice does not, however, alter or extend the limitation period for challenges of project decisions subject to previous notices published in the **Federal Register**. The projects and actions that are the subject of this notice are:

1. Project name and location. Central City Line Project, Spokane, Washington. *Project Sponsor:* Spokane Transit Authority (STA). *Project description:* The project will provide a new 5.8-mile bus rapid transit system consisting of 34 stations that connect major destinations in Spokane, Washington, including the Central Business District, the University District, Gonzaga University, and Spokane Community College along with residential neighborhoods and will include the purchase of ten (10) new vehicles. Nothing in this notice affects FTA's previous decisions, or notice thereof, for this project. *Final agency actions:* Section 4(f) exception and Section 4(f) *de minimis* impact determination; Section 106 finding of no adverse effect concurrence dated July 9, 2018; and determination of the applicability of a Categorical Exclusion pursuant to 23 CFR 771.118(d), dated March 7, 2019. *Supporting documentation:* Documented Categorical Exclusion checklist and supporting materials, dated March 2019.

2. Project name and location: Division Transit Project, Portland and Gresham, Oregon. *Project sponsors:* Metro and TriMet. *Project description:* The project will provide approximately 15-mile of a new bus rapid transit route between downtown Portland and downtown Gresham. The project also includes 42 stations, articulated buses and station configurations, pedestrian improvements, bicycle access, and accessibility improvements, signal and safety improvements, and a new bus layover facility within the existing Cleveland Park-and- Ride Lot. This notice only applies to the discrete actions taken by FTA at this time, as described below. Nothing in this notice affects FTA's previous decisions, or notice thereof, for this project. *Final agency actions:* Section 4(f) exception and Section 4 (f) *de minimis* impact determination; Section 106 finding of no adverse effect concurrence dated February 22, 2019; and determination of the applicability of a Categorical Exclusion pursuant to 23 CFR 771.118(d), dated March 13, 2019. *Supporting documentation:* Documented Categorical Exclusion checklist and supporting materials, dated March 2019.

Dwayne E. Weeks,

Director, Office of Planning.

[FR Doc. 2019–09399 Filed 5–7–19; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

Competitive Funding Opportunity: Integrated Mobility Innovation (IMI) Demonstration Program

AGENCY: Federal Transit Administration (FTA), U.S. Department of Transportation (USDOT).

ACTION: Notice of funding opportunity.

Funding opportunity Number XXXXXXXX; Catalogue of Federal Domestic Assistance (CFDA) No. 20.530

SUMMARY: The Federal Transit Administration's (FTA) Integrated Mobility Innovation (IMI) Demonstration program's primary purpose is to fund projects that demonstrate innovative, effective approaches, practices, partnerships, and technologies to enhance public transportation effectiveness, increase efficiency, expand quality, promote safety, and improve the traveler's experience. This notice announces the availability of up to $15 million in Fiscal Year (FY) 2017 and FY 2018 FTA research funds in the form of cooperative agreements for eligible projects. FTA may award additional funds, if available.

This IMI Notice of Funding Opportunity (NOFO) brings together three distinct areas of inquiry: Mobility on Demand (MOD) Sandbox demonstrations; FTA's Strategic Transit Automation Research (STAR); and Mobility Payment Integration (MPI). These areas are integrated in this NOFO to allow applicants to comprehensively plan multiple areas of mobility research. FTA requests that all applicants identify the specific area(s) for which they are applying.

The Integrated Mobility Innovation Demonstration program will also leverage FTA's leadership of the Accessible Transportation Technologies Research Initiative (ATTRI) to ensure that all activities conducted under this NOFO advance the vision of a Complete Trip for All. The Complete Trip concept reflects the understanding that a person's travel comprises a chain of steps beginning with an often-spontaneous decision to make a trip, through to planning an itinerary, traversing the built environment and its transportation networks (with or without a vehicle); navigating streets, intersections, facilities, stations, and stops to their destination—safely, efficiently, and carefree. The Complete Trip is the realization that if any part of the trip-making chain is broken, the trip cannot be completed, and an opportunity is lost.

DATES: Applications must be submitted by 11:59 p.m. Eastern Time August 6, 2019 through *Grants.gov*.

FOR FURTHER INFORMATION: Please send any questions regarding this notice to Mr. Hendrik Opstelten, Program Manager, Office of Research, Demonstration and Innovation, (202) 366–8094, or *hendrik.opstelten@dot.gov*. A Telecommunication Device for the Deaf (TDD) is available for individuals who are deaf or hard of hearing at 202–366–3993. In addition, FTA will post answers to questions and requests for clarifications as well as information about webinars FTA will host to provide further guidance at *https://www.transit.dot.gov/imi*

SUPPLEMENTARY INFORMATION: Each section of this notice contains information and instructions relevant to the application process for IMI Demonstration projects, and all applicants should read this notice in its entirety so that they have the information required to submit eligible and competitive applications.

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A. Program Description

FTA's Public Transportation Innovation program is authorized by Federal public transportation law at 49 U.S.C. 5312. Under this authority, FTA may make grants, or enter into contracts, cooperative agreements, and other agreements for research, development, demonstration, deployment, and evaluation projects of national significance to public transportation that the Secretary determines will improve public transportation. The Integrated Mobility Innovation (IMI) Demonstration program was developed under this authority.

The IMI Demonstration program and its constituent areas of inquiry advance the Secretary's strategic goal to lead the development and deployment of

innovative practices and technologies that improve the performance of the nation's transportation system and support economic growth. Further, this program follows FTA's vision of mobility for all—promoting equitable, accessible, and safe transportation for everyone. The program is built upon the opportunities offered by new mobility options that utilize public-private partnerships, various local assets, and innovative approaches to enhance personal mobility. These new models offer travelers more options, more information, and greater temporal and geographic coverage, thus increasing the vibrancy of all American communities.

The IMI Demonstration program's goals include:

- Exploring new business approaches and emerging technology solutions that support transformational mobility services;
- Enabling communities to adopt innovative mobility solutions that enhance transportation efficiency and effectiveness; and
- Facilitating the widespread deployment of proven mobility solutions that foster expanded personal mobility.

All applicants are expected to suggest performance measures in their applications to gauge the success of the proposed solutions within the above goals. Applicants are also required to note the data that will be provided to the Department to evaluate performance as well as provide an overview of how a public data access plan will be developed.

This NOFO announces the availability of $15 million in Fiscal Year (FY) 2017 and 2018 FTA research funds. The $15 million will fund solutions in one or more of the three areas: Mobility on Demand (MOD), Transit Automation, and Mobility Payment Integration. FTA may make multiple awards (*i.e.*, select multiple project teams) in each of these areas. Applicants should identify the area(s) in which they wish to have their proposal considered for funding. FTA reserves the right to ultimately determine which Area(s) of Inquiry apply to each proposal.

1. MOD Sandbox Demonstration ($8 Million)

FTA's Mobility on Demand (MOD) initiative envisions improved mobility through a traveler-centric approach that leverages innovations in technologies, service methods, and business models. FTA's MOD Sandbox Demonstrations provide a venue for integrated MOD concepts and solutions—supported through local partnerships—demonstrated in real-world settings.

In support of the Mobility on Demand vision, the Sandbox Demonstration program seeks to:

- Advance the transit industry's adoption of MOD;
- Enhance the transit industry's ability to formulate and implement MOD practices, with existing transit service as the backbone of an integrated mobility ecosystem;
- Validate the technical and institutional feasibility of innovative MOD business models and document best practices emerging from the demonstrations;
- Measure the impacts of MOD on travelers and transportation systems; and
- Examine requirements, regulations, and policies supporting the adoption of MOD.

The 2016 MOD Sandbox program (*https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program*) offered a platform where transit providers formed partnerships with innovative mobility providers, technology suppliers, and other partners to demonstrate innovative concepts and solutions to deliver high-quality, transformative mobility options in a real-world setting. The eleven demonstration projects and complementary independent evaluations in the 2016 MOD Sandbox program are helping FTA and related stakeholders learn how to approach MOD-related policies, and identify which technologies and business models hold promise. This NOFO solicits projects that build upon the existing knowledge base of the 2016 MOD Sandbox, and other demonstration and pilot projects, advancing the state of the practice and continuing to test MOD models across rural, suburban, and urban settings.

The state of practice for MOD has evolved since 2016. FTA is aware that a growing number of transit agencies and communities have partnered with private mobility providers to integrate new mobility options for transit users. Some agencies transformed their own operational and business practices to better meet passenger needs with new or enhanced services, such as new trip planning tools and applications; on-demand bus and microtransit operations; and other flexible service models.

The 2016 Sandbox projects are yielding valuable insights into how agencies can take advantage of new mobility options. These insights include the potential value for travelers, and some of the challenges or potential pitfalls in using these methods of service.

Some initial lessons learned include:

- Well-functioning first-mile/last-mile connections are essential to implementing effective MOD projects regardless of the MOD technology or business model demonstrated;
- Though MOD technologies and approaches can provide new and enhanced transportation options for all travelers and all communities, the benefits and impacts of new MOD service models may vary across different communities;
- Access to data and information on demonstration projects is essential to understanding the impacts of MOD, validating new MOD-focused metrics, and enabling transit agencies to make effective operational decisions. However, potential hurdles exist to accessing MOD pilot project data, including privacy concerns, the protection of proprietary business information, and data accuracy issues;
- Business models must be sustainable for all project partners, throughout the pilot and beyond; and
- The flexibility inherent in research authority allows project adjustments to respond to changing realities or changing business priorities, minimizing risk to project participants.

To build on these initial findings, and to continue to advance the state of the practice, the MOD Sandbox Demonstration component of this NOFO will focus on the three key areas below, while encouraging other innovative models and ideas that may not fall into any one category.

Key MOD Sandbox Demonstration Areas:

- *Projects that enhance traveler linkages (first mile/last mile) to transportation hubs,* enabling travelers to access existing transportation resources and foster personal mobility. This can include improved trip planning and payment mechanisms; new service models for linking travelers to transit stations and other transportation hubs; and innovative partnerships and approaches that provide new or expanded options for traveler linkages.
- *Projects that explore new MOD accessibility models, approaches, and technologies, especially those that increase access to transportation choices* for older Americans; school-aged populations traveling independently; persons with disabilities; or other individuals with limited ability to access existing public transportation services.
- *Projects that provide innovative approaches to data sharing arrangements and data collection methods, enabling increased*

understanding of impacts to travelers and the community. Innovative approaches include projects that provide open data platforms, open source technologies, and data sharing agreements that allow public and controlled access to project data. Innovative approaches can also include collecting relevant project data to understand MOD impacts such as crowdsourcing information, and incentive-based participation in data collection efforts. FTA expects demonstrations funded under this NOFO to provide a vital real-world testbed as FTA continues to develop a set of mobility metrics that support the vision of the IMI Demonstration program.

New MOD Sandbox demonstration projects selected and funded from this NOFO will be subject to current regulations and policies, the applicability of which is explained by FTA's Shared Mobility Frequently Asked Questions document at *https://www.transit.dot.gov/shared-mobility.* However, FTA understands that innovations proposed in the MOD Sandbox projects may require *new* Federal guidelines or changes to existing regulations and policies. Thus, FTA encourages applicants to identify in their applications any regulatory or policy challenges they expect to encounter in the implementation of the proposed demonstration. Such requests will be reviewed as part of the application process, and used to help FTA understand barriers to full implementation of MOD demonstrations. This corresponds to the Department's and FTA's commitment to supporting innovation by examining barriers to implementing inventive and practicable demonstration projects in the transit sector, including examining policy and regulatory requirements.

2. Transit Automation ($5 Million, Including $3 Million for Demonstration 1 and $2 Million for Demonstration 2)

FTA developed the five-year Strategic Transit Automation Research (STAR) Plan (*https://www.transit.dot.gov/research-innovation/strategic-transit-automation-research-plan-report-0116*) to explore the use of vehicle automation technologies in bus transit operations. The transit industry is increasingly interested in the potential applications and benefits of automation, including safety and operational improvements, cost savings, and new forms of transit service that provide increased mobility, flexibility, and convenience. Additionally, an initial analysis confirmed there are several partial automation applications with a clear business case for transit agency investment. That is, the technology investment costs for these applications could readily be recouped through future operational savings (STAR Plan, Appendix D: Transit Automation Benefit-Cost Analysis Report. *https://www.transit.dot.gov/research-innovation/strategic-transit-automation-research-plan-report-0116*).

The goal of STAR is to advance transit readiness for automation by:

- Conducting enabling research to achieve safe and effective transit automation deployments;
- Identifying and resolving barriers to deployment of transit automation;
- Leveraging technologies from other sectors to move transit automation forward;
- Demonstrating market-ready technologies in real-world settings; and
- Transferring knowledge to the transit stakeholder community.

This NOFO solicits specific automation projects noted in the STAR plan roadmap, including:

- *Automated Advanced Driver Assistance Systems (ADAS) for Transit Buses,* which seek to demonstrate market-ready or near market-ready advanced driver assistance technologies (automation levels 0–2 as defined in Society of Automotive Engineers (SAE) J3016 [June 2018]) to support partial transit automation in revenue service. And
- *Automated Shuttles,* focusing on shuttle buses with Level 4 automation and with use cases including circulator and feeder bus service.

All automation projects must address a range of factors related to transit, including:

- System performance, capabilities, limitations, and effectiveness;
- Transit operations and maintenance;
- Service quality;
- Safety and security, including cybersecurity;
- Passenger experience, comfort, acceptance, and willingness to use;
- Communication and equipment needs and costs;
- Overall cost-effectiveness; and
- Transferability.

Additional factors that should be included are noted for each of the specific demonstration areas.

Automated Advanced Driver Assistance Systems (ADAS) for Transit Buses ($3 Million)—Demonstration 1

In support of the STAR Plan's goal to demonstrate ADAS for Transit Buses (defined as a rubber-tired automotive vehicle used for the provision of public transportation service) projects are sought that will demonstrate use cases including, but not limited to:

- Smooth acceleration and deceleration;
- Automatic emergency braking and pedestrian collision avoidance;
- Curb avoidance;
- Object avoidance;
- Precision docking;
- Narrow lane/shoulder operations; and
- Platooning.

A project team may demonstrate one or more use cases. Applicants may also propose other ADAS use cases not identified above.

In addition to the factors related to automation demonstrations, generally, ADAS demonstrations must address:

- Human factors, including training drivers in ADAS operation, establishing understanding to avoid over-reliance on or under-utilization of ADAS, and evaluating the driver-vehicle interface; and
- Bus operator experience and acceptance.

Eligible Projects: FTA is seeking innovative projects to demonstrate market-ready or near market-ready advanced driver assistance technologies to support partial transit automation in revenue service. Demonstrations can be conducted with technologies and vehicles that can be adapted or retrofitted to the purpose relatively quickly. Eligible activities include applicable project planning and systems engineering activities leading to the demonstration of ADAS use cases, such as requirements, architecture and design development, installation integration, and testing.

Automated Shuttles ($2 Million)—Demonstration 2

FTA will fund one or more projects that demonstrate the integration of automated shuttles into a transit system (*e.g.,* connecting to existing transit stops or integrating with fare payment and trip planning systems) using a route (or several routes) in mixed traffic on public roads.

Demonstrations will utilize nearly market-ready automated shuttles to support transit automation (SAE Level 4). Preference will be given to projects operating in revenue service. Existing automated shuttle projects in the United States and abroad have demonstrated basic functionality and user acceptance, so appropriate projects should seek to demonstrate operations in more complex operating environments (*e.g.,* in mixed traffic on public roads, including operations at intersections) and integrate with an existing transit service (*e.g.,* a station feeder service or

other new routes that provide links to existing transit stops), possibly including integration with payment and trip planning systems. For more information on the Department's voluntary guidance on automated driving systems at SAE levels 3–5 please refer to AV 3.0 at *https://www.transportation.gov/av/3*.

Projects can include one or more automated shuttle use case including, but not limited to, circulator service and/or feeder service.

In addition to the factors related to automation demonstrations, generally, automated shuttle demonstrations must address:

- Human factors, including communicating shuttle intent and human-machine interface;
- Accessibility for people with disabilities, at a level which complies with the Americans with Disabilities Act, and beyond, ensuring contribution to an accessible Complete Trip;
- On-board attendant experience and acceptance; and
- Perceptions and acceptance by other road users, such as bicyclists and pedestrians.

Applicants should also provide information showing that any automated shuttles comply with the National Highway Safety Administration's (NHTSA) Federal Motor Vehicle Safety Standards (FMVSS) or are operating consistent with an exemption from those standards issued by NHTSA. If, conversely, an applicant wishes to use a vehicle that is not compliant and does not have an applicable exemption, the applicant should provide information concerning its plan to apply for the necessary exemption.

In addition, FTA may also select the Automated Shuttles Demonstration project for "twinning," which is an ongoing knowledge exchange, with a relevant European Commission-funded automated road transport research project.

Eligible Projects: FTA is seeking innovative projects to demonstrate nearly market-ready automated shuttles to support transit automation (SAE level 4). Eligible activities include applicable project design and planning activities leading to the demonstration of automated shuttle use cases.

3. Mobility Payment Integration ($2 Million)

The Mobility Payment Integration (MPI) research area was developed from FTA's recognition of the emergence and rapid evolution of the mobility payment marketplace, its importance in managing and integrating mobility, and ultimately, its overall influence on mobility outcomes. Integrating payment for different types of transportation services in a region can facilitate seamless travel across a variety of modes, including public transportation, transportation network companies, car and bike sharing services, micro-transit providers, and even private vehicles. Payment integration will enable the full use and coordination of public-sector and private-sector mobility resources to expand mobility options in communities across America. In keeping with FTA's commitment to equity and accessibility, payment integration solutions funded under this NOFO will address universal usability by all people, including those with disabilities as well as those who are under-banked or unbanked.

Convenient, useful payment systems are a key provision of FTA's Mobility Innovation goals. To advance the state of the practice in this area, FTA seeks to assess the feasibility of different payment integration technologies and strategies through the MPI demonstrations. Key areas to explore will include back-office operational models (including financial and accounting systems), institutional collaboration and experience, user experience, and interoperability and sustainability of such systems. Furthermore, MPI is also structured to explore the feasibility and impact of integrating payment services beyond the traditional mobility ecosystem, such as retail, banking, and health care industries.

This NOFO solicits demonstration projects in MPI with a focus on two topical areas: *Payment Equity and Human Service Transportation Coordination;* and *Integrated Mobility and Beyond.*

Payment Equity and Human Service Transportation Coordination

An informal assessment of data suggests that between 10 and 50% of transit riders use cash as their primary method of payment, to include on-vehicle payment and at transit ticket vending machines. Reasons for cash only payments range from personal preference to lack of access to non-cash payment products or services. In addition, some American households do not have relationships with traditional financial institutions (*i.e.,* they are unbanked). To address these populations, MPI Demonstration 1 will focus on the development and demonstration of mobility payment solutions for one or more of the following groups:

a. Unbanked and underbanked populations;

b. Populations without access to mobile devices and/or mobile data access; and

c. Human service transportation users.

Projects selected under this MPI focus area will plan, develop, demonstrate, evaluate, and refine solutions to ensure equitable access to transit and mobility systems by: Unbanked or underbanked populations; the technology disadvantaged; and vulnerable groups (low-income, minority, older adults, students and young travelers, and people with disabilities). Furthermore, projects should seek to validate payment integration's ability to enhance the experience of travelers from the targeted groups, thus enabling them to more effectively use the mobility system to connect them with more economic, healthcare, educational, social, and recreational opportunities. This demonstration aims to uncover and showcase how public transportation agencies and mobility providers can ensure equity and accessibility when deploying integrated payment solutions.

Integrated Mobility and Beyond

Multi-modal and multi-provider payment integration requires enabling technologies and institutional partnerships. Demonstration(s) in this topical area will focus on operationalizing an integrated single payment account across multiple public and private mobility services (*i.e.,* some combination of single or multiple transit agencies plus transportation network companies, bikeshare, carshare, ride hailing, taxi, scooters, and/or microtransit). FTA welcomes applications that address the following opportunities for integration:

- Transportation adjacencies (*e.g.,* tolling, parking, motor vehicle administrative transactions, electric charging stations);
- Specialized and demand-response transportation (*e.g.,* human service transportation, faith-based transportation, non-emergency medical transportation, paratransit, volunteer-based transportation, closed or open-loop shuttle services, employee and campus transportation);
- Multiple non-transit/non-mobility services (*e.g.,* retail, incentivization, loyalty programs);
- Social programs (*e.g.,* travelers with disabilities, student discounts, transit benefits, social security, senior citizens, veteran benefits, human service programs); and
- Access and authorization (*e.g.,* student cards, government IDs, campus/academic cards, library access,

community and facility access, municipal programs, age-based program IDs).

Applicants wishing to pursue an integrated mobility demonstration should address practical and sustainable partnership models among multiple agencies and providers. Applicants will investigate effective system-wide mobility and business or technology partnerships. These partnerships should be supported by scalable and sustainable back-office procedures and operations. Institutional collaboration should address harmonization of business rules and fare policies, as well as collaborative incentivization strategies.

Due to the anticipated complexity of structuring and developing a multi-agency, multi-modal, multi-provider system, FTA recognizes that most applicants will plan and implement their respective mobility payment integration projects in phases beyond the scope of this demonstration. Phases can be structured to capture different aspects such as incremental expansion of service areas or regions, layering of different service providers (transportation, mobility, retail, government, etc.) over a period, expansion of interregional operations, or geography-agnostic interoperability, etc. This incremental approach can leverage lessons learned in each phase to refine and optimize subsequent strategies.

FTA requires that all applicants describe their vision and phased planning and implementation plan toward an integrated mobility payment system, and clearly indicate which phase(s) the requested funding will address.

B. Federal Award Information

1. Amount Available

This notice makes available $15 million under the Public Transportation Innovation program (49 U.S.C. 5312(b)), which FTA intends to award in the form of cooperative agreements, to support the research, development, demonstration, deployment, and evaluation of research and technology of national significance to public transportation that the Secretary determines will improve public transportation.

2. Award Size

There is no minimum or maximum award amount. Rather, project scale will be bounded by each project's ability to complete all proposed planning and development activities and launch the demonstration within 12 months of project award. FTA intends to fund as many meritorious projects as possible. Only proposals from eligible recipients for eligible activities will be considered for funding. Due to funding limitations, applications that are selected for funding may receive less than the amount originally requested. In those cases, applicants must be able to demonstrate that the proposed projects are still viable and can be completed with the amount awarded.

3. Type of Assistance Instrument

Projects funded through this NOFO will be structured as cooperative agreements in which the federal government will have substantial involvement. The federal role will include active participation in the project activities by attending review meetings, commenting on technical reports, and maintaining frequent contact with the local project manager. FTA reserves the right to re-direct project activities and funding for projects supported under this NOFO and their related activities.

4. Previous Award

Recipients of funding under the 2016 Mobility on Demand Sandbox demonstration program may apply for funding to support additional projects or enhancements to previously developed activities. To be competitive, the applicant should demonstrate the extent to which the newly proposed project is indeed a new effort, and not a continuation of a prior project.

5. Project Timelines

Projects funded under the IMI Demonstration program will be allowed a maximum of 12 months for project planning. A minimum of 12 months of demonstration activity is required.

6. Restrictions on Funding

The IMI Demonstration program is a research and development effort and, as such, FTA Research Circular 6100.1E (available at *https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/research-technical-assistance-and-training-program*) rules will apply in administering the program.

C. Eligibility

To be selected for the IMI Demonstration program, an applicant must be an *eligible applicant* and the project must be an *eligible project* as defined below:

1. Eligible Applicants

Eligible applicants under this notice are providers of public transportation, including public transportation agencies, state/local government DOTs, and federally recognized Indian tribes. Eligible applicants must identify one or more strategic project partner(s) with a substantial interest and involvement in the project. Applications must clearly identify the eligible applicant and all project partners on the project team.

Eligible project partners under this program may include, but are not limited to:

- Private for-profit and not-for-profit organizations, including shared-use mobility providers, technology system suppliers and integrators, automated vehicle technology providers, property managers and developers, and others;
- private operators of transportation services, such as employee shuttle services, airport connector services, university transportation systems, or parking and tolling authorities;
- bus manufacturers;
- state or local government entities, including multi-jurisdictional partnerships, and organizations such as a Metropolitan Planning Organization; or
- other organizations including consultants, research consortia or not-for-profit industry organizations, and institutions of higher education.

The project team should include all project partners necessary to successfully carry out the prospective project, and structured to efficiently leverage Federal funds.

The applicant must be able to carry out the proposed agreement and procurements, if needed, with project partners in compliance with all applicable Federal, state, and local laws.

Key Partners can be designated by applicants. A key partner is defined as one that shares the costs, risks, and rewards of early deployment and demonstration of innovation. FTA may also determine that any identified project partner in the proposal is a key partner and make any award conditional upon the participation of that key partner. A key partner is essential to the project as approved by FTA and is therefore eligible for a noncompetitive award by the applicant to provide the goods or services described in the application. The applicant shall clearly indicate whether each partner is a key partner. A key partner's participation on a selected project may not be substituted later without FTA's approval.

2. Eligible Projects

Eligible activities include all activities leading to the demonstration, such as planning and developing business models, obtaining equipment and service, acquiring or developing software and hardware interfaces to

implement the project, operating the demonstration, and providing data to support performance measurement and evaluation.

FTA continues to seek bold and innovative ideas to advance the vision of MOD: Complete trips for all travelers using emerging technologies, applications, practices, and service models in concert with existing public transportation systems and resources.

Where applicable, eligible projects should consider how to address accessibility for persons with disabilities, including persons who use wheelchairs, and for older riders, affordability for individuals with lower incomes, impacts on the local community, broad access to mobility options for all travelers, as well as payment options that can accommodate all users, including the unbanked and underbanked. Planning activities should ensure that all stakeholders are involved, including people with disabilities. Eligible demonstrations will consist of a minimum 12-month field test and must be implemented and operational within 12 months of project award.

It should be noted that the program description section of this NOFO contains additional eligibility information with respect to the transit automation programmatic area. All applicants should closely review the Program Description section of this NOFO.

3. Cost Sharing or Matching

The Federal share of project costs under this program is limited to 80 percent. Applicants may seek a lower Federal contribution. The applicant must provide the local share of the net project cost in cash, or in-kind, and must document in its application the source of the local match. Eligible sources of local match are detailed in FTA Research Circular 6100.1E. (available at *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTACir6100.1E.docx4.08.2015%282%290.pdf).*

D. Application and Submission Information

1. Address

Applications must be submitted electronically through *GRANTS.GOV*. General information for submitting applications through *GRANTS.GOV* can be found at the following URL: *https://www.transit.dot.gov/funding/grants/applying/applying-fta-funding* along with specific instructions for the forms and attachments required for submission. Mail and fax submissions will not be accepted. A complete proposal submission consists of two forms: The SF424 Application for Federal Assistance (available at *GRANTS.GOV*) and the supplemental form for the 2018 Integrated Mobility Innovation Demonstration program (available at *GRANTS.GOV*). Failure to submit the information as requested can delay review or disqualify the application.

2. Content and Form of Application Submission

i. Submission

The application must include the Standard Form 424 (Application for Federal Assistance), cover page, and the Project Narrative, with the Applicant and a Proposal Profile supplemental form attached. The application must include responses to all sections of the SF–424 mandatory form and the supplemental form unless a section is designated as optional. FTA will use the information on the supplemental form to determine applicant and project eligibility for the program and to evaluate the proposal against the selection criteria described in part E of this notice. FTA will accept only one supplemental form per SF–424 submission. FTA encourages applicants to consider submitting a single supplemental form that includes multiple activities to be evaluated as a consolidated proposal. If an applicant chooses to submit separate proposals for individual consideration by FTA, it must submit each proposal with a separate SF–424 and supplemental form.

An applicant may attach additional supporting information to the SF–424 submission and supplemental form submission, including but not limited to letters of support, project budgets, fleet status reports, or excerpts from relevant planning documents. Supporting documentation must be described and referenced by file name in the appropriate response section of the supplemental form, or it may not be reviewed.

Information such as applicant name, Federal amount requested, local match amount, description of areas served, etc., may be requested in varying degrees of detail on both the SF–424 form and supplemental form. An applicant must fill in all fields unless stated otherwise on the forms. If copying information into the supplemental form from another source, the applicant should verify that the supplemental form has fully captured pasted text and that it has not truncated the text due to character limits built into the form. An applicant should use both the "Check Package for Errors" and the "Validate Form" validation buttons on both forms to check all required fields on the forms. An applicant should also ensure that the Federal and local amounts specified are consistent throughout the application.

ii. Application Content

The SF–424 Mandatory Form and the supplemental form will prompt applicants for the required information, including:

a. Applicant name.

b. Dun and Bradstreet (D&B) Data Universal Numbering System (DUNS) number.

c. Key contact information (including contact name, address, email address, and phone).

d. Congressional districts where the project will be carried out.

e. A description of the technical, legal, and financial capacity of the applicant.

f. A discussion of the overall goals of the proposed project, with proposed performance measures including the current state of mobility innovation in the community or service area of the proposed project, current challenges in providing robust, flexible, and accessible transportation options, integration challenges or gaps, and how the proposed project will address those needs. The discussion should include demographics for the areas expected to be served, a description of the current opportunities and need to improve mobility choices for all, and if applicable, recent local and/or national trends or developments that make this proposed project particularly timely. Additionally, all proposals should describe the extent to which the project builds, if applicable, on past research, innovation, or development efforts, and how this project will further advance innovative practices.

g. A description of the project partners, both technical and institutional, their roles, and their anticipated contributions. Indicate which of the project partners are "key partners" essential to the success of the proposed project. Additionally, the project team is encouraged to provide letters of commitment or support from each of the project partners as well as any agreements among the project partners. Describe the business model, service model, or approach that will be used to implement the demonstration project and any public-private partnerships formed to achieve the project objectives. Specify any unique or innovative approaches used to

coordinate and coalesce the project partners and local stakeholders.

h. A discussion of the expected outcomes and benefits of the proposed project to the individual travelers and the community; and how the goals and outcomes will be measured.

i. A description of the extent to which the proposed project is replicable in other communities, and the national significance of the project, if any.

j. A description of how, and the extent to which, the proposed project addresses accessible and equitable mobility service for all travelers, including persons with disabilities, older individuals, school age populations, and individuals with lower incomes or in underserved communities.

k. A description of any Federal, state, or local requirements or policies that the project team expects to present challenges to successfully implementing the proposed project.

l. A preliminary data management plan (DMP) which details the types of data that will be generated, and how the project team will provide access for FTA or its designee to this project-related data for purposes of evaluation, and a subset to the public.

m. A detailed description and supporting evidence (*e.g.*, signed memorandum of understanding, executed data agreements, detailed plans on what and how to share data between partners, etc.) related to project data collection, management, sharing, and usage.

n. A timeline of project implementation detailing all significant milestones and the roles of the responsible project partners. The timeline should include elements such as when the project will start, when it will be fully operational, and the length of time for anticipated data collection activities.

o. Financials and Budget

- Identify funding requirements for the proposed project, noting the specific sources and uses for the funds proposed, with enough detail to indicate the various key components of the project.
- Document the matching funds, including amount and source of the match (may include local or private sector financial participation in the project), or documents supporting the commitment of non-Federal funding to the project, or a timeframe upon which those commitments would be made.

Applicants may attach to the supplemental form supporting materials and documentation as appropriate. Applicants are encouraged to clearly reference all attachments in the Applicant and Proposal supplemental form. Suggested attachments include graphics, maps, letters of support, and other documents to support the proposal.

3. Dun and Bradstreet Universal Numbering System (DUNS) Number and System for Award Management (SAM)

Each applicant is required to: (i) Be registered in SAM before submitting its application; (ii) provide a valid DUNS number in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by FTA. FTA may not make a grant award to an applicant until the applicant has complied with all applicable DUNS and SAM requirements. FTA will review an applicant's SAM registration status to make responsibility determination.

These requirements do not apply if the applicant: (1) Is an individual; (2) is excepted from the requirements under 2 CFR 25.110(b) or (c); or (3) has an exception approved by FTA under 2 CFR 25.110(d). FTA may not make an award until the applicant has complied with all applicable unique entity identifier and SAM requirements. If an applicant has not fully complied with the requirements by the time FTA is ready to make an award, FTA may determine that the applicant is not qualified to receive an award and use that determination as a basis for making a Federal award to another applicant. All applicants must provide a unique entity identifier provided by SAM. Registration in SAM may take as little as 3–5 business days, but there can be unexpected steps or delays. For example, the applicant may need to obtain an Employer Identification Number. FTA recommends allowing ample time, up to several weeks, to complete all steps. For additional information on obtaining a unique entity identifier, please visit *www.sam.gov*.

4. Submission Dates and Times

Project proposals must be submitted electronically through *GRANTS.GOV* by 11:59 p.m. Eastern Time on August 6, 2019. Mail and fax submissions will not be accepted.

FTA urges applicants to submit applications at least 72 hours prior to the due date to allow time to correct any problems that may have caused either *GRANTS.GOV* or FTA systems to reject the submission. Proposals submitted after the deadline will only be considered under extraordinary circumstances not under the applicant's control. Deadlines will not be extended due to scheduled website maintenance. *GRANTS.GOV* scheduled maintenance and outage times are announced on the *GRANTS.GOV* website. Within 48 hours after submitting an electronic application, the applicant should receive two email messages from *GRANTS.GOV*: (1) Confirmation of successful transmission to *GRANTS.GOV*; and (2) confirmation of successful validation by *GRANTS.GOV*. If the applicant does not receive confirmation of successful validation or receives a notice of failed validation or incomplete materials, the applicant must address the reason for the failed validation, as described in the email notice, and resubmit before the submission deadline. If making a resubmission for any reason, applicants must include all original attachments regardless of which attachments were updated and check the box on the supplemental form indicating this is a resubmission.

Applicants are encouraged to begin the process of registration on the *GRANTS.GOV* site well in advance of the submission deadline. Registration is a multi-step process, which may take several weeks to complete before an application can be submitted. Registered applicants may still be required to update their registration before submitting an application. Registration in SAM is renewed annually and persons making submissions on behalf of the Authorized Organization Representative (AOR) must be authorized in *GRANTS.GOV* by the AOR to make submissions.

5. Executive Order 12372 (Intergovernmental Review)

The regulations effectuating Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this NOFO.

6. Funding Restrictions

Funds under this NOFO cannot be used to reimburse projects for otherwise eligible expenses incurred prior to FTA award of a Cooperative Agreement unless FTA has issued a "Letter of No Prejudice" for the project before the expenses are incurred.

The Integrated Mobility Innovation Demonstration program is a research, development, and demonstration effort and as such FTA Research Circular 6100.1E rules will apply in administering the program.

7. Other Submission Requirements

FTA encourages applicants to identify scaled funding options in case

insufficient funding is available to fund a project at the full requested amount. If an applicant indicates that a project is scalable, the applicant must provide an appropriate minimum funding amount that will fund an eligible project that achieves the objectives of the program and meets all relevant program requirements. The applicant must provide a clear explanation of how a reduced reward would affect the project budget. FTA may award a lesser amount regardless of whether the applicant provides a scalable option.

E. Application Review

1. Selection Criteria

Project proposals will be evaluated by FTA per the following five selection criteria. FTA strongly encourages each applicant to demonstrate the responsiveness of a project to all criteria shown below with the most relevant information that the applicant can provide.

The five selection criteria are:

i. Project Impact and Outcomes—FTA is seeking projects that address demonstrated mobility needs in the local community and uncover the potential of integrated mobility innovation to benefit the mobility of all users, including those with a range of functional abilities. Applicants should provide adequate contextual information about the nature of these needs (supported with statistical analysis, operational data, maps, and/or diagrams, where relevant) and clearly articulate how their proposal is designed to address those challenges, and meet FTA's goals for Mobility Innovation.

Applications should indicate how they expect to use the data they collect to evaluate the impact of their project, recognizing that ultimately this will involve collaboration between the applicant and an independent evaluator. Specifically, an essential element of all applications is a set of performance measures that clearly notes how success with the goals of the proposal will be measured and how the data will be collected.

ii. Innovation—The application should discuss the expected utility of new service models, systems, and technologies in ways that advance FTA's mobility goals and the state of the practice. Applications that test multiple innovative approaches will be given higher consideration.

iii. Transferability and Technology Transfer—Since knowledge transfer is a key goal of demonstrations, proposals that have a high degree of transferability to other public transportation agencies and locations or are otherwise scalable will be given priority. Additionally, applicants should note how they will support technology transfer of their findings, and are encouraged to note outreach mechanisms to support information sharing.

iv. Project Approach—The proposed project must be explained in sufficient detail and clarity to engender confidence in its eventual success. The proposal should present a realistic and detailed description of the overall project workflow, delineating project roles and responsibilities, and noting potential project risks and mitigations. The project budget should be supported by documentation on the source and credibility of the estimates. Sources of local matching funds should be clearly identified and documented, noting any restrictions or limitations to use. A robust evaluation framework should be provided, including details on how relevant demonstration data will both be collected, stored, and shared, with assurances that there are no contractual or other impediments to sharing data with FTA and the independent evaluator. FTA favors applications that evidence detailed readiness (such as a signed data agreement) among all project partners for project data collection, management, sharing, and use. Applications that demonstrate strong commitment to share data with FTA, in a way that addresses confidential business information (CBI) or Personally Identifiable Information (PII) concerns, will be viewed more positively.

v. Team Capacity, Experience, and Commitment—Applicants should provide information on the experience and capabilities of the project management team and implementation staff, and the extent of local commitment to the project and any relevant partnerships, including with other public-sector entities. Applications must evidence an understanding of the current state of the practice in mobility. Applicants are advised to submit information on partners' qualification and experience as a part of the application. FTA is seeking proposals that minimize project risk through appropriate staffing and robust community support. However, prior experience with similar projects is not required.

Each selection criterion will be judged in the frame of the Area of Inquiry identified by the applicant. Therefore, applicants should clearly reference how their proposal advances the specific goals, objectives, and other intents of the applicable Area of Inquiry as they address the selection criteria.

2. Review and Selection Process

A technical evaluation panel comprising FTA, other Departmental, and/or Federal agency staff will review project proposals against the selection criteria listed above. The technical evaluation committee may seek clarification from any applicant about any statement made in a proposal. FTA may also request additional documentation or information to be considered during the evaluation process. After the evaluation of all eligible proposals, the technical evaluation committee will provide project recommendations to the FTA Administrator. The FTA Administrator will determine the final list of project selections, and the amount of funding for each project. Geographic diversity, diversity of project type, the applicant's receipt of other Federal funding, and projects located in or that support public transportation service in a qualified opportunity zone designated pursuant to 26 U.S.C. 1400Z–1 may be considered in FTA's award decisions. FTA may prioritize projects proposed with a higher local share.

In addition to the criteria and considerations outlined in this section, the FTA Administrator will consider the following key Departmental objectives:

- Supporting economic vitality at the national and regional level;
- Leveraging Federal funding to attract other, non-Federal sources of investment, including value capture;
- Using innovative approaches to improve safety and expedite project delivery; and
- Holding grant recipients accountable for their performance and achieving specific, measurable outcomes with supporting data.

F. Federal Award Administration

1. Federal Award Notice

The FTA Administrator will announce the final project selections on the FTA website.

2. Administrative and National Policy Requirements

i. Independent Evaluation

Projects funded under this announcement will be subject to evaluation by an independent evaluator selected and funded separately by FTA. Recipients will be required to coordinate with the independent evaluator to assist in developing an evaluation plan; and collecting, storing, and managing data required to fulfill that evaluation plan.

ii. Draft Mobility Metrics

Projects funded under this announcement will be required to support the efforts of FTA or its designee to evaluate the project and its outcomes against a set of in-development Mobility Metrics, which will be shared with selected project teams upon award.

iii. Data Access and Data Sharing

Projects funded under this announcement will be required to gather and share all relevant and required data with the FTA within appropriate and agreed-upon timelines, to support project evaluation.

The Department may make available a secure data system to store data for evaluation (more information available at *https://its.dot.gov/data/secure/*), or projects may suggest an appropriate third-party system where Departmental analysts can conduct their work, with FTA approval. Applicants should budget for the costs of data storage and sharing as appropriate.

In response to the White House Office of Science and Technology Policy memorandum dated February 22, 2013, entitled *Increasing Access to the Results of Federally Funded Scientific Research,* the Department is incorporating Public Access requirements into all funding awards (grants and cooperative agreements) for scientific research. All work conducted under the Integrated Mobility Innovation Demonstration program must follow the Department data policies outlined in the DOT Public Access Plan at: *https://ntl.bts.gov/public-access/how-comply.* Recipients are required to include these obligations in any sub-awards or other related funding agreements.

The FTA expects Recipients to remove CBI and PII before providing public access to project data. Recipients must ensure the appropriate data are accessible to the FTA and/or the public for a minimum of five years after the award period of performance expires.

Additionally, information submitted as part of or in support of an IMI Demonstration program-funded project shall make every attempt to use publicly available data or data that can be made public and methodologies that are accepted by industry practice and standards, to the extent possible. FTA recognizes that certain partnerships may pose a challenge to data sharing and will work with each recipient to develop an appropriate data management plan (DMP) building upon the preliminary DMP submitted in the application.

Recipients must make available to the Department copies of all work developed in performance of a project funded under this announcement, including but not limited to software and data. Data rights shall be in accordance with 2 CFR 200.315, Intangible property.

If the submission includes information the applicant considers to be trade secret or confidential commercial or financial information, the applicant should do the following: (1) Note on the front cover that the submission "Contains Confidential Business Information (CBI)"; (2) mark each affected page "CBI"; and (3) highlight or otherwise denote the CBI portions. FTA protects such information from disclosure to the extent allowed under applicable law. If FTA receives a Freedom of Information Act (FOIA) request for the information, FTA will follow the procedures described in the Department's FOIA regulations at 49 CFR part 7.

iv. Knowledge and Technology Transfer

Project teams may be asked to participate in information exchange meetings, webinars, or outreach events to support FTA's goal of advancing the state of the practice. Project teams will be required to work with FTA to support knowledge transfer by participating in a relevant community of practice or similar activity. Applicants should allocate a portion of their budgets to support such work, which may include travel or presentations at key industry gatherings, such as conferences of the American Public Transportation Association (APTA), Community Transportation Association of America (CTAA), American Association of State Highway and Transportation Officials (AASHTO), Intelligent Transportation Society of America (ITSA) America, Transportation Research Board (TRB), and the Department, among others.

Projects with significant potential impacts on the mobility of persons with disabilities will be specifically encouraged to participate in FTA-supported cross-program coordination efforts. Such collaboration will bring together experts from the public, private, government, and academic sectors who share information and lessons learned from the development of technologies and business models with the potential to reduce the mobility barrier facing those with disabilities. The intent of this participation is to promote the success of projects funded under this NOFO, and to transfer knowledge and practices specific to accessibility.

v. Equity and Accessibility Planning

Funded projects will be required to produce, within 4 months of award, a draft equity and accessibility plan. Such plans will clearly identify the steps to be taken to ensure the usability of the proposed service or technology by people with disabilities, as well as those who are unbanked or have lower incomes. As part of these plans, projects will be required to engage a stakeholder group comprised of representatives of impacted communities, and to clearly identify how stakeholder input will be garnered and utilized in the project's development.

vi. Pre-Award Authority

FTA will issue specific guidance to recipients regarding pre-award authority at the time of selection. FTA does not provide pre-award authority for discretionary funds until projects are selected, and even then, there are Federal requirements that must be met before costs are incurred. For more information about FTA's policy on pre-award authority, please see the FY 2018 Apportionment Notice published on July 16, 2018. *https://www.govinfo.gov/content/pkg/FR-2018-07-16/pdf/2018-14989.pdf.*

vii. Planning

FTA encourages applicants to notify the appropriate State Departments of Transportation and Metropolitan Planning Organizations (MPO) in areas likely to be served by the project funds made available under these initiatives and programs.

viii. Standard Assurances

The applicant assures that it will comply with all applicable Federal statutes, regulations, executive orders, directives, FTA circulars, and other Federal administrative requirements in carrying out any project supported by the FTA agreement. The applicant acknowledges that it is under a continuing obligation to comply with the terms and conditions of the grant or cooperative agreement issued for its project with FTA. The applicant understands that Federal laws, regulations, policies, and administrative practices might be modified from time to time and may affect the implementation of the project. The applicant agrees that the most recent Federal requirements will apply to the project, unless FTA issues a written determination otherwise. The applicant must submit the Certifications and Assurances before entering into a grant or cooperative agreement if it does not have current certifications on file.

ix. Buy America

FTA requires that all capital procurements meet FTA's Buy America requirements per 49 U.S.C. 5323(j), which require that all iron, steel, or manufactured products be produced in the United States. Federal public transportation law provides for a phased increase in the domestic content for rolling stock. For FY 2019, the cost of components and subcomponents produced in the United States must be more than 65 percent of the cost of all components. For FY 2020 and beyond, the cost of components and subcomponents produced in the United States must be more than 70 percent of the cost of all components. There is no change to the requirement that final assembly of rolling stock must occur in the United States. FTA issued guidance on the implementation of the phased increase in domestic content on September 1, 2016 (81 FR 60278). Applicants should read the policy guidance carefully to determine the applicable domestic content requirement for their project. Any proposal that will require a waiver must identify in the application the items for which a waiver will be sought. Applicants should not proceed with the expectation that waivers will be granted, nor should applicants assume that selection of a project under the Low-No Program that includes a partnership with a manufacturer, vendor, consultant, or other third party constitutes a waiver of the Buy America requirements applicable at the time the project is undertaken. Consistent with Executive Order 13858 Strengthening Buy-American Preferences for Infrastructure Projects, signed by President Trump on January 31, 2019, applicants should maximize the use of goods, products, and materials produced in the United States, in Federal procurements and through the terms and conditions of Federal financial assistance awards. Additional information on Buy America requirements can be found at *https://www.transit.dot.gov/buyamerica.*

G. Federal Awarding Agency Contacts

For further information concerning this NOFO, please contact Mr. Hendrik Opstelten by phone at 202–366–8094, or by email at *hendrik.opstelten@dot.gov.* A TDD is available for individuals who are deaf or hard of hearing at 800–877–8339. In addition, FTA will post answers to questions and requests for clarifications on FTA's website at *https://www.transit.dot.gov/imi.* To ensure applicants receive accurate information about eligibility or the program, the applicant is encouraged to contact FTA directly, rather than through intermediaries or third parties, with questions.

Issued in Washington, DC.

K. Jane Williams,

Acting Administrator.

Address Name
Address Line 2
City, State, Zip

Dear **Name**:

Thank you for your letter supporting the application submitted by **Applicant** under the U.S. Department of Transportation's Fiscal Year (FY) 2019 Integrated Mobility Innovation (IMI) Demonstration program.

The IMI Demonstration program is administered by the Federal Transit Administration (FTA), and funded under Federal public transportation law (49 U.S.C. 5312) through the Federal Public Transportation Innovation program. FTA expects to award several cooperative agreements up to a total of $15 million under this program.

The IMI Demonstration program's primary purpose is to fund projects that demonstrate innovative, effective approaches, practices, partnerships, and technologies to enhance public transportation effectiveness, increase efficiency, expand quality, promote safety, and improve the traveler's experience. The program will fund solutions in one or more of the three areas identified in the notice of funding opportunity: Mobility on Demand, Transit Automation, and Mobility Payment Integration.

All properly submitted applications for this funding will receive full and careful consideration. FTA will announce final project selections after the review process is complete.

Your interest in this program is appreciated.

Sincerely,

Signatory

[FR Doc. 2019–09269 Filed 5–7–19; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

[Docket No. MARAD–2019–0078]

Requested Administrative Waiver of the Coastwise Trade Laws: Vessel ALLANA (Sailboat); Invitation for Public Comments

AGENCY: Maritime Administration, DOT.

ACTION: Notice.

SUMMARY: The Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S.-build requirements of the coastwise trade laws to allow the carriage of no more than twelve passengers for hire on vessels, which are three years old or more. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below.

DATES: Submit comments on or before June 7, 2019.

ADDRESSES: You may submit comments identified by DOT Docket Number MARAD–2019–0078 by any one of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Search MARAD–2019–0078 and follow the instructions for submitting comments.
- *Mail or Hand Delivery:* Docket Management Facility is in the West Building, Ground Floor of the U.S. Department of Transportation. The Docket Management Facility location address is: U.S. Department of Transportation, MARAD–2019–0078, 1200 New Jersey Avenue SE, West Building, Room W12–140, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except on Federal holidays.

Note: If you mail or hand-deliver your comments, we recommend that you include your name and a mailing address, an email address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission.

Instructions: All submissions received must include the agency name and specific docket number. All comments received will be posted without change to the docket at *www.regulations.gov,* including any personal information provided. For detailed instructions on submitting comments, see the section entitled Public Participation.

FOR FURTHER INFORMATION CONTACT: Bianca Carr, U.S. Department of Transportation, Maritime Administration, 1200 New Jersey Avenue SE, Room W23–453, Washington, DC 20590. Telephone 202–366–9309, email *Bianca.carr@dot.gov.*

SUPPLEMENTARY INFORMATION: As described by the applicant the intended service of the vessel ALLANA is:

—*Intended Commercial Use of Vessel:* "Primarily used as a training vessel to teach ASA sailing courses as well as sunset cruises"

—*Geographic Region Including Base of Operations:* "North Carolina" (Base of Operations: Wrightsville Beach, NC)

Regional Transit Technical Advisory Committee
2019 Agenda Look Ahead

The RTTAC meets quarterly on the fifth Wednesday of the month. Additional meetings may be necessary in 2019 leading up to the release of the Draft Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Connect SoCal, in late 2019. Following is a tentative look-ahead to the proposed RTTAC agendas for 2019. It includes three standing items requested by the Chair and Vice Chair for:

1) Regulatory Compliance – items addressing compliance with MAP - 21 and FAST Act rulemakings, as well as state regulations including SB 375 or ARB fleet rules
2) Performance – items related to understanding why ridership has declined, and highlighting steps local agencies are taking to address these losses
3) Technology and Mobility Innovations – items related to transportation network companies, ITS, advanced technologies, and other mobility innovations

The discussion items below are proposed and speakers have not yet been contacted. Suggestions from RTTAC members are welcome.

Spring 2019 (May 29)

- Regulatory Compliance Standing Item
    - Connect SoCal Transit/Rail Project Submittals & Modeling Assumptions
    - Private Sector Providers Analysis
    - Transit Asset Management Target Setting
- Performance Standing Item
    - Transit Ridership Study Phase 2 (receive & file)
- Technology and Mobility Innovations Standing Item
    - Portland Tri-Met Hop Fastpass*
    - Transit Technology/Service Delivery Innovation
- ADA Paratransit Demand Forecast

Summer 2019 (July 31)

- Regulatory Compliance Standing Item
    - Connect SoCal Environmental Justice Analysis
    - SCAG Transit Asset Management Target Setting
    - Private Sector Providers of Transportation Service outreach findings
- Performance Standing Item
    - Connect SoCal Performance Targets
- Technology and Mobility Innovations Standing Item
    - Santa Monica Big Blue Bus at Night*
    - San Bernardino County 211 Program*
- Connect SoCal Scenario Planning Development
- LAWA Automated People Mover
- SCAG ADA Paratransit Forecasting Tool Development

Fall 2019 (Sep. 30 and/or Oct. 30)

- Regulatory Compliance Standing Item
    - SCAG Transit Asset Management Target Setting
    - California ARB Clean Transit Rule
    - Regional Housing Needs Assessment/Growth Forecast
- Performance Standing Item
    - Connect SoCal Draft Plan -- Investments and Plan Performance
- Technology and Mobility Innovations Standing Item
    - Montebello Bus Lines On Board Video Detection System*
- SCAG ADA Paratransit Forecasting Tool Development
- South Bay Metro Green Line Extension*

**Speakers not yet contacted*

SCAG Regional Transit TAC

5/29/2019

Mobility Solutions

Tim McHugh, Chief Information Officer

Rhyan Schaub, Director, Fare Revenue & Administrative Services

Mobility Solutions

"Putting Customers First"

Door to door convenient transportation

Plan-Book-Pay Application

Moves beyond traditional transit operations to a more holistic, comprehensive approach to a larger transportation ecosystem.

...Taking Complex Service Alternatives and Simplifying for the Customer

Mobility Solutions Objectives

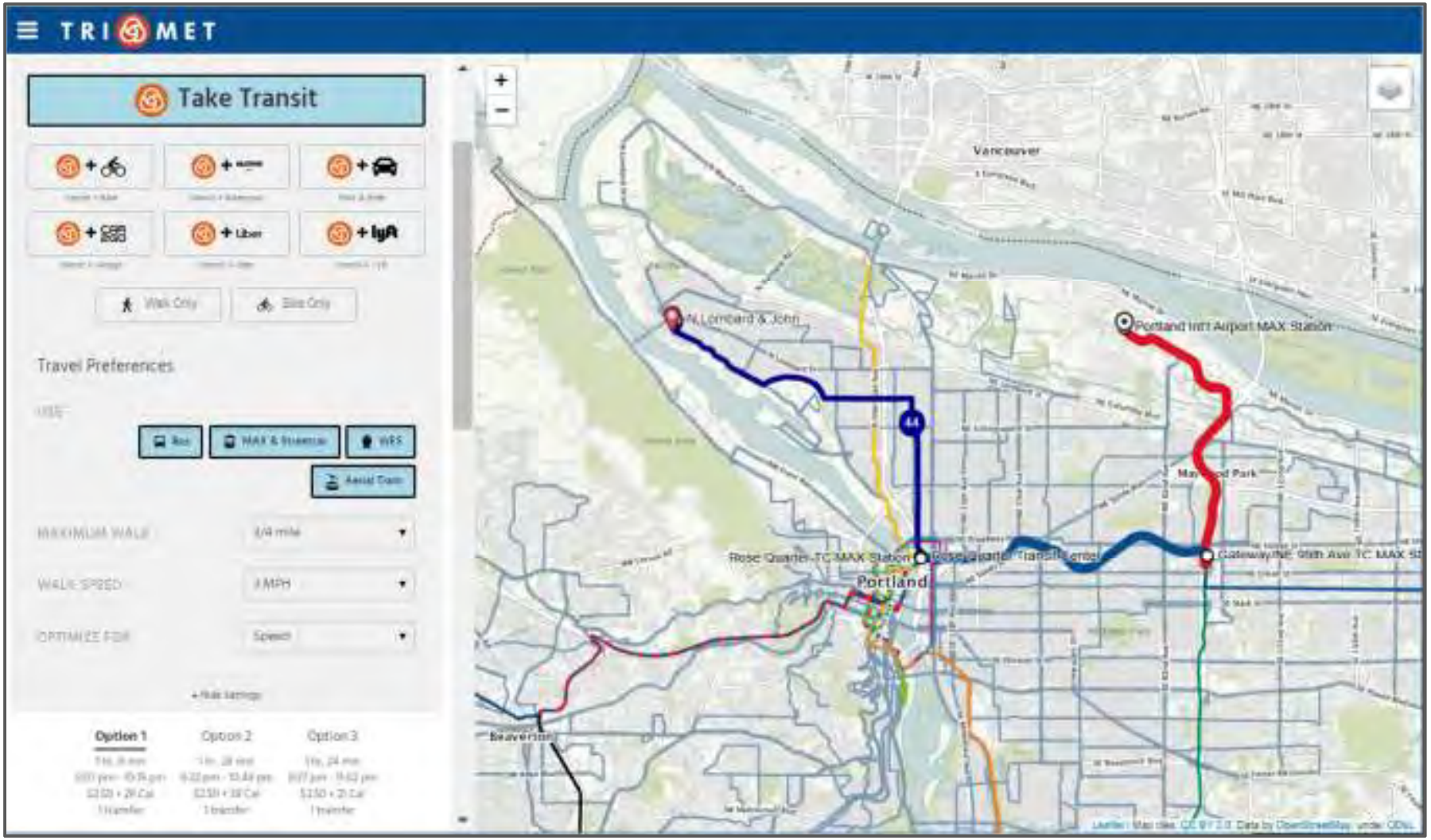
- Reduce customer planning and travel options “frictions” and anxiety
- Reduce congestion
- Improve customer experience
- Improve overall transportation network
- Cater to all travelers (age, disadvantaged, low-income)
- Work in driver-controlled & autonomous environment
- Deliver and simplify customer experiences across all key regional modes (KISS)

Beta Planner Launch

March 12, 2019

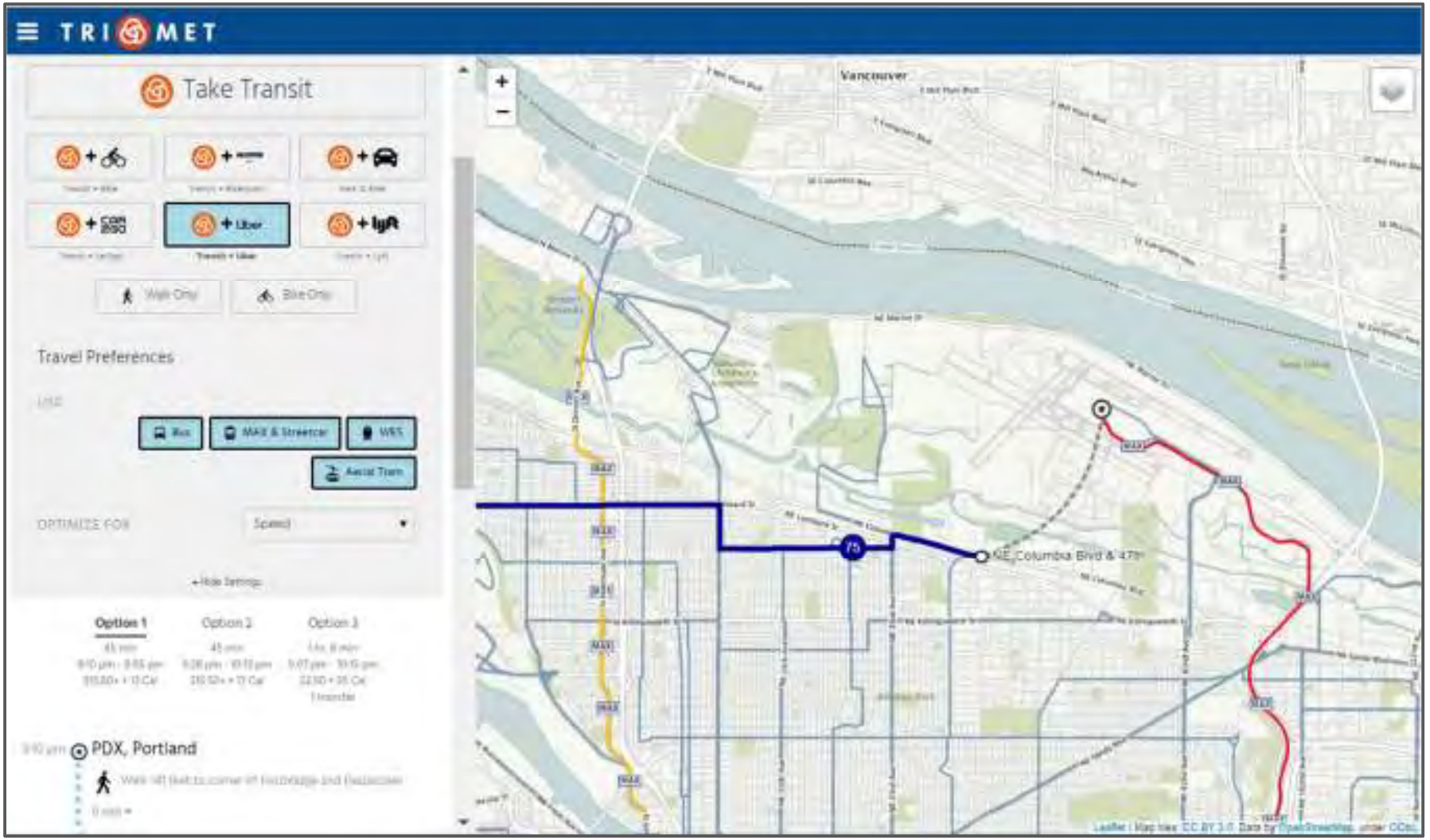
Transit Trip

Real-time Information



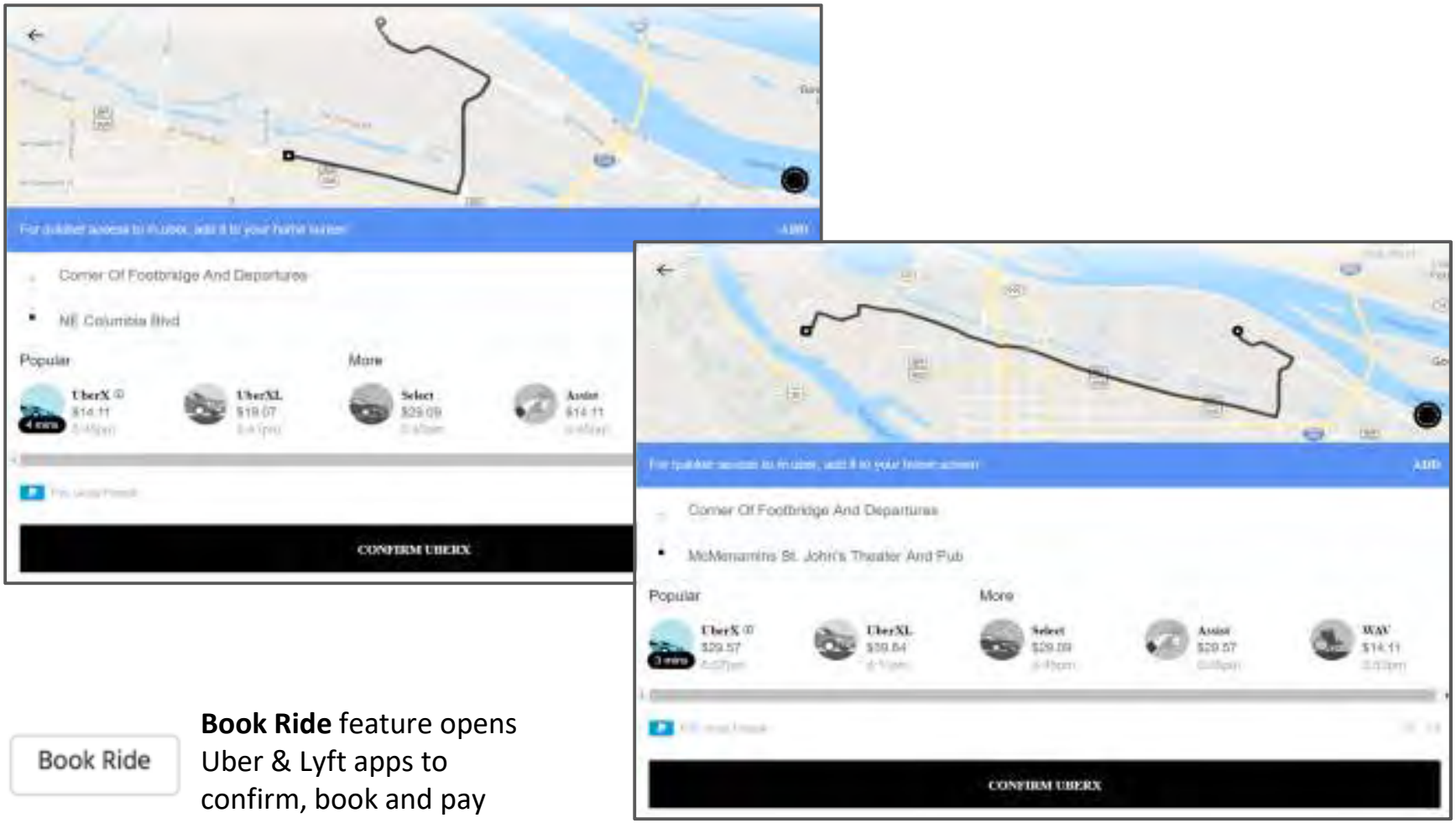
Transit + Uber Trip

Faster than Transit Alone



Transit + Uber Trip

Cheaper than Uber Alone

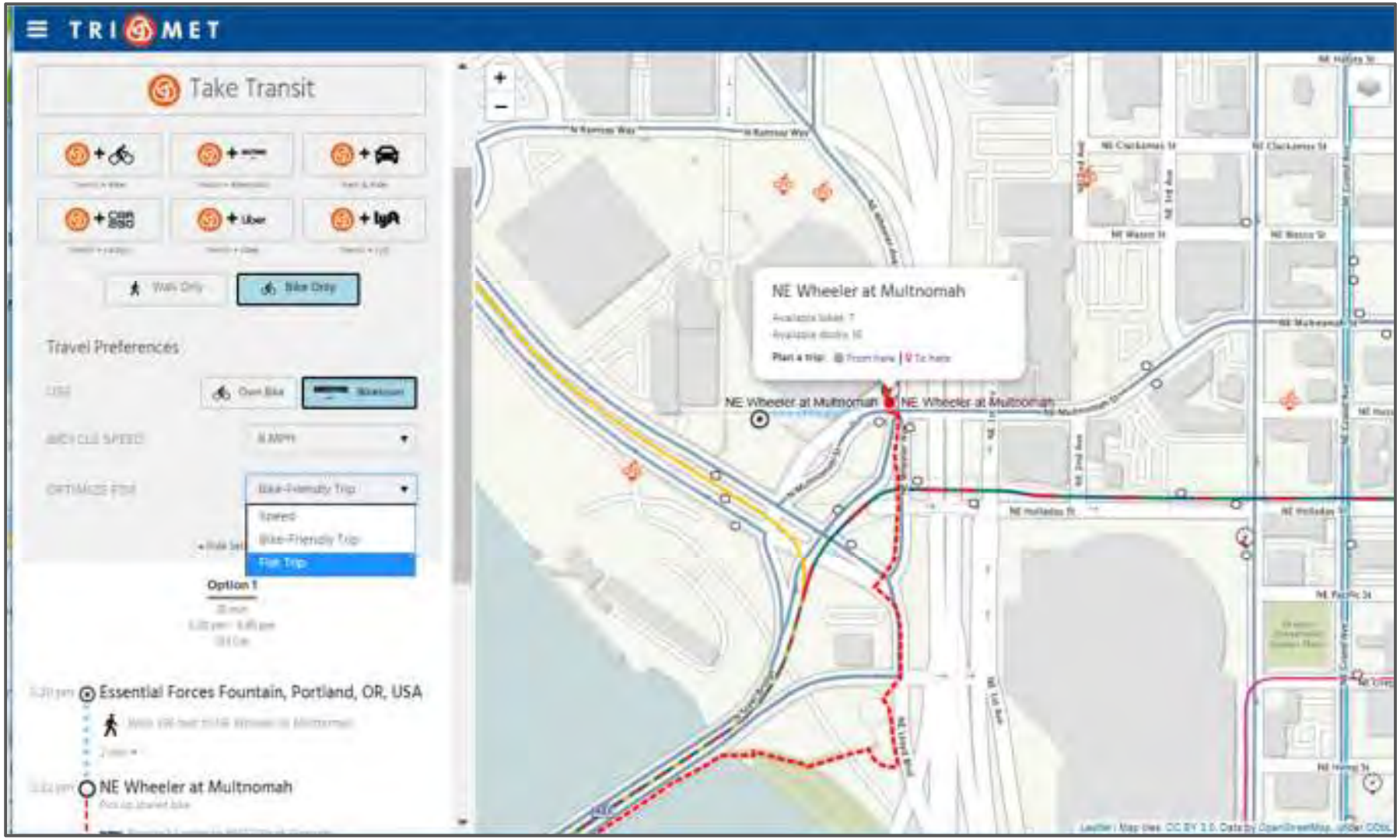


Book Ride

Book Ride feature opens Uber & Lyft apps to confirm, book and pay

BIKETOWN

Real-time Information, Biking Preferences



OpenTripPlanner

Official OTP Deployment

Unofficial OTP Deployment

OpenTripPlanner

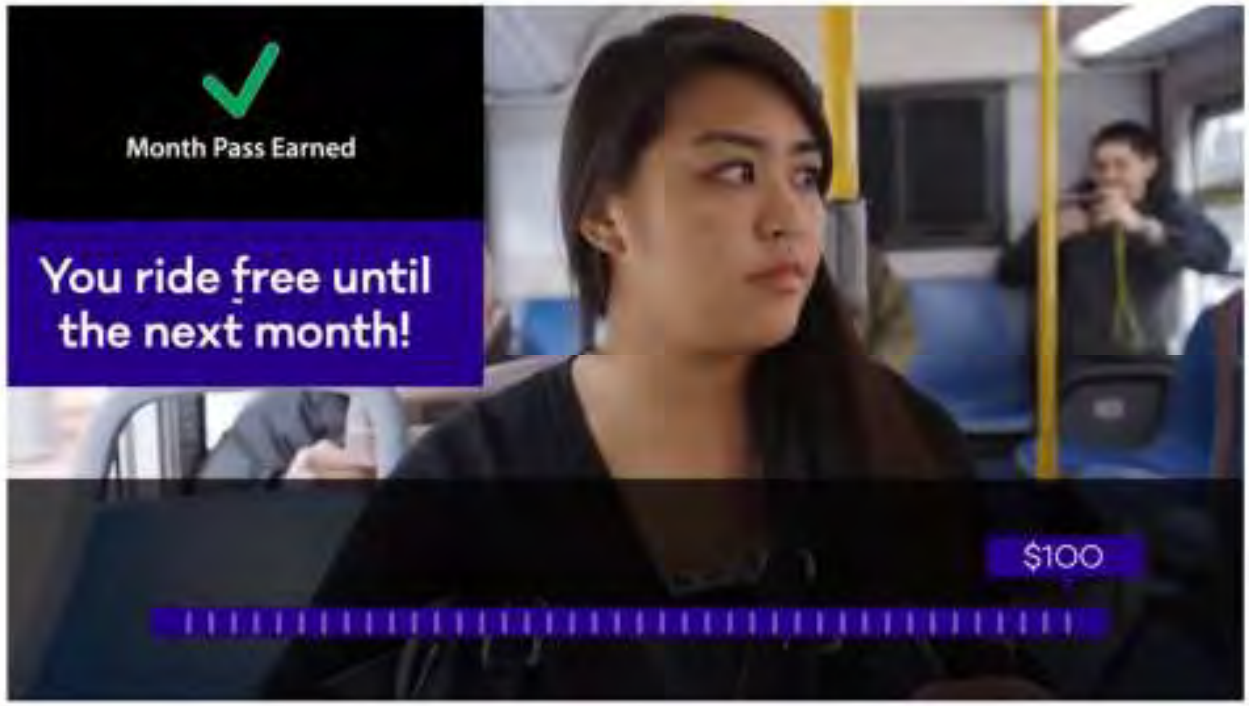
Official OTP Deployment Unofficial OTP Deployment

Multimodal Trip Planning

Key component to
PLAN-BOOK-PAY

Addresses first & last mile

Fare Policy



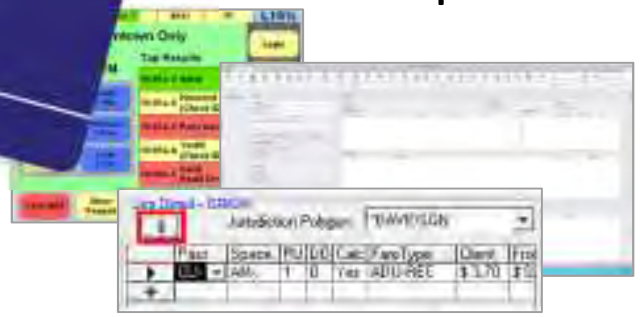
Account-Based

Sales

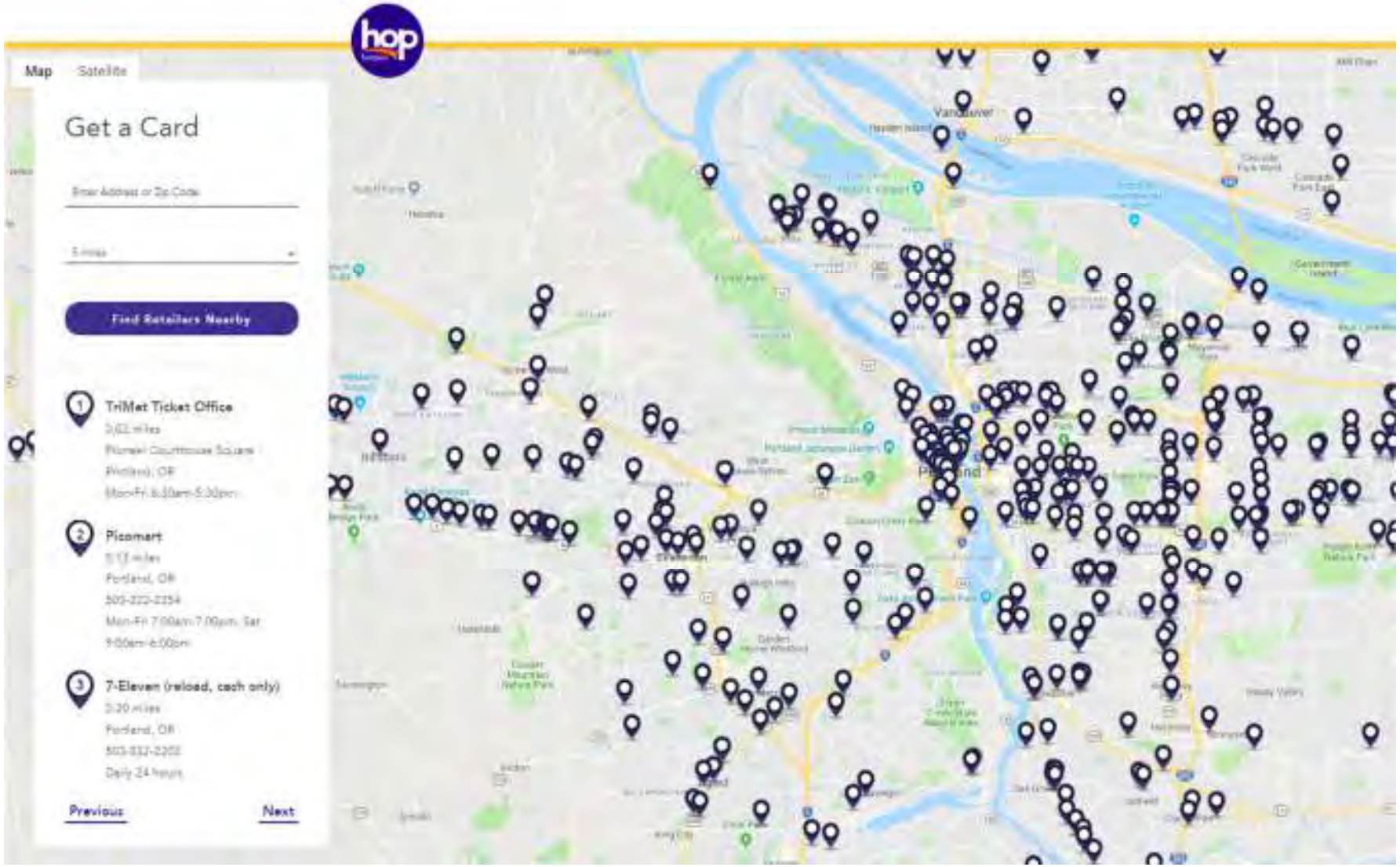
Support

Payment

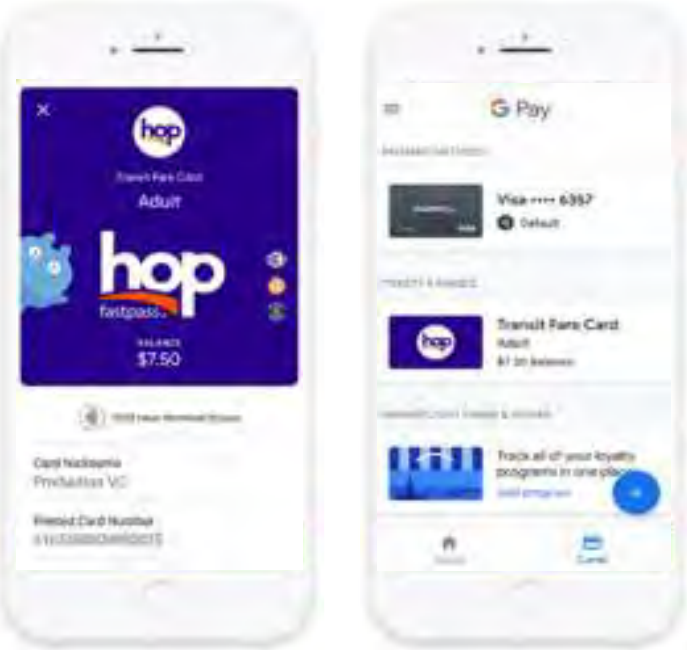
Inspection

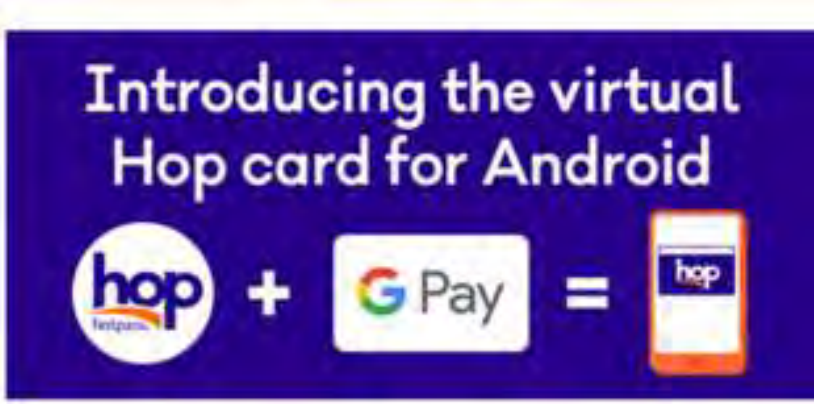


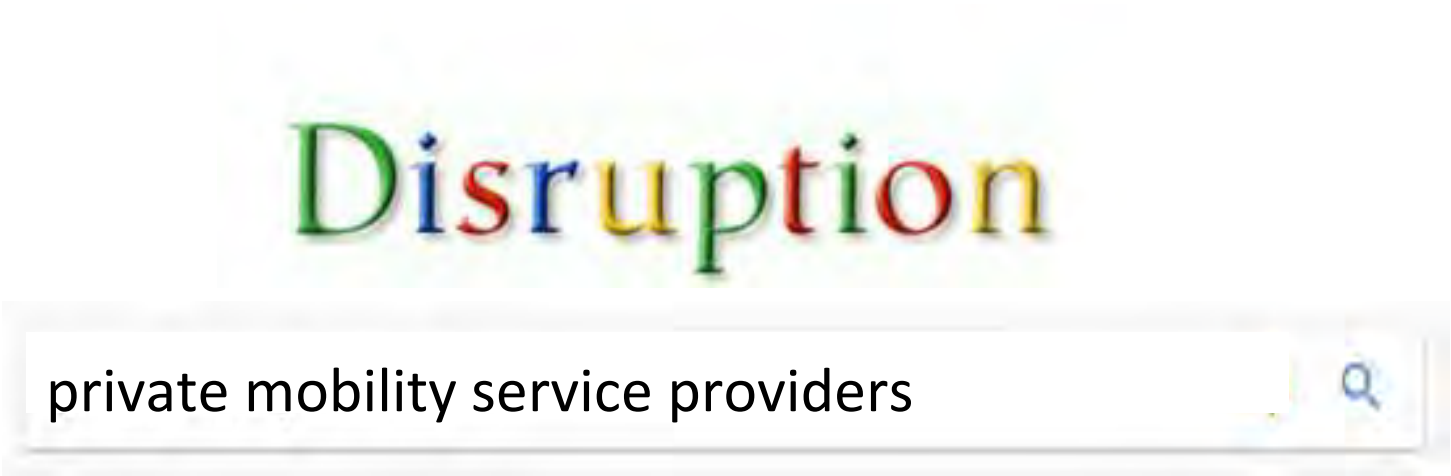
Retail Network



Virtual Card

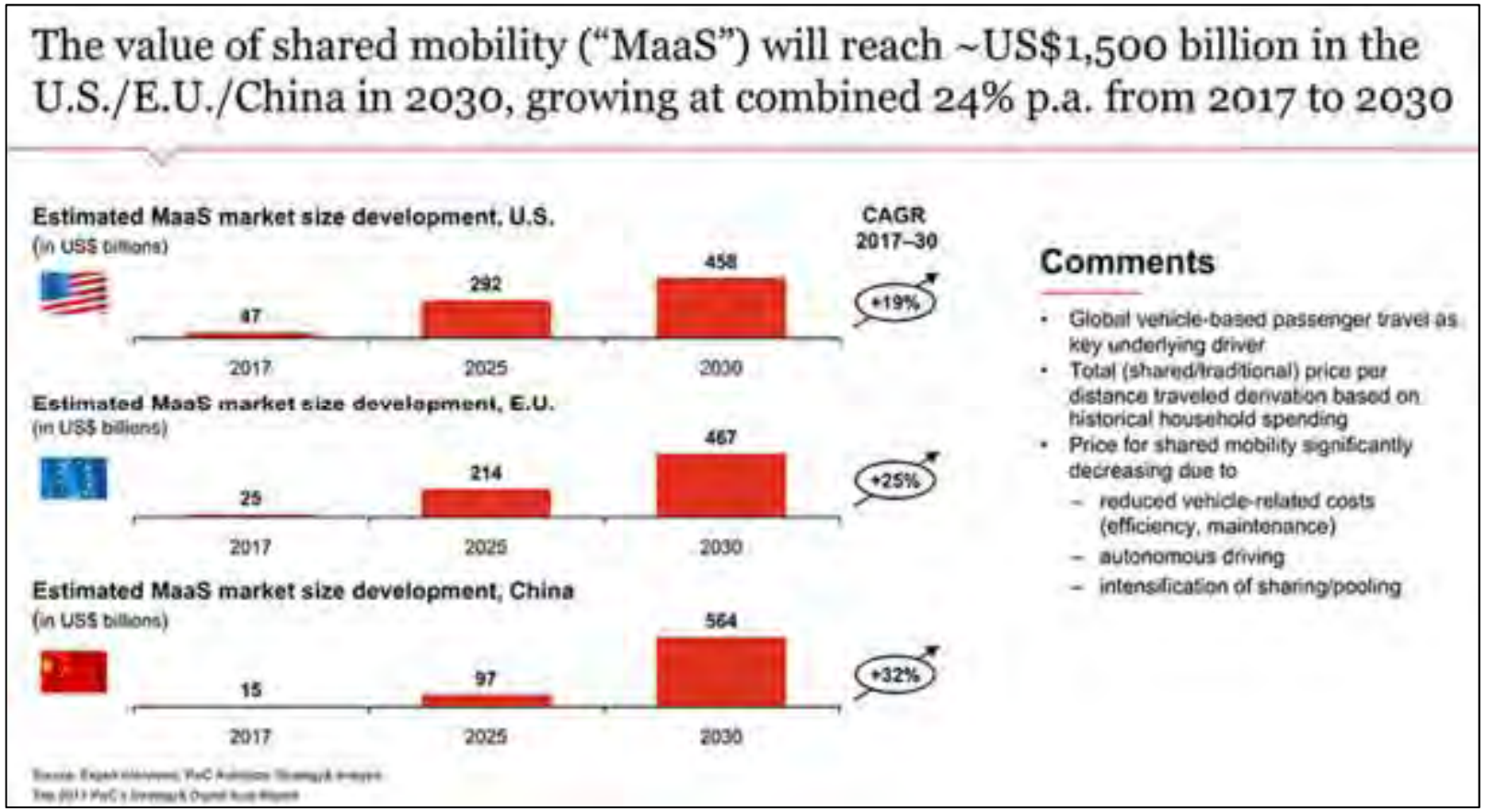





Disruption
private mobility service providers

State of the Industry

"Battle for the Customer"



What is TriMet Doing to Support a Changed Vision and Changing Services?

- Hop
- Multimodal Trip Planner
- Loyalty Program Business Case
- Siemens Pilot (ROOT)
- Smart Cities Strategy/Action Plan
- RFP for Consultant for Mobility Solutions Strategy

What Else Can TriMet Do?

Recommendations to Consider:

- Focus on faster, cheaper, equitable, safer and more reliable service
- Monitor market
- Position as regional mobility manager
- Strategy, direction, influence
- Be agile, adaptive, flexible
- Proactive with policy and data management

Discussion

Connect SoCal : Transit and Rail Project List

Regional Transportation Plan/ Sustainable Communities Strategy Investments

Regional Transit Technical Advisory Committee (RTTAC)

Matt Gleason and Steve Fox
Senior Regional Planners
May 29, 2019

SCAG™
INNOVATING FOR A BETTER TOMORROW
WWW.SCAG.CA.GOV

What is an RTP/SCS?
Long-term vision and investment framework

- Federal Requirements
  - Updated every 4 years to maintain eligibility for federal funding
  - Long Range: 20+ years into the future
  - Demonstrated conformity:
    - Regional emissions analysis
    - Financially constrained (revenues = costs)
    - Timely implementation of TCMs
    - Interagency consultation/public involvement
- State Requirements
  - Must meet GHG reduction targets for passenger vehicles

Background:
Previous Presentations

Staff have come to the RTTAC several times to discuss Connect SoCal. Previous presentations have included items on system performance, performance measures, and performance benchmarking

2020 RTP Transit Element

Process

FY2015-16 Transit Existing Conditions Analysis

System Performance	Performance Benchmarking	Implementation Monitoring	Network Development

Emerging Trends

Ridership	Technology	Needs Assessment	Demographic Analysis

Plan

Asset Management Target Setting	Planned Investments	Performance Forecasting

2020 RTP/SCS – Transit Element

Expenditure Plan and Project List

Development and Process

- SCAG's RTP's are an example of the benefits of bottom up approach to regional planning
- County Transportation Commissions (CTCs) work with local agencies to build project lists
- These Project Lists are submitted to SCAG, and evaluated by SCAG staff
- 3 Key SCAG Analyses
  - AQ Conformity
  - Fiscal Constraint
  - Model Replicability
- Numbers shown on following slides are draft, subject to change as SCAG works with CTCs on clarification.

County Level Plans

System Level Plans with a Transit Component

Commission	Short Range or Strategic Plan	Long Range Plan	Coordinated Human Services Transportation Plan
ICTC	2019 Draft Short Range Transit Plan	2013 Long Range Transportation Plan	2014 Coordinated Human Services Transportation Plan
Metro	2014 Short Range Transportation Plan	2009 Long Range Transportation Plan 2019 LRTP Update in Progress	2016-2019 Coordinated Public Transit-Human Services Transportation Plan for Los Angeles County
OCTA	OC Transit Vision	Designing Tomorrow – 2018 Long-Range Transportation Plan OC Transit Vision	Public Transit- Human Services Transportation Coordination Plan For Orange County
RCTC	2016 Strategic Assessment	2019 Draft/In Process Long Range Transportation Plan	2016 Coordinated Human Services Transportation Plan
SBCTA	2016 Short Range Transit Plan	2015 Countywide Comprehensive Transportation Plan 2010 Long Range Transit Plan	2016-2020 Coordinated Human Services Transportation Plan
VCTC	Ventura County Short Range Transit Plan (SRTP) (2015)	Ventura County Comprehensive Transportation Plan (2013)	Ventura County Coordinated Public Transit-Human Services Transportation Plan, 2016 Revision

Transit Submittals

Projects by Type of Investment

Row Labels	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Grand Total
Capital (Corridor)		$ 34,719,945,491.82	$ 3,977,493,000.00	$ -	$ 1,755,322,000.00		$ 40,452,760,491.82
Capital (Facilities)	$ 16,467,000.00	$ 8,183,556,000.00	$ 25,300,000.00	$ 462,246,000.00	$ 17,500,000.00		$ 8,705,069,000.00
Capital (Infrastructure)		$ 156,437,000.00		$ 80,000,000.00	$ 487,581,000.00		$ 724,018,000.00
Capital (LSLI)		$ 21,872,356,000.00					$ 21,872,356,000.00
Capital (Non-revenue)				$ 13,320,000.00			$ 13,320,000.00
Capital (Vehicle)		$ 13,763,487,000.00	$ 1,766,313,000.00	$ 639,043,000.00			$ 16,168,843,000.00
Infrastructure /MOW		$ 6,538,500,000.00					$ 6,538,500,000.00
Operations		$ 5,496,143,952.97	$ 15,051,515,000.00	$ 92,616,000.00	$ 3,030,645,000.00	$ 95,700,000.00	$ 23,766,619,952.97
Operations (Vehicle)			$ -				$ -
Operations /Planning				$ 15,493,000.00			$ 15,493,000.00
Planning				$ 35,000,000.00			$ 35,000,000.00
Grand Total	$ 16,467,000.00	$ 90,730,425,444.79	$ 20,820,621,000.00	$ 1,337,718,000.00	$ 5,291,048,000.00	$ 95,700,000.00	$ 118,291,979,444.79

Key Projects
(Major Corridor Investments -- Streetcar)

Project Description	Los Angeles	Orange	Riverside	San Bernardino	Grand Total
OC Streetcar between SARTC and A New Transit Center in Garden Grove, Near the Intersection of Harbor Boulevard and Westminster Avenue		$ 414,275,000			$ 414,275,000
Street Car and Circulator Projects (System Connectivity Projects (No Subregion))	$ 41,822,492				$ 41,822,492
Streetcar Modal Total	$ 41,822,492	$ 414,275,000			$ 456,097,492

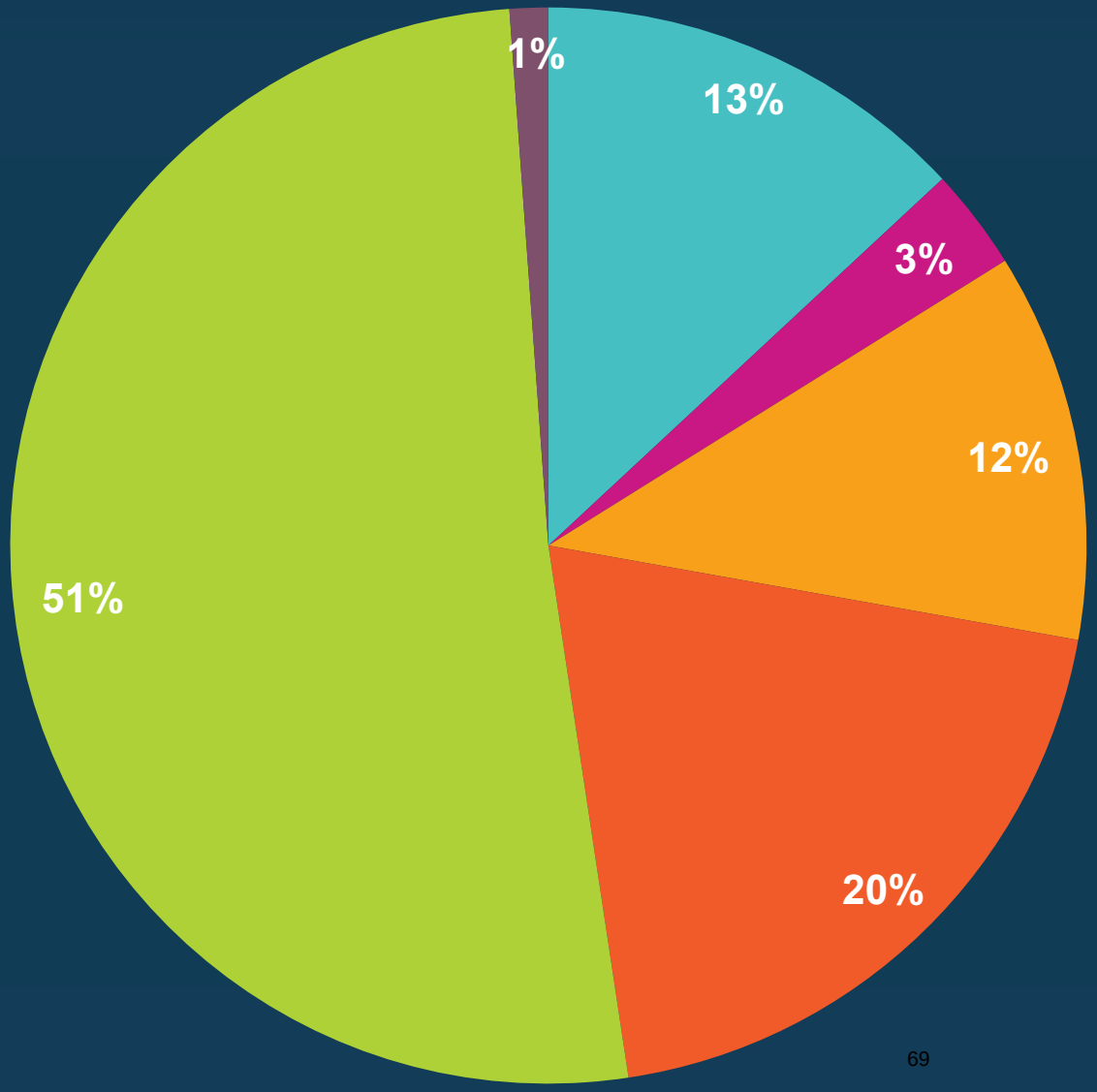
Key Projects
(Major Corridor Investments – Bus Rapid Transit)

Project Description	Los Angeles	Orange	Riverside	San Bernardino	Grand Total
BRT Connector Orange/Red Line to Gold Line	$ 283,400,000				$ 283,400,000
Full BRT - San Bernardino, San Manuel Casino in Highland to Kaiser Hospital in Fontana				$ 422,223,000	$ 422,223,000
OC Transit Vision - Corridor Improvements		$ 3,563,218,000			$ 3,563,218,000
Orange Line BRT Improvements	$ 321,400,000				$ 321,400,000
West Valley Connector BRT Phase II from Victoria Gardens to Sierra Ave				$ 30,000,000	$ 30,000,000
Vermont Transit Corridor	$530,100,000				
Implement Bus Rapid Service/BRT on Highway 111 based on recommendations in the Comprehensive Operational Analysis conducted in 2005/06.			$15,493,000		
Bus Rapid Transit Modal Total	$1,134,900,000	$ 3,563,218,000	$15,493,000	$ 452,223,000	$5,165,834,000

Key Projects
(Major Corridor Investments – Light Rail)

Project Description	Los Angeles	Orange	Riverside	San Bernardino	Grand Total
Light Rail Extended from County Line to Montclair (Phase 2B)				$ 100,400,000	$ 100,400,000
Airport Metro Connector 96th St Station/Green Line Extension LAX	$ 620,700,000				$ 620,700,000
Green Line Extension to Crenshaw Blvd in Torrance	$ 1,159,500,000				$ 1,159,500,000
Gold Line Foothill Extension to Claremont	$ 1,232,800,000				$ 1,232,800,000
East San Fernando Valley Transit Corridor Project	$ 1,572,500,000				$ 1,572,500,000
Gold Line Eastside Extension Phase 2 (South El Monte along SR-60)	$ 4,530,700,000				$ 4,530,700,000
Gold Line Eastside Extension Phase 2 (Whittier along Washington Blvd)	$ 4,530,700,000				$ 4,530,700,000
West Santa Ana Branch Transit Corridor Light Rail	$ 6,433,400,000				$ 6,433,400,000
Light Rail Modal Total	$ 20,080,300,000			$ 100,400,000	$ 20,180,700,000

Key Projects
(Major Corridor Investments– by Mode)



- Bus Rapid Transit
- Commuter Rail
- Heavy Rail
- Sepulveda Pass
- Light Rail
- Streetcar

Project List
Operations & Maintenance, Vehicles, Facilities

	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Grand Total
Operations		$5,496,143,953	$15,051,515,000	$92,616,000	$3,030,645,000	$95,700,000	$23,766,619,953
Capital (Facilities)	$16,467,000	$8,183,556,000	$25,300,000	$462,246,000	$17,500,000		$8,705,069,000
Capital (Vehicle)		$13,763,487,000	$1,766,313,000	4639,043,000			$16,168,843,000

Future HQTCs Identified by Transit Operators

Operator	Line	Mode	Corridor	Date
Big Blue Bus	8	Local	Ocean Park Blvd.	2045
Big Blue Bus	14	Local	Bundy Dr./Centinela Ave.	2045
Big Blue Bus	17	Local	Palms/Sawtelle Blvds.	2045
Burbank Bus	NoHo-Airport	Local	Hollywood Way/Burbank Blvd.	2045
Foothill Transit	492	Local	Arrow Highway	2045
Gold Coast Transit	1	Local	Saviers Blvd.	2045
Gold Coast Transit	6	Local	Main St.	2045
Imperial Valley Transit	1N	Local	SR 111	2045
Imperial Valley Transit	1S	Local	SR 111	2045
OCTA	26	Local	Commonwealth Ave.	2045
OCTA	37	Local	Euclid Blvd.	2045
OCTA	47	Local	Harbor Blvd.	2045
OCTA	50	Local	Katella Ave.	2045
OCTA	55	Local[71]	Santa Ana to Newport Beach	2045
OCTA	70	Local	Edinger Ave.	2045

Future HQTCs Identified by CTCs

Operator	Line	Mode	Corridor	Date
LADOT	DASH Boyle Heights/East L.A.	Local	Boyle Heights/East L.A.	2022
LADOT	DASH Boyle Heights West	Local	West Boyle Heights	2022
LADOT	DASH C	Local	Downtown L.A.	2022
LADOT	DASH Canoga Park	Local	Canoga Park	2022
LADOT	DASH Chersterfield Square	Local	Chesterfield Square	2022
LADOT	DASH Crenshaw	Local	Crenshaw	2022
LADOT	DASH El Sereno/City Terrace	Local	El Sereno/City Terrace	2022
LADOT	DASH Elysian Valley/Cypress Park	Local	Elysian Valley/Cypress Park	2022
LADOT	DASH Fairfax	Local	Fairfax	2022
LADOT	DASH Highland Park/Eagle Rock	Local	DASH Highland Park/Eagle Rock	2022
LADOT	DASH Glassell Park/Highland Park	Local	Glassell Park/Highland Park	2022
LADOT	DASH Hollywood	Local	Hollywood	2022
LADOT	DASH Hollywood/Wilshire	Local	Hollywood	2022
LADOT	DASH King East	Local	South L.A.	2022
LADOT	DASH Larchmont Shuttle	Local	Larchmont Village	2022
LADOT	DASH Leimert	Local	Leimert Park	2022
LADOT	DASH Lincoln Heights/Chinatown	Local	Lincoln Heights/Chinatown	2022
LADOT	DASH Los Feliz	Local	Los Feliz	2022
LADOT	DASH Midtown	Local	Midtown/Crenshaw	2022

Future HQTCs Identified by CTCs

Operator	Line	Mode	Corridor	Date
LADOT	DASH Mission Hills	Local	Mission Hills	2022
LADOT	DASH North Hollywood	Local	North Hollywood	2022
LADOT	DASH Northridge	Local	Northridge	2022
LADOT	DASH Pico Union/Echo Park	Local	Pico Union/Echo Park	2022
LADOT	DASH Pacoima	Local	Pacoima	2022
LADOT	DASH Panorama City	Local	Panorama City	2022
LADOT	DASH Pueblo Del Rio	Local	South L.A.	2022
LADOT	DASH San Pedro	Local	San Pedro	2022
LADOT	DASH Southeast	Local	South L.A.	2022
LADOT	DASH Sun Valley	Local	Sun Valley	2022
LADOT	DASH Sylmar	Local	Slymar	2022
LADOT	DASH Van Nuys	Local	Van Nuys	2022
LADOT	DASH Vermont/Main	Local	Vermont Corridor/South L.A.	2022
LADOT	DASH Watts	Local	Watts	2022
LADOT	DASH Wilmington	Local	Wilmington	2022
LADOT	DASH Wilshire Center/Koreatown	Local	Wilshire Center/Koreatown	2024

Future HQTCs Identified by CTCs

Operator	Line	Mode	Corridor	Date
L.A. Metro	Red Line to Gold Line Connector	BRT	NoHo to Pasadena	2022
L.A. Metro	Vermont BRT	BRT	Vermont Transit Corridor	2028
OCTA	529	Rapid	Beach Blvd.	2019
OCTA	553	Rapid	Main St.	2023
OCTA	538	Rapid	La Palma Ave.	2026
OCTA	I-5 Express	Express	I-5	2027
OCTA	557	Rapid	Westminster Blvd./Bristol Ave.	2030
OCTA	564	Rapid	McFadden Ave./Bolsa Blvd.	2033
OCTA	554	Rapid	Chapman Ave.	2037
OCTA	Harbor/Anaheim/Lemon Rapid	Rapid	Harbor/Anaheim/Lemon Blvds./Ave.	2039
OCTA	SR 55 Express	Express	SR 55	2040
Omnitrans	West Valley Connector Phase 1	Rapid	Holt Blvd./Milliken Ave.	2024
Omnitrans	Lime	Rapid	Sierra Ave.	2045
Omnitrans	Yellow	Rapid	Foothill	2045
Omnitrans	Pink	Rapid	Haven Ave.	2045
Omnitrans	Cobalt	Rapid	Riverside Ave.	2045
Omnitrans	Grey	Rapid	Grand/Edison Aves.	2045
Omnitrans	Orange	Rapid	Euclid Ave.	2045
Omnitrans	Red/Blue	Rapid	Foothill/San Bernardino	2045
RTA	Line 1 Local/RapidLink	Rapid	University/Magnolia Blvds.	2020
RTA	16/19	Rapid	Perris Blvd.	2035
SunLine Transit	111	BRT	SR 111	2030

SCAG Regional Initiatives

Operator	Line	Mode	Corridor	Date
L.A. Metro	710	Rapid	Crenshaw Blvd. from Purple Line to South Bay Galleria	2045
L.A. Metro	728	Rapid	Olympic Blvd. from Downtown Santa Monica to Vermont Ave.	2045
L.A. Metro	733	Rapid	Venice Blvd. from Venice to Union Station	2045
L.A. Metro	740	Rapid	Hawthorne Blvd. from Union Station to South Bay Galleria	2045
L.A. Metro	744	Rapid	Reseda/Van Nuys Blvds.	2045
L.A. Metro	745	Rapid	Broadway Ave. between Downtown Los Angeles and Green Line	2045
L.A. Metro	750	Rapid	Ventura Blvd.	2045
L.A. Metro	751	Rapid	Ave. 26/Soto Ave. from Figueroa St. to 9th St.	2045
L.A. Metro	757	Rapid	Western Ave. from Slauson to Red Line	2045
L.A. Metro	760	Rapid	Long Beach Blvd. between Vernon Ave. and Green Line	2045
L.A. Metro	770	Rapid	Cesar Chavez Blvd. from Atlantic to Downtown L.A.	2045
L.A. Metro	780	Rapid	Fairfax Ave. from Expo Line to Hollywood and Vine	2045
L.A. Metro	788	Rapid	Van Nuys Blvd./San Diego Freeway	2045
L.A. Metro	794	Rapid	San Fernando Road	2045

Commuter/Passenger Rail Projects Identified by CTCs

Project	Lead Agency	Project Description	Year
Link US	L.A. Metro	L.A. Union Station Master Plan and Run-Through Tracks	2028
Metrolink	L.A. Metro	Metrolink Operations Subsidy (Does not include Metrolink fares and other non-Metro funds)	2040
Metrolink	L.A. Metro	Metrolink Capital Subsidy (Does not include Metrolink fares and other non-Metro funds)	2040
Metrolink	OCTA	Metrolink Service Expansion Program - capital (Baseline 54 weekday trains), safety, operations, and station improvements	2041
Metrolink	RCTC	Metrolink Commuter Rail Existing Lines Services Expansion - Riverside, 91, AND IEOC Lines	2045
Metrolink	RCTC	State of Good Repair Improvements at RCTC-owned stations, including but not limited to pavement rehab, platform and passenger drop off enhancements, facility painting projects, elevator maintenance, and safety related projects.	2030
Metrolink	RCTC	Riverside-Downtown Station Improvements - Install an additional center platform and siding track, extend the existing pedestrian overpass and construct an additional elevator for ADA compliance. (SCORE Project)	2027
Metrolink	RCTC	Moreno Valley/ March Station Improvement - station upgrade with additional platform and a pedestrian overpass.	2027

Commuter/Passenger Rail Projects Identified by CTCs

Project	Lead Agency	Project Description	Year
Metrolink	RCTC	Perris South Metrolink Station Improvements - addition of a second track and platform through station, starting east of the San Jacinto River; including a fourth layover track at the South Perris layover facility.	2030
Metrolink	RCTC	PVL 2nd Main Track Project including approx 9 miles of second main track from Control Point Eastridge (MP 72.2) to Control Point Nuevo (MP 81.4)	2030
Metrolink	RCTC	Parking lot expansion projects	2045
Metrolink	SBCTA	Service Expansion; SB Line 50 daily trains; Riverside line 46 daily trains; IEOC line 28 daily trains	2030
Metrolink	SBCTA	Extend Metrolink rail service from Rialto/E St in San Bernardino to Redlands (9 miles)	2021
Metrolink	SBCTA	Redlands Passenger Rail - Add a second track/additional passing track throughout the corridor of Phase 1 project	2045
Metrolink	SBCTA	Double tracking of Metrolink San Bernardino Line between CP Lilac and CP Rancho in San Bernardino County	2025
Metrolink	SBCTA	Double tracking of Metrolink San Bernardino Line between CP Central and CP Archibald in San Bernardino County	2030
Metrolink	VCTC	Metrolink Commuter Rail Service Improvements	2039

Commuter/Passenger Rail - Regional Initiatives

Project	Lead Agency	Project Description	Year
CA HSR	Various	California High-Speed Rail - Phase 1 (includes Metrolink and LOSSAN corridor speed upgrades)	2033
Metrolink SCORE	SCRRA	The Southern California Optimized Rail Expansion Program expands capacity of the entire Metrolink system to accommodate service that is more regular and frequent, throughout the entire service day (from morning to late evening). Capital investments for SCORE include additional track (e.g., sidings, double track, triple track, and quadruple track segments), improved signaling, expanded and lower emissions fleet, upgraded and enlarged maintenance facilities, grade crossing treatments and separations, fencing and safety features, features to support readiness for quiet zones, and required asset rehabilitation to sustain capacity.	2045

Questions?

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No. 4.4
May 29, 2019

To: Regional Transit Technical Advisory Committee (RTTAC)

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

Subject: FAST Act Requirements on Private Sector Providers of Transportation

BACKGROUND:
Last August, SCAG staff presented an item to the RTTAC on new FAST Act Requirements on private sector providers of transportation. The new rule requires metropolitan planning organizations (MPOs) to include private providers of transportation, including intercity bus operators and employer-based commuting programs, in the metropolitan transportation planning process. Employer-based commuting programs include carpool, vanpool, transit benefit, parking cash-out, shuttle and telework programs. SCAG must provide these interested parties with reasonable opportunities to comment on the Draft 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 Connect SoCal).

DISCUSSION:
As part of the Draft 2020 Connect SoCal development, SCAG staff is seeking input from private providers of transportation on the Draft 2020 Connect SoCal document. As part of that process, SCAG staff has developed an inventory of private intercity bus operators, locations they serve, and their depot locations. The Draft 2020 Connect SoCal document will discuss the role of private transportation providers, especially private intercity bus operators, with a focus on the high volume of intercity and interregional trips they provide, gaps in service, and opportunities to improve connectivity with existing and future public transportation providers and their facilities.

There are many benefits of including private transportation providers in to the metropolitan transportation planning process. These include:

- identifying gaps in service between public and private operators;
- improving transportation connectivity and coordination between public and private operators;
- learning about new and future transit facilities;
- identifying and improving first/last mile opportunities; and
- sharing mutually beneficial data.

Representatives of private intercity bus operators have been invited to the RTTAC to spur discussions and provide their perspective on the above points.

NEXT STEPS:
SCAG staff will continue to incorporate input and information from the RTTAC and private providers of transportation for the Draft 2020 Connect SoCal effort and update the RTTAC periodically on its progress.

ATTACHMENTS:
1. Private Intercity Bus Operators
2. Private Intercity Bus Operator Transportation Centers

Private Intercity Bus Operators

Operator	Address	Cities	Fleet Size	Notes
Greyhound	1716 E 7th St, Los Angeles 90021	Numerous	1,230 nation-wide	
Megabus	https://us.megabus.com	Los Angeles, Riverside, Anaheim, Burbank	N/A - 30 routes nation-wide	Part of Stagecoach Group - Based in UK
Bolt Bus	877-BOLTBUS	Los Angeles, Hollywood, Ontario, Barstow	101 nation-wide	Owned by Greyhound.
Lux Bus	851 E Cerritos Ave, Anaheim, CA 92805	Anaheim, Los Angeles, Las Vegas	N/A	
Antelope Express	332 W Ave S, Palmdale, CA 93551	Palmdale, Santa Clarita, LAX	N/A	Primarily LAX shuttle service.
FlixBus	503 East Cesar E Chavez Avenue, Los Angeles, CA 90012	San Diego, Los Angeles, Phoenix, Las Vegas and others		
Tres Estrellas de Oro	2414 E Florence Ave, Huntington Park, CA 90255		N/A	
Intercalifornias	655 Maple Ave, Los Angeles, CA 90014	Tijuana, San Ysidro, San Diego, Los Angeles, Oxnard, Fresno, San Jose	N/A	
Hoang Express Bus	1231 N Spring St, Los Angeles, CA 90012	San Diego, Westminster, El Monte, San Jose, Oakland, San Francisco, Sacramento	N/A	
Tufesa	611 Maple Ave., Los Angeles, CA 90017		N/A	Based in Mexico.

Private Intercity Bus Operator Transportation Centers

Transportation Center	City	Location
Los Angeles Union Station	Los Angeles	800 Alameda St. , Los Angeles 90012
Los Angeles Greyhound Station	Los Angeles	1716 E. 7th St., Los Angeles 90021
El Monte Station	El Monte	3501 Santa Anita Ave., El Monte 91731
El Centro Bus Station	El Centro	460 State St., El Centro 92243
Calexico Bus Station	Calexico	123 E. 1st St., Calexico 92231
Palmdale Transportation Center	Palmdale	39000 Clock Tower Plaza Dr., Palmdale 93550
Santa Ana Regional Transportation Center	Santa Ana	1000 E. Santa Ana Blvd., Santa Ana 92701
ARTIC	Anaheim	2626 E. Katella Ave., Anaheim 92806
Fullerton PNR	Fullerton	
Oxnard Transportation Center	Oxnard	201 E. 4th St., Oxnard 93030
San Bernardino Santa Fe Depot	San Bernardino	1170 W 3rd St, San Bernardino 92410
San Bernardino Transportation Center	San Bernardino	599 W. Rialto Ave., San Bernardino
Riverside Metrolink Station	Riverside	4066 Vine St., Riverside
Calexico	Calexico	123 E 1st St., Calexico 92231
Claremont Metrolink Station	Claremont	110 W. First St., Claremont
Indio Bus Station	Indio	83-100 Indio Blvd., Indio 92201
Long Beach Bus Station	Long Beach	1498 Long Beach Blvd., Long Beach 90813
North Hollywood Station	North Hollywood	5273 Lankershim Blvd., North Hollywood 11239
Burbank Downtown Metrolink	Burbank	201 Front St., Burbank

Private Intercity Bus Operator Transportation Centers

Services	Notes
Amtrak, Metrolink, Megabus, Bolt Bus, Municipal Bus Operators, FlyAway	
Greyhound	
Greyhound	At El Monte Bus Station
Greyhound	
Greyhound	
Metrolink, Amtrak Thruway Bus, Greyhound	Connects with AVTA and Metrolink.
Amtrak, Metrolink, OCTA, Greyhound, Intercalifornias, Tres Estrellas de Oro	Good connections.
Amtrak, Metrolink, OCTA Bus, Greyhound, Megabus	At ARTIC.
FlixBus	
Amtrak, Metrolink, Greyhound, Gold Coast	Intercalifornias 106 E. 5th St.
Metrolink, Amtrak, Amtrak Thruway Bus, Omnitrans	New Downtown San Bernardino Transit Center
Metrolink, Omnitrans, RTA, VVTA	Greyhound stop at 596 N. G St.
Metrolink, Megabus	Greyhound no longer serving downtown Riverside.
	Future Calexico Intermodal Transportation Center
Metrolink, Future Gold Line, Foothill Transit	
Greyhound	Possibly a future passenger rail station.
Greyhound	
Metro Red and Orange Lines, Metro Bus, Burbank Bus	
Metrolink, Megabus	

Private Intercity Bus Operator Transportation Centers

Connectivity Gaps
No connecting service to L.A. Union Station. Metro Rapid 760
Approximately one-mile gap to El Monte Metrolink. El Monte Trolley
Greyhound two blocks away from IVT terminal at 460 State St.
Greyhound Bus station about two miles south at 888 S. Indian Hill Blvd.
Three blocks from Blue Line Anaheim station. 15 blocks from Long Beach Transit Mall.
Greyhound Bus station about one-half mile south at 11239 Magnolia Blvd.

Connect SoCal : Emerging Transit Trends

Regional Transportation Plan/ Sustainable Communities Strategy Base Year Existing Conditions

Regional Transit Technical Advisory Committee (RTTAC)

Matt Gleason
Senior Regional Planner
April 29, 2019

What is an RTP/SCS?
Long-term vision and investment framework

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2020 RTP Transit Element

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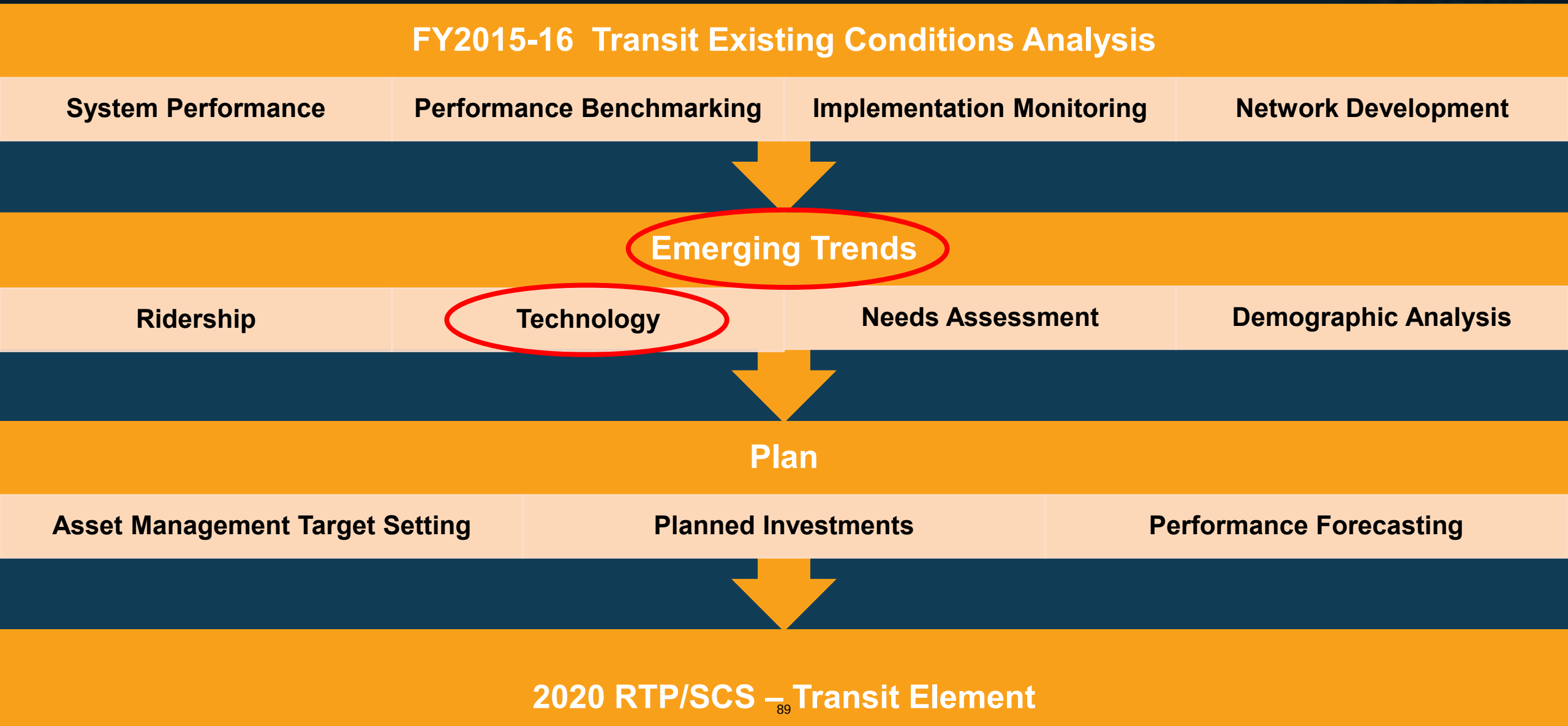


Existing Transit ITS Technologies
Intelligent Transportation Systems for Transit

- FTA : ITS are techniques and methods for relieving congestion, improving road and transit safety, and increasing economic productivity.

- The FTA is currently dividing ITS applications into two broad categories. Recently, it has become very common to refer to these categories by the terms connected vehicles and connected infrastructure.

Existing Transit ITS Technologies

ITS by System Location

Infrastructure Systems (Connected Infrastructure)

- Arterial Management
- Freeway Management
- Transit Management
- Incident Management
- Emergency Management
- Electronic Payment & Pricing
- Traveler Information
- Information Management
- Crash Prevention & Safety
- Roadway Operations & Maintenance
- Road Weather Management
- Commercial Vehicle Operations
- Intermodal Freight

Vehicle Systems (Connected Vehicles)

- Collision Avoidance Systems
- Driver Assistance Systems
- Collision Notification Systems

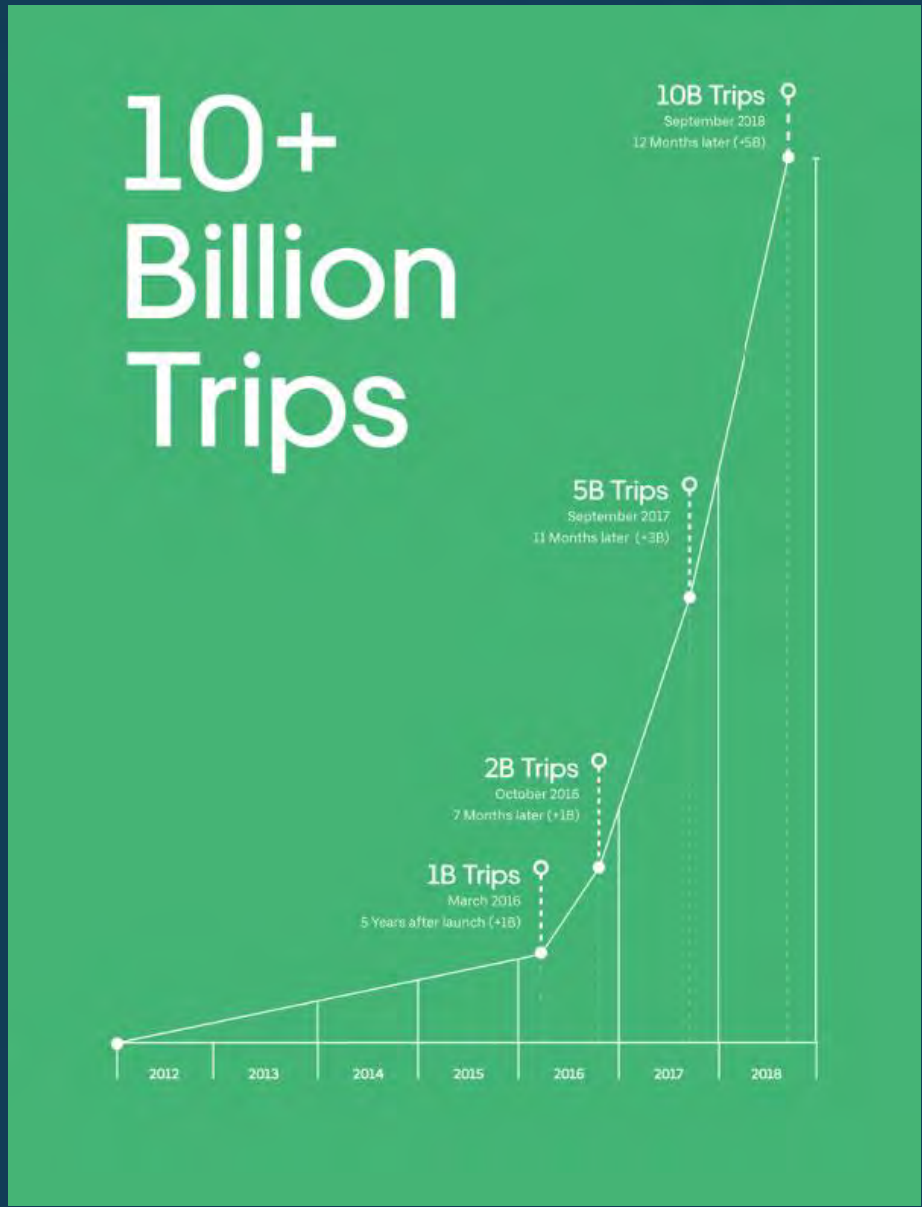
Open Data
Local Agencies Publishing Open Mobility Data

Transit Agencies Publishing Open Transit Data Using GTFS		
Anaheim Resort Transportation	LADOT Transit Services	Palo Verde Valley Transit Agency
City of Santa Monica/ Santa Monica's Big Blue Bus	Laguna Beach Transit	Pasadena Transit
City of Torrance/ Torrance Transit	LA Metro	Pass Transit
Corona Cruiser	Long Beach Transit	Riverside Transit Agency
Culver City Bus	Metrolink	Simi Valley Transit
Duarte Transit	Mountain Transit	Spirit Bus (City of Monterey Park)
El Monte Transit	Norwalk Transit System	Sunline Transit Agency
Foothill Transit	Omnitrans	Thousand Oaks Transit
Glendale Beeline	Orange County Transportation Authority	Ventura County Transportation Commission
Gold Coast Transit	Palos Verdes Peninsula Transit Authority	Victor Valley Transit Authority

Transportation Network Companies

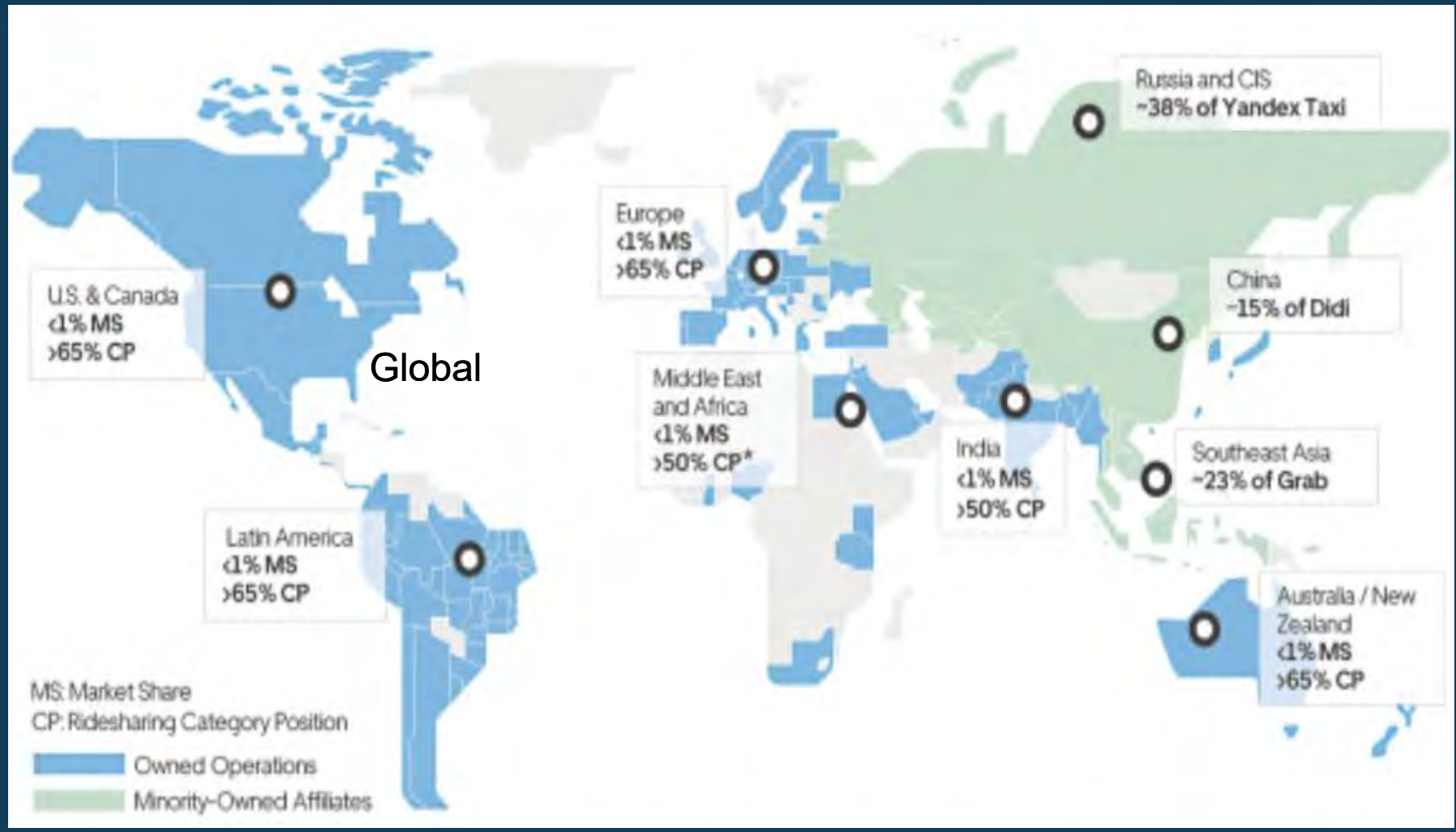
Global Growth at Uber

- Revenue from Uber Ridesharing:
  - $3.5 billion in 2016
  - $9.2 billion in 2018
- Gross Bookings grew from $18.8 billion in 2016 to $41.5 billion in 2018.
- Consumers traveled approximately 26 billion miles on Uber in 2018.
- 2nd Quarter 2018:
  - 1.5 Billion Trips
  - 3.9 Million Vehicle Operators
- $3 billion operational loss in 2018



Transportation Network Companies
Global Growth at Uber

- 24% of Uber's bookings are in 5 Metros:
  - NYC, LA, San Francisco, London, Sao Paolo
  - 65% of business in USA/Canada
- As business models evolve, SCAG Region will be impacted



Transportation Network Companies
Growth at Lyft

Demand for Lyft			
	2016	2017	2018
Revenue (Gross)	$343.3 million	$1.1 billion	$2.2 billion
Year Over Year Growth		209%	103%
Bookings (Net)	$1.9 billion	$4.6 billion	$8.1 billion
Year Over Year Growth		141%	76%

$8.1 billion
Bookings in 2018

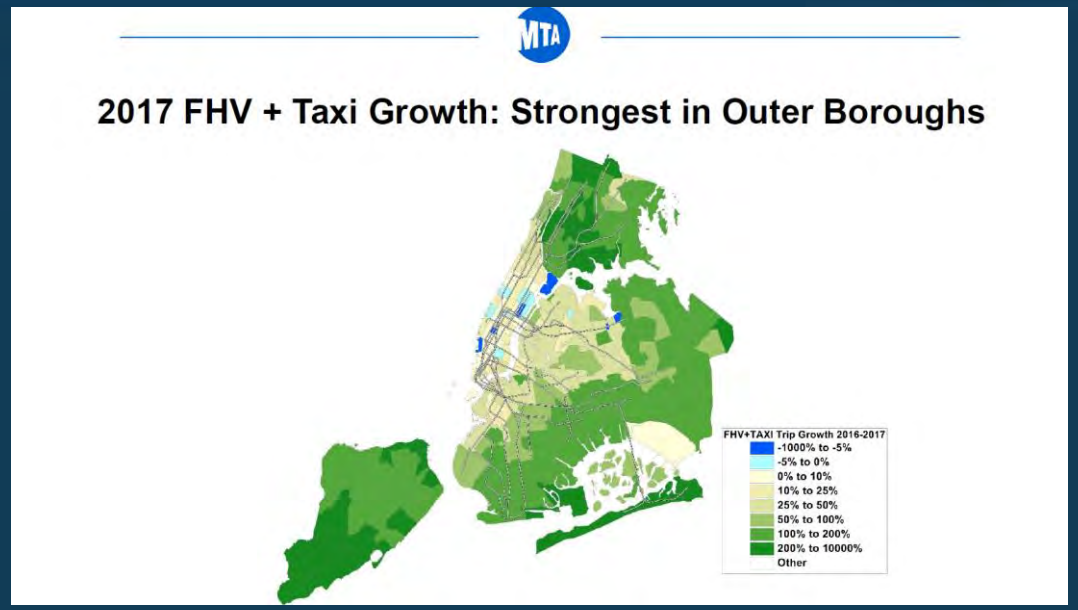
$2.2 billion
Revenue in 2018

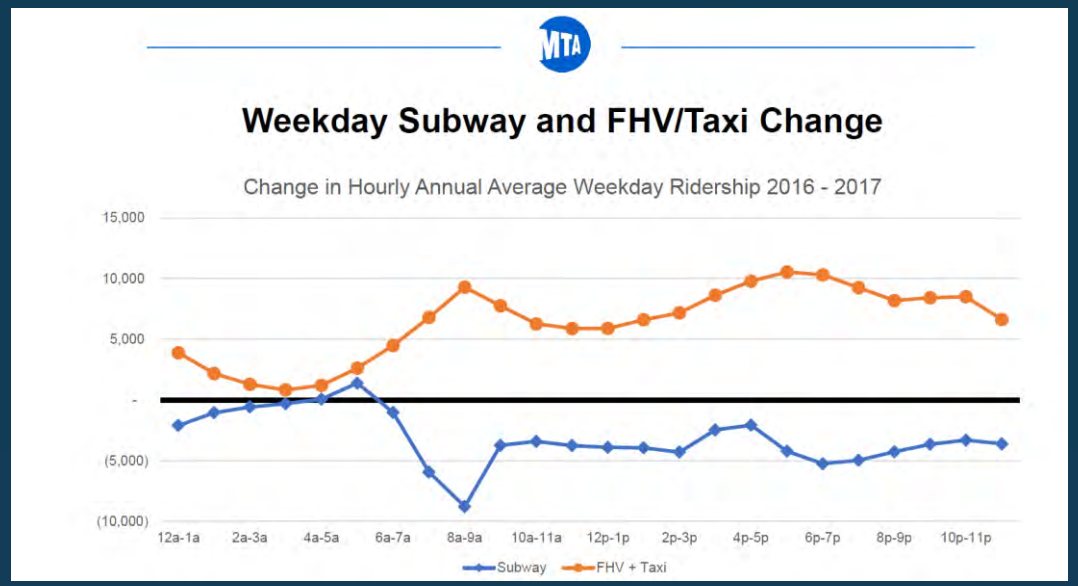
1 billion+
Cumulative rides

300+
Markets in US and Canada

New York Example

- Due to agreements with TNCs, New York has really good TNC data
- TNCs appear to be affecting transit use most in the AM Peak, and in the outer Boroughs
- Bus use rate of decline increasing
  - Down 1.3% in 2016
  - Down 5.1% in 2017
  - May 2018 year to date down 5.8%
  - Student ridership down 10% per MetroCard





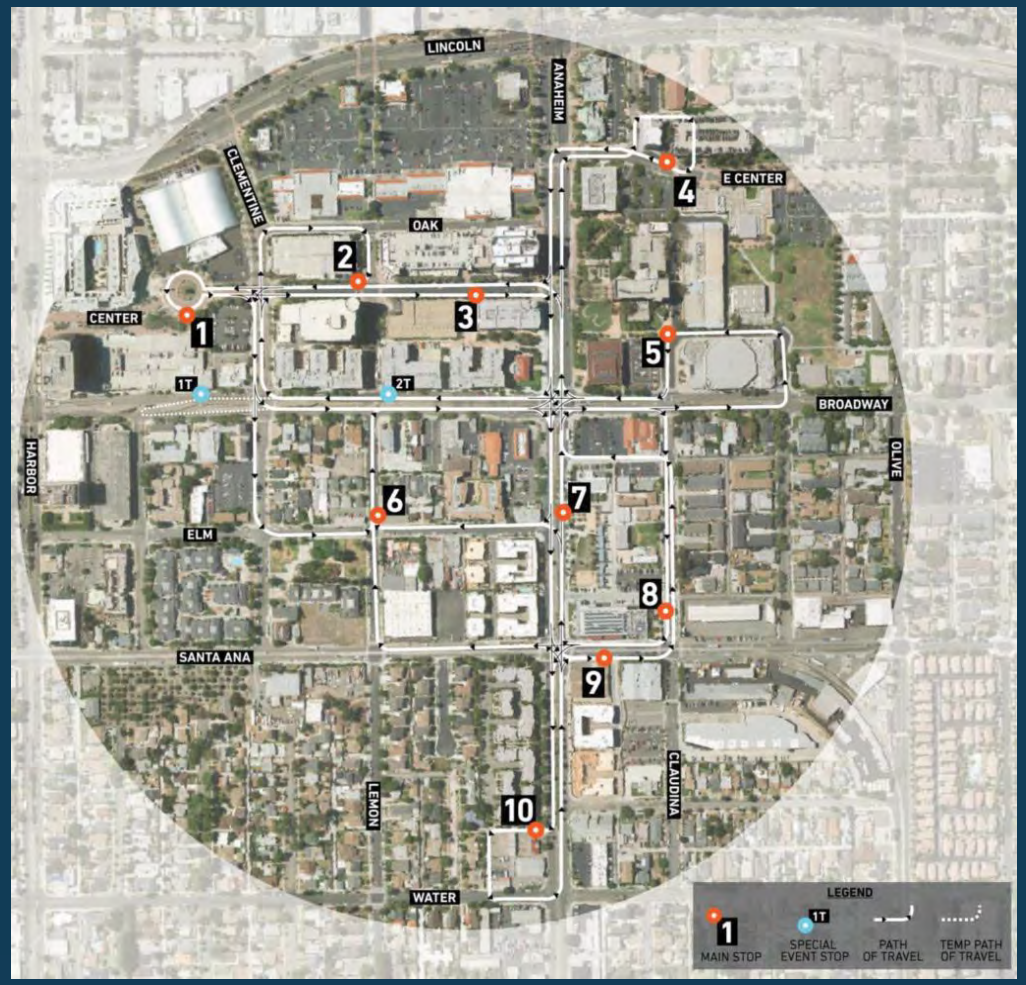
TNC Partnerships

- Many transit agencies are seeking to leverage TNC services as a first mile last mile option
- LAVTA, Metro, OCTA, SMART, TAM, Sacramento RT, and Pinellas SunCoast Transit are among agencies that have partnered with TNCs
- Other agencies have partnered with traditional livery providers -- Santa Monica BBB

Microtransit Performance

Transit Agency	Contract or In house	Cost per Vehicle Service Hour	Passengers per Vehicle Service Hour	Cost per Passenger Trip
AC Transit	In house	$214.00	3	$71.00
NVTA	Contracted	$44.48	2.6	$17.00
NCTD	Contracted	$97.00	2.7	$36.00
OCTA (OC FLEX)	Contracted	$54.00	1.69	$31.95

Microtransit – FRAN



- FRAN: specialty Mircotransit service - operates between a series of clustered designated stops in downtown Anaheim.
- The longest trip served is 0.7 miles.
- FRAN seems to be especially productive

FRAN			
	19-Feb	19-Mar	Total
Passenger Trips per Vehicle Revenue Hour	4.35	5.72	5.2
Total Revenue Hours	383.36	619.09	1002.45
Total Passenger Trips	1666	3544	5210
Total Vehicle Revenue Miles	1002.31	1608.08	2610.39

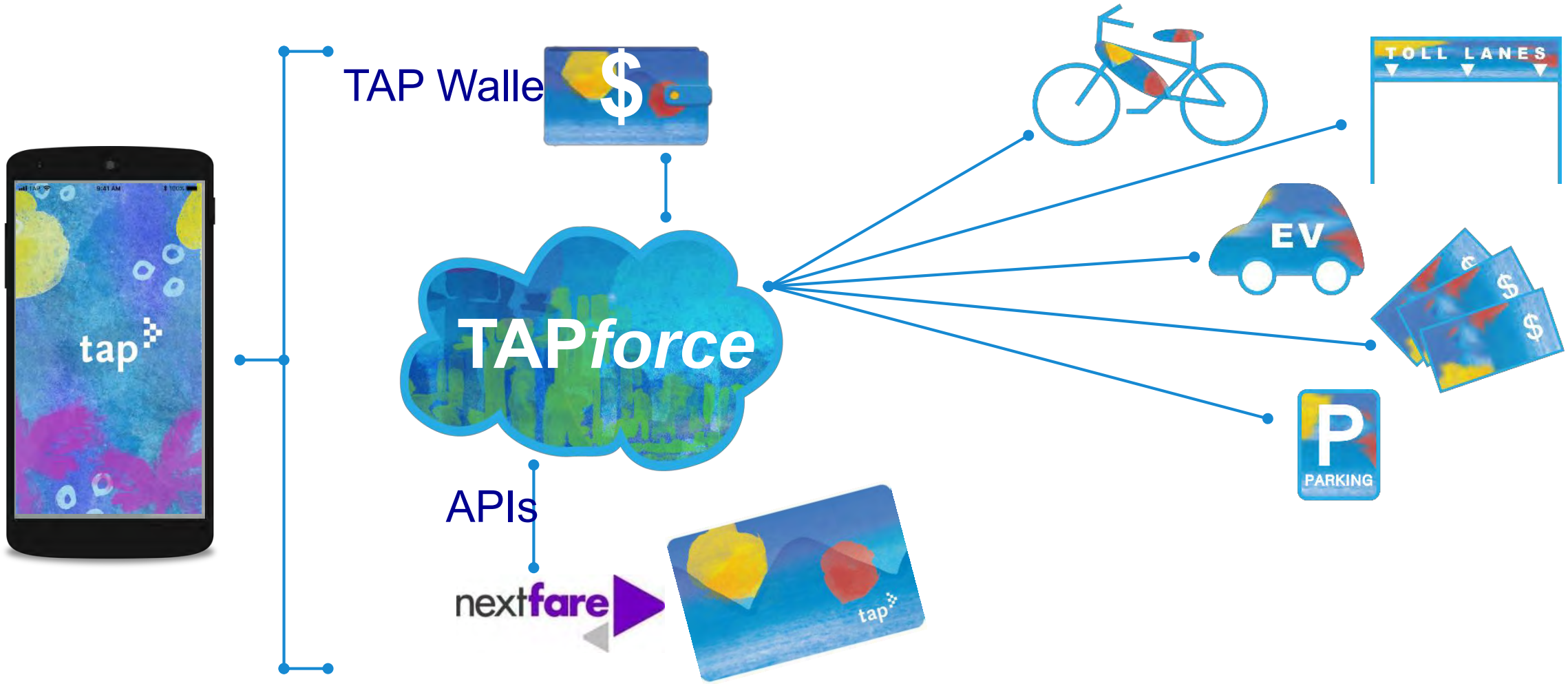
Mobility as a Service (MaaS)

Emerging concept to integrate payment, information, and service

Core Characteristic	Description
1. Integration of transport modes	A goal of MaaS schemes is to encourage the use of public transport services, by bringing together multi-modal transportation and allowing the users to choose and facilitating them in their intermodal trips. Following transport modes may be included: public transport, taxi, car-sharing, ride-sharing, bike-sharing, car-rental, on-demand bus services. Envisioning a service beyond the urban boundaries, it will embrace also long-distance buses and trains, flights, and ferries.
2. Tariff option	MaaS platform offers users two types of tariffs in accessing its mobility services: “mobility package” and “pay-as-you-go”. The package offers bundles of various transport modes and includes a certain amount of km/minutes/points that can be utilized in exchange for a monthly payment. The pay-as-you-go charges users according to the effective use of the service.
3. One platform	MaaS relies on a digital platform (mobile app or web page) through which the end-users can access to all the necessary services for their trips: trip planning, booking, ticketing, payment, and real-time information. Users might also access to other useful services, such as weather forecasting, synchronization with personal activity calendar, travel history report, invoicing and feedback
4.. Multiple actors	MaaS ecosystem is built on interactions between different groups of actors through a digital platform: demanders of mobility (e.g. private customer or business customer), a supplier of transport services (e.g. public or private) and platform owners (e.g. third party, PT provider, authority). Other actors can also cooperate to enable the functioning of the service and improve its efficiency: local authorities, payment clearing, telecommunication and data management companies.
5. Use of technologies	Different technologies are combined to enable MaaS: devices, such as mobile computers and smartphones; a reliable mobile internet network (WiFi, 3G, 4G, LTE); GPS; e-ticketing ANDE-payment system; database management system and integrated infrastructure of technologies (i.e. IoT).
6. Demand orientation	MaaS is a user-centric paradigm. It seeks to offer a transport solution that is best from customer’s perspective to be made via multimodal trip planning feature and inclusion of demand-responsive services, such as taxi.
7. Registration requirement	The end-user is required to join the platform to access available services. An account can be valid for a single individual or, in certain cases, an entire household. The subscription not only facilitates the use of the services but also enables the service personalisation.
8. Personalisation	Personalisation ensures end users’ requirements and expectations are met more effectively and efficiently by considering the uniqueness of each customer. The system provides the end-user with specific recommendations and tailor-made solutions on the basis of her/his profile, expressed preferences, and past behaviors (e.g. travel history). Additionally, they may connect their social network profiles with their MaaS account.

Mobility as a Service: A Critical Review of Definitions, Assessments of Schemes, and Key Challenges: Urban Planning (ISSN: 2183–7635) 2017, Volume 2, Issue 2, Pages 13–25, Peraphan Jittrapirom 1, *, Valeria Caiati 2 , Anna-Maria Feneri 2 , Shima Ebrahimigharehbaghi 1 , María J. Alonso- González 3 and Jishnu Narayan

LA County TAP Platform/MaaS Integration



Other MaaS Integration Projects

Uber

- Personal Mobility
  - Ridehailing
  - E-bikes
  - E-scooters
- Goods
  - Meal Delivery (UberEats)
  - Distribution Management (Uber Freight)
  - 1st Mile/Last Mile (Uber Rush – Discontinued)

Maas In US and Europe

Project	Location
TransitApp	(USA, UK, Canada, Europe, Australia)
Optymod	(Lyon, France)
Mobility 2.0 services	(Palma, Spain)
SHIFT—Project 100	(Las Vegas, USA)
UbiGo	(Gothenburg, Sweden)
Mobility Shop	(Hannover, Germany)
Smile	(Vienna, Austria)
Tuup	(Turku Region, Finland)
My Cicero	(Italy)
Moovel	(Germany)
Whim	(Helsinki, Finland)
WienMobil Lab	(Vienna, Austria)

Innovative Clean Transit

ICT Large Agencies

Large Transit Agencies	2016 Bus Vehicles	2017 Bus Vehicles	Air Pollution Control District	Air Basin
Los Angeles County Metropolitan Transportation Authority dba: Metro(LACMTA)	1935	1916	SCAQMD	South Coast
Orange County Transportation Authority(OCTA)	471	466	SCAQMD	South Coast
Foothill Transit	318	329	SCAQMD	South Coast
City of Los Angeles Department of Transportation(LADOT)	258	262	SCAQMD	South Coast
Long Beach Transit(LBT)	187	189	SCAQMD	South Coast
Riverside Transit Agency(RTA)	164	163	SCAQMD	South Coast
Santa Monica's Big Blue Bus(Big Blue Bus)	167	162	SCAQMD	South Coast
Omnitrans(OMNI)	169	154	SCAQMD	South Coast
Santa Clarita Transit(SCT)	68	68	SCAQMD	South Coast
Montebello Bus Lines(MBL)	67	67	SCAQMD	South Coast

- Per the final rule, a "Large Transit Agency" means either:

A) transit agency that operates either in the South Coast or the San Joaquin Valley Air Basin and operates more than 65 buses in annual maximum service; or

B) a transit agency that does not operate in the South Coast or San Joaquin valley Air Basin and has at least 100 buses in annual maximum service in an urbanized area with a population of at least 200,000 as last published by the Bureau of the Census before 12/31/2017

- A "Small Transit Agency" means a transit agency that is a not a large transit agency.

Vehicle Propulsion
Existing Conditions

- The Region is only beginning the transition to ZEBs
- The Electric Battery category will likely grow to a majority number over the life of the plan

2016 Vehicle Revenue Miles by Propulsion/Fuel Source		
Compressed Natural Gas	172,384,043	64.54%
Gasoline	93,305,569	34.93%
Electric Propulsion (Urban Rail)	21,909,815	8.20%
Diesel (71% Commuter Rail)	17,169,492	6.43%
Other Fuel	10,901,793	4.08%
Liquefied Petroleum Gas	2,311,196	0.87%
Electric Battery	503,703	0.19%
2016 Regional Vehicle Revenue Miles	267,090,533	100%

Vehicle Propulsion
Existing Conditions

2016 Vehicle Revenue Miles by Propulsion/Fuel Source				
County	Gasoline (gal)	Electric Battery	Compressed Natural Gas	Diesel
Imperial	49,154	-	-	1,005,056
Los Angeles	7,019,318	487,521	127,979,901	13,495,100
Orange	2,314,764	1,377	15,340,233	495,536
Riverside	749,656	14,805	13,485,025	-
San Bernardino	1,139,761	-	12,585,685	-
Ventura	64,321	-	2,993,199	2,173,800
Grand Total	11,336,974	503,703	172,384,043	17,169,492

ZEB Pilots in Southern California

- SunLine/NREL Fuel Cell Electric Pilot
- 2010-2013 48,000 vehicle miles, 3,600 fuel system hours
- Problems encountered during the demonstration include some air conditioning issues during the hot desert summer, fuel cell power system issues, traction battery issues, and bus body work.
- Maintenance costs well above CNG control group

- Foothill Transit/ NREL Battery Electric Bus Demonstration
- 2014: 12 Proterra BEBs from through a $10.2 TIGGER grant to utilize on route 291
- 2014-2015: 401,244 vehicle miles; 4,462 vehicle hours
- Maintenance costs below CNG control group

Maintenance Costs Per Mile
NREL Demonstration Projects

	ZEB Evaluation Period Performance	CNG Evaluation Period Performance
Total maintenance, $/mile , Sunline Fuel Cell	$ 0.80	$ 0.48
Maintenance – propulsion only, $/mile, Sunline Fuel Cell	$ 0.60	$ 0.21
Total maintenance, $/mile , Foothill BEB	$ 0.16	$ 0.18
Maintenance – propulsion only, $/mile, Foothill BEB	$ 0.02	$ 0.08

Anaheim Transportation Network (ATN)
Electrify Anaheim Grant (TIRCP)

- 40 electric BYD buses, half 40’ and half 30’ or 60’
- $28.6 Million TIRCP grant
- Capability to double service levels on 8 routes
- Implement new first last mile circulators – Microtransit Pilot
- Maintenance facility with solar panels

AVTA
Electric Bus Fleet Conversion Project

- Goal of converting to clean fuel electric buses.
- February 2016 award contract to BYD $79 million, 85 electric buses between 2018 and 2023
- 3 60’ electric buses already operating on Route 1
- Two rounds of TCIRP Grant Funding
  (one joint grant with LBT)

LADOT
Clean Fuels Program & TIRCP

- Los Angeles City: Leading the
- Transformation to Zero Emission Electric Bus Transit Service
  - Acquire 112 zero-emission replacement and new buses to, in order to
  - increase frequency of all existing DASH routes to 15-minute service and add 4 new routes,

- Council approved (17-0739) motion to convert to 100% ZEB fleet by 2030
  - LADOT directed to:
  - report back on facility needs
  - integrate renewables into fuel mix
  - prioritize implementation in disadvantaged communities
  - Investigate possible transition by 2035

Metrolink
TIRCP

- Purchase of 9 Fuel-Efficient Tier IV Locomotives Project
- $41 million, TCIRP Grant,
  $17 million match
- Replacing 7 locomotives, and also acquiring 2 additional locomotives that will be
- Used to increase service on the Antelope Valley and Ventura County lines within Los Angeles County

City of Santa Monica
TIRCP

- Electric Blue: Electrification of City of Santa Monica's Big Blue Bus
- Purchase 10 zero-emission battery electric vehicles to add new express service and increase ridership on route 7, which connects Santa Monica with the Purple and Expo Metrorail lines and Downtown LA.
- Goal of 100% ZEB by 2030

Questions?