



MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

Tuesday, January 31, 2017
10:00 a.m. – 12:00 p.m.

SCAG Los Angeles Main Office

818 W. 7th Street, 12th Floor,
Policy Committee Room A
Los Angeles, California 90017
(213) 236-1800

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To join the meeting: <http://scag.adobeconnect.com/rttac/>
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San Bernardino SCAG Office

1170 W. 3rd St, Ste. 140 San Bernardino, CA 92410

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Matt Gleason at (213) 236-1832 or gleason@scag.ca.gov.

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**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
AGENDA
January 31, 2017**

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 CONSENT CALENDAR

3.1 Approval Items

3.1.1 Minutes of the October 5, 2016 Regional Transit TAC Meeting 5 3

**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE
AGENDA
January 31, 2017**

5.0 INFORMATION ITEMS

5.1	<u>First-Last Mile Environmental Life-Cycle Assessment of Multimodal Transit in Los Angeles</u> <i>(Christopher Hoehne, Arizona State University)</i>	30	8
5.2	<u>Metro Mobility On Demand (MOD) Sandbox Grant</u> <i>(Marla Westervelt, LA Metro)</i>	20	28
5.3	<u>OCTA Transit Master Plan</u> <i>(Gary Hewitt, OCTA)</i>	20	64
5.4	<u>GCTD Holiday Bus</u> <i>(Vanessa Rauschenberger, GCTD)</i>	10	80
5.5	<u>Clean Cities Annual Report Survey</u> <i>(Marco Anderson, Sustainability Department, SCAG)</i>	5	89
5.6	<u>Sustainability Planning Grant Program</u> <i>(Marco Anderson, Sustainability Department, SCAG)</i>	10	103
5.7	<u>Transit Asset Management Data Collection</u> <i>(Matt Gleason, Transit and Rail Department, SCAG)</i>	10	107

6.0 STAFF UPDATE

6.1	<u>FTA Triennial Reviews</u>	5	
6.2	<u>2017 Agenda Look Ahead</u>	10	117

7.0 ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for March 29, 2017.



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

October 5, 2016

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 Wayne Wassell.

Members Present:

Wayne A. Wassell (Chair)	Metro
Kirk Schneider	Caltrans District 7
Rawan Aljamal	Caltrans District 7
Jad Andari	Caltrans District 7
Joyce Rooney	Beach Cities Transit
Ron Mathieu	Metrolink
Rory Vaughn	Metrolink
Lori Huddleston	Metro

Video Conference:

Gary Hewitt	Orange County Transportation Authority
Matt Miller	Gold Coast Transit District
Kevin Kane	Victor Valley Transit Authority

Teleconference:

Shirley Hsiao	Long Beach Transit
Anita Petke	Sunline Transit

SCAG Staff:

Philip Law	Joseph Briglio
Matthew Gleason	
Stephen Fox	

1.0 CALL TO ORDER

Wayne Wassell called the meeting to order at 10:07 a.m.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 CONSENT CALENDAR

3.1 Approval Item

Minutes of the June 30, 2016 Regional Transit TAC Meeting

The Consent Calendar was approved by consensus.

4.0 RECEIVE AND FILE

4.1 Caltrans Section 5304 Sustainable Transportation Planning Grants: Completed Grants

4.2 Transit Performance Measures in California, Caroline Rodier, and Emily Issac, Mineta Transportation Institute

5.0 INFORMATION ITEMS

5.1 Trends in the SCAG Region 2005-2015

Philip Law, SCAG staff, reported on transit trends in the SCAG region for 2005-2015. Mr. Law stated, in response to the committee's request to examine potential contributing factors for an emerging trend in declining transit ridership, a research effort has begun. It was noted staff is reviewing data sources for the 6-county region to test ideas about different socioeconomic trends that could be driving the decline in ridership. Mr. Law noted the research examines a 10-year time frame from 2005 – 2015.

Mr. Law first reviewed the transit mode split indicating it was 5.7% in 2008 but has declined to 4.6% in 2015. Further, there is an increasing trend in employees who work at home and in 2015 there were more home-based workers than those who took transit or Active Transportation. The Active Transportation mode share increased only slightly during the 10-year period. Average commute times were reviewed noting that Riverside County commuters have the longest average commute time with Los Angeles County commuters having the second longest average commute time at approximately 31 minutes. Additionally, it was noted that approximately half of San Bernardino and Riverside county workers work outside of their resident counties. Next the population of those 20-34 years and 65 years and older were reviewed as these two age groups are thought to have a greater demand for transit. It was noted by Chair Wassell that the growing senior population may represent more of a demand for paratransit/demand response type services as opposed to fixed route bus and rail service.

Next, the region's immigration population was examined as new immigrants are inclined toward greater transit dependence. There has been a slight decline in those foreign born regionally with the trend line flat over the study period. Zero Vehicle Households were examined and it was noted there has been a slight decrease in ZVHs from 8.1% in 2011 to 7.2% in 2015. Next, the growth in the number of driver's licenses and auto registrations were reviewed. From 2008 to 2015 there was an increase of 1 million driver's licenses issued from 11.1 million in 2008 to 12.2 million in 2015. Similar growth in auto registrations was seen during this time from 10.5 million in 2009 to 11.8 million in 2015. It was noted 600,000

licenses were issued in the year after the state began issuing licenses to undocumented immigrants. Average fuel prices for the study period were reviewed as it has been shown to be a significant factor for transit ridership. Fuel prices have shown a decreasing trend. Total employment in the region was examined and employment has returned to its pre-recession high. Total vehicle miles travelled was reviewed indicating an increasing trend since 2012.

Gary Hewitt, OCTA, stated that it is useful to explore these potential underlying trends particularly those relevant to the increase in driver's licenses issued and auto registrations. Mr. Hewitt noted the recent increase in vehicle ownership may be related to a trend of liberal auto loan financing which is poised to slow in the future. Mr. Hewitt asked if this research will be shared with other SCAG committees. Mr. Law responded that the effort to explore causes of ridership decline will continue with a joint research effort with UCLA. Those findings will be shared with the RTTAC in the coming months and with SCAG policy committees as research continues.

Wayne Wassell, MTA, noted that assumptions about Uber and Lyft cannibalizing transit ridership ought to be examined closely as transit riders tend to be lower income and transit dependent while TNCs have a higher cost than transit and may serve a different customer.

5.2 Imperial Valley College/San Diego State Transit Shuttle Analysis

Stephen Fox, SCAG staff, reported on the Imperial Valley College/San Diego State Transit Shuttle Analysis. Mr. Fox stated the study examined opportunities to improve transit access to the three college campuses in Imperial County: Imperial Valley College (IVC), and San Diego State University-Imperial Valley (SDSU), which has campuses in both Calexico and Brawley. The study also looked at fuel types as well as funding and implementation strategies. Mr. Fox noted there were two rounds of public outreach for the study which took place November 2015 and April 2016. These were held on college campuses and sought to understand student ridership needs, travel patterns as well as transit alternatives.

It was noted that Phase 1, scheduled for implementation between 2017 and 2025, would add two new shuttle routes that meet at the IVC campus. The first route is from SDSU Brawley to IVC using 1 bus that cycles every 60 minutes. The second route is from SDSU Calexico to IVC using 1 bus cycling every 60 minutes. Phase Two would add an express route connecting the two SDSU campuses bypassing IVC. Phase 3 involves service to SDSU's main campus in San Diego. One alternative in Phase 3 would involve service from SDSU Calexico to SDSU's main campus. An additional alternative in Phase 3 would add an express line to Northern Arizona University in Yuma, Arizona.

Mr. Fox reviewed the estimated operating and maintenance cost noting Phase 1 cost is estimated at \$638,000 annually and the addition of Phase 2 would require \$866,200 yearly. This is based on a \$117 hourly operating cost. Capital costs are anticipated to be \$3 million to purchase 3 transit buses at \$750,000 each and two

new shelters estimated at \$40,000. Annual Ridership on the Phase 1 SDSU Brawley – IVC Route is estimated to be 19,000 yearly and the SDSU Calexico – IVC Route 59,700 yearly. Total revenue is estimated at \$98,000 yearly representing a 15% farebox recovery.

Phase 2 ridership on the SDSU Brawley – IVC route is estimated at 14,200 yearly and the SDSU Calexico – IVC route 44,800 yearly. Phase 2 ridership is anticipated to be 86,400 with revenue of \$108,100 yearly, representing a farebox recovery of 12%. Mr. Fox then reviewed potential funding sources for the additional service.

Kirk Schneider, Caltrans, noted that Yuma County Intergovernmental Public Transportation Authority operates a route to El Centro two days a week and perhaps there's an opportunity to link with that effort. Additionally, SDSU has a campus transit service which may offer a partnership opportunity.

5.3 FY 2013-14 Transit System Performance Report

Matt Gleason, SCAG staff, provided an update on the FY 2013-2014 Transit System Performance Report. Mr. Gleason noted the current update looks at the development of a benchmarking resource for transit operators and the market sector performance analysis. It was noted this report examines a 10-year trend aggregated at the regional level. Mr. Gleason reviewed total unlinked transit trips from 2004 – 2016 noting transit trips trended flat in 2013-2014; however, from 2014-2016 a precipitous decline is seen in total trips which reflects concerns raised in previous meetings by committee members. Additionally, per capita transit trips show a similar decline in the same period.

Next, Mr. Gleason reviewed market sector analysis. It was noted there are 70 providers of fixed route service and 100 total transit providers in the region. Additionally, it is rare that metropolitan regions have so many agencies providing public transportation. In comparison the San Francisco Bay area has approximately 30 transit agencies providing service. Mr. Gleason stated the diverse range of transit providers in the region presents a challenge in providing a benchmarking tool for agencies. In order to provide a useful benchmarking tool, agencies will be aggregated into those providing greater than 15 million trips and those providing fewer than 15 million yearly. Mr. Gleason reviewed cost per hour, cost per trip, cost per passenger mile, trips per hour, trips per mile, fleet average age and farebox recovery for regional transit agencies.

Gary Hewitt, OCTA, reported that Anaheim ridership numbers may be skewed by a bus service that travels from offsite parking to Disney theme parks.

Kirk Schneider, Caltrans, noted that Anaheim ridership figures may want to exclude the Anaheim Resort Transportation (ART) which provides transit for local resort visitors. Its service model is different from municipal transit and it may be useful to separate it.

6.0 **STAFF UPDATE**

6.1 **FTA Transit Asset Management Final Rulemaking**

Philip Law, SCAG staff, provided an update on FTA Transit Asset Management Final Rulemaking. Mr. Law reported that all providers of public transportation receiving federal funds must develop a transit asset management plan and establish annual performance targets. Targets are to be reported to NTD on an annual basis and compliance to the rule will be determined through the triennial review process. As part of this rule SCAG has a responsibility to coordinate with the State and transit operators on the development of performance measures and setting targets as part of the Regional Transportation Plan. Also, there is a requirement to develop jointly with the State and with transit providers specific written provisions for how performance measures are developed and targets are established for the RTP/SCS. The written provisions may be included as part of our existing agreements (MOUs) with operators and county transportation commissions.

Mr. Law noted that as discussions are held with operators and county transportation commissions to develop procedures and methodologies for target setting, the Metropolitan Planning Agreements may be updated and modified.

6.2 **RTTAC Chairperson Selection Discussion**

Wayne Wassell was thanked for his service in chairing the committee. Mr. Law discussed with members the opportunity to serve as chair.

ADJOURNMENT

The meeting adjourned at 11:47 a.m.

First-last mile environmental life-cycle assessment of multimodal transit in Los Angeles

CHRISTOPHER G. HOEHNE – DOCTORAL STUDENT

MIKHAIL V. CHESTER – ASSOCIATE PROFESSOR

CIVIL, ENVIRONMENTAL, & SUSTAINABLE ENGINEERING

ARIZONA STATE UNIVERSITY



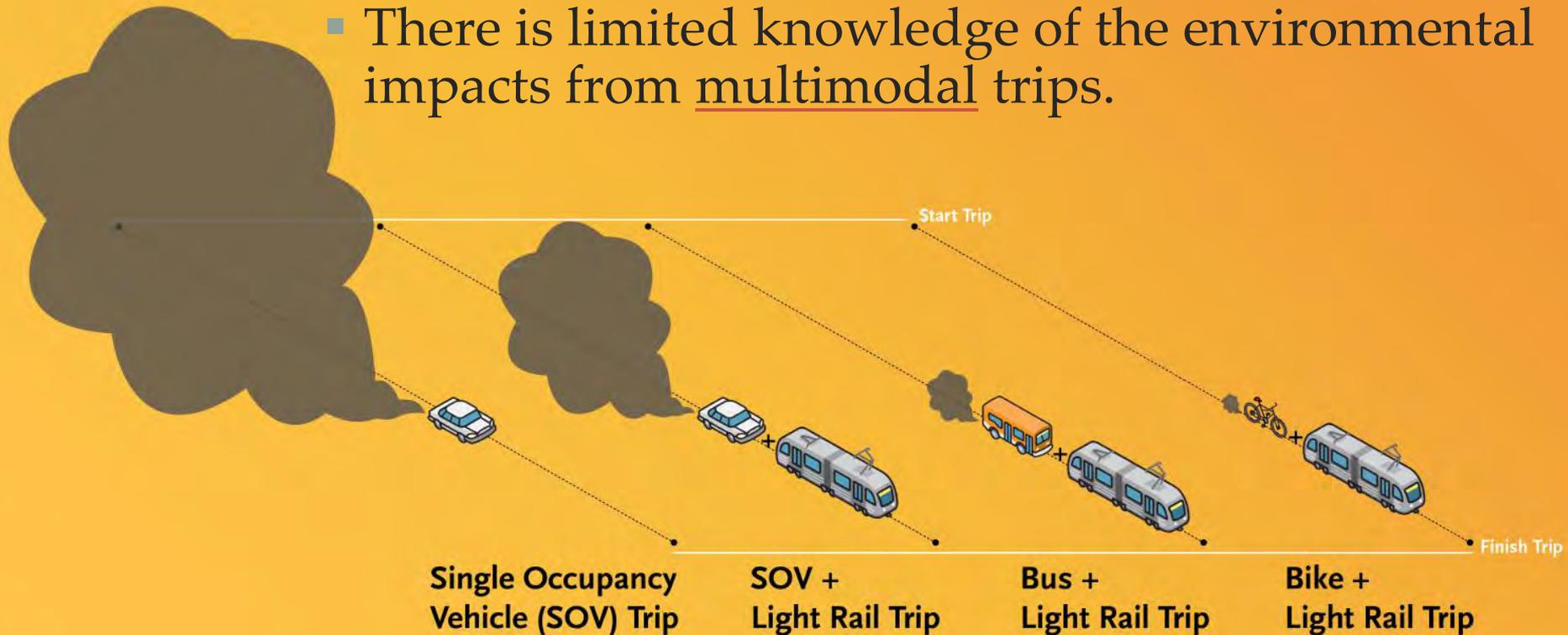
Outline

- Project motivation
- Project overview and scope
- Project methodology & data
- Life cycle impacts (per passenger mile)
- Multimodal impacts (per passenger trip)
- Reducing 10% of system GHG impacts



Motivation in transportation

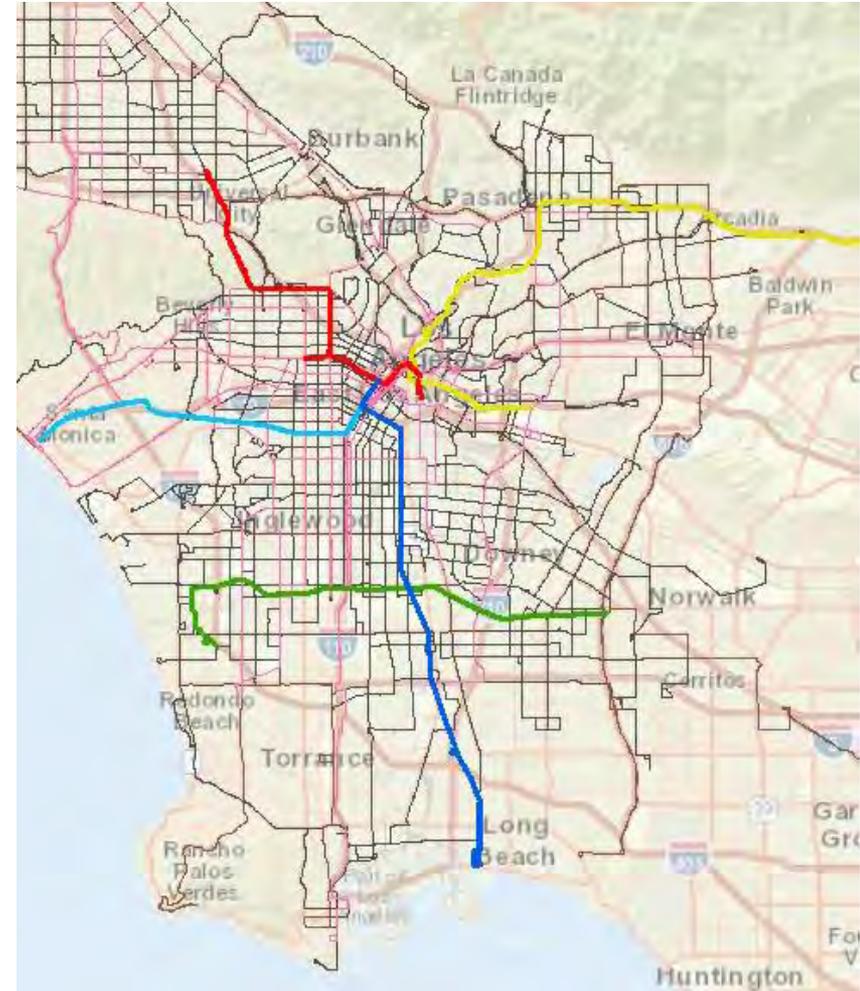
- There is a strong understanding of the environmental impacts from unimodal trips.
- There is limited knowledge of the environmental impacts from multimodal trips.



- Very limited knowledge of impacts from automobile access and egress with transit.

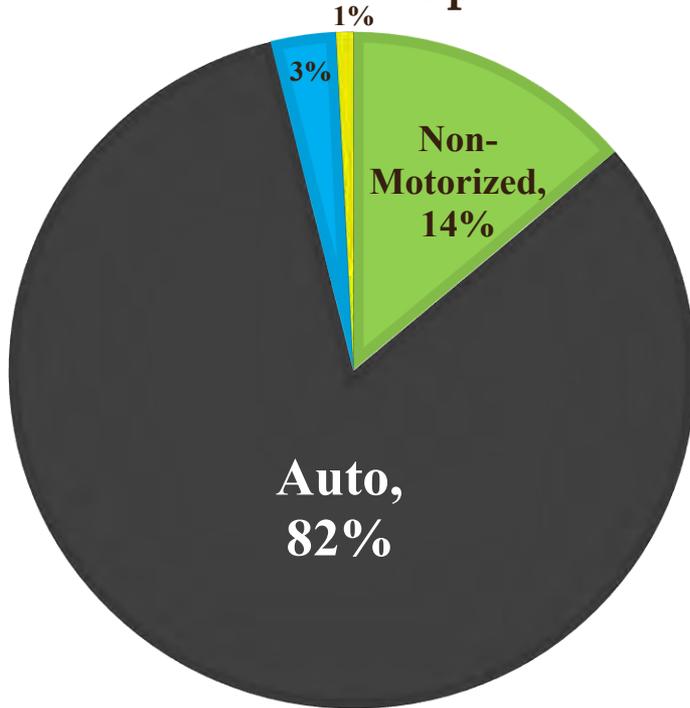
Project Overview

- Assess impacts generated from 10 LA transit systems and LA automobiles.
- Transit systems included:
 - Metro Light Rail Transit (LRT, 4 lines)
 - Metro Heavy Rail Transit (HRT, 1 line)
 - Commuter Rail Transit (CRT, 1 line)
 - Metro Local Bus
 - Metro Rapid Bus
 - Metro Express Bus
 - Bus Rapid Transit (BRT, 1 line)
- LA Auto:
 - 25 MPG sedan



Modal Split in LA

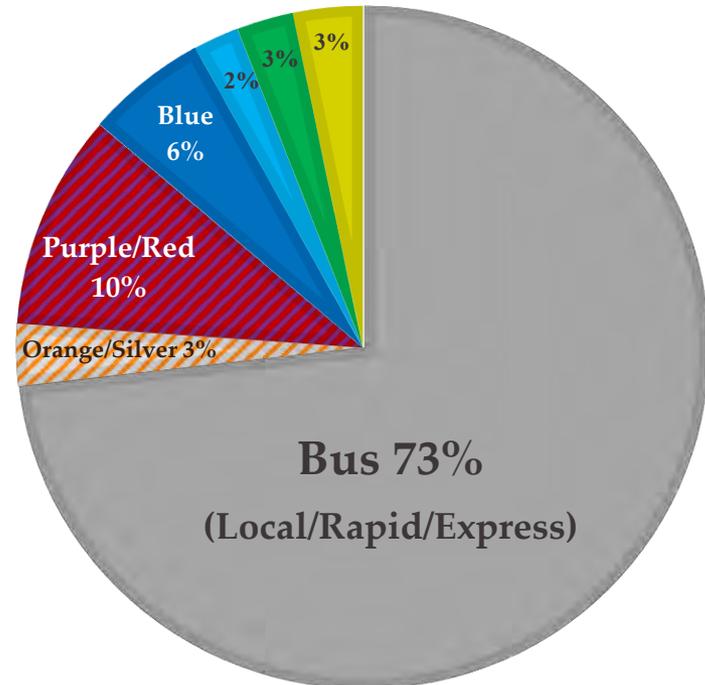
Modal Split



- Non-Motorized
- Auto
- Metro Transit
- Other

Estimate via California Household Travel Survey (Caltrans, 2013)

Transit Modal Split



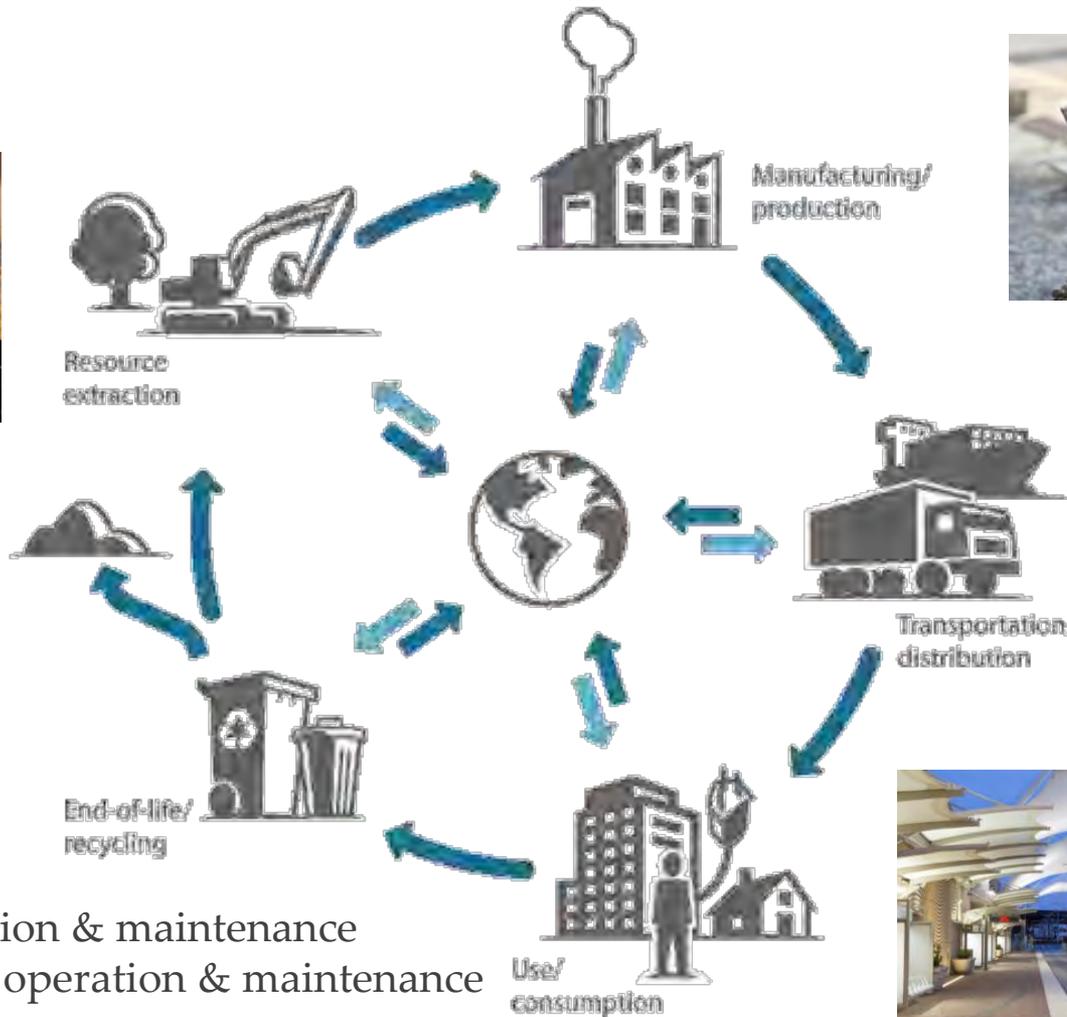
- Bus
- Blue
- Gold
- BRT
- Expo
- Heavy Rail
- Green

Estimate via LA Metro boardings (LA Metro, 2016)

Life-Cycle Assessment Scope



- Material and fuel extraction



- Vehicle manufacturing
- Infrastructure construction
- Electricity production and generation

- Vehicle operation & maintenance
- Infrastructure operation & maintenance



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Data & Tools

Trip data:

- California Household Travel Survey (CHTS, 2012-13)
- LA Metro On-board Surveys (2013 – current)



Transit operational data:

- Ridership & Operation Reports (2013 – current)
- Engineering design documents, Google Earth

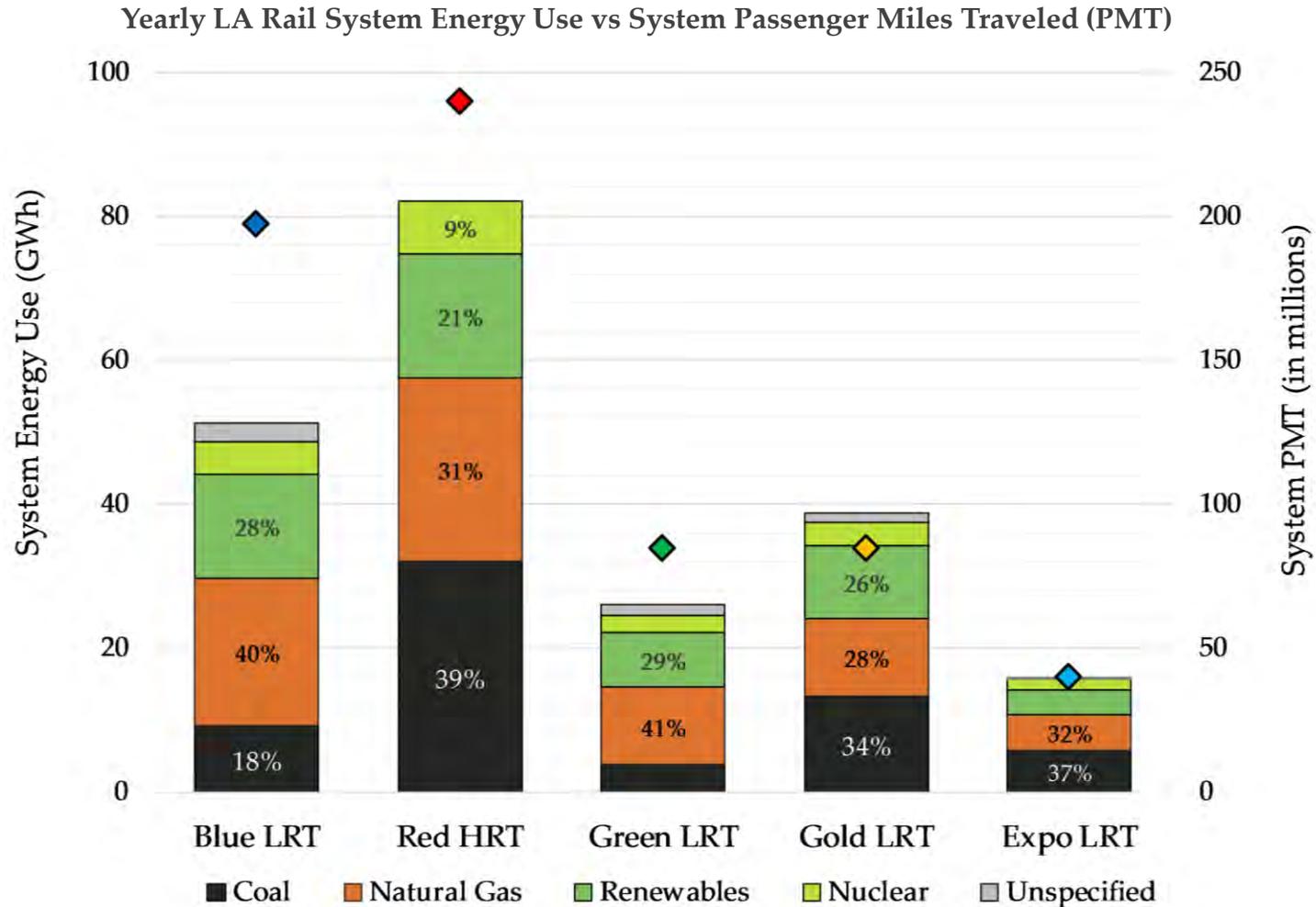


Life-cycle Modeling:

- Modeling tools including SimaPro, GREET, CiRN-LCA, and other components
- EcoInvent and EIOLCA database and empirical studies



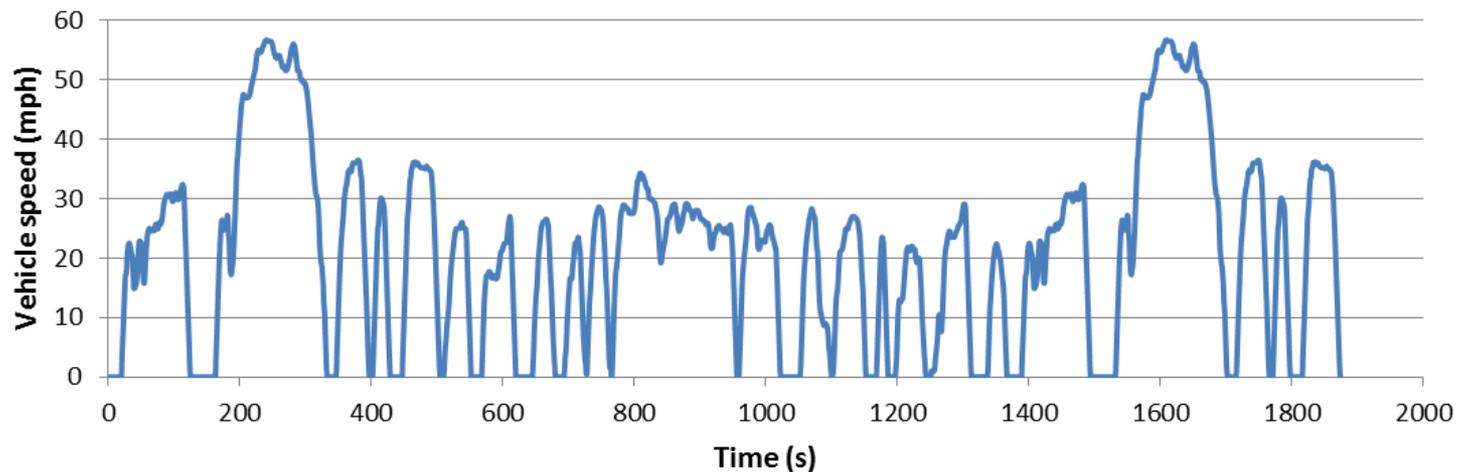
LA Metro Rail Energy Use



* Reflects 2013-2014 data

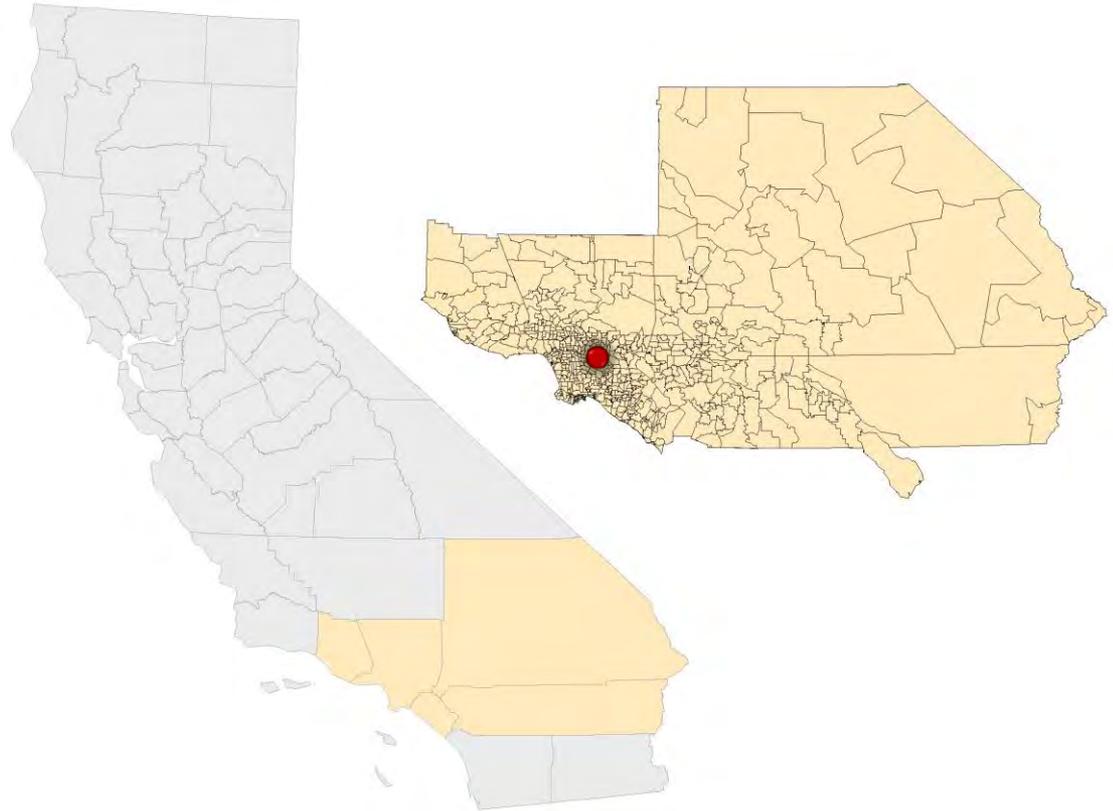
Bus & Metrolink Drive Cycles

- Local, Express, and Rapid Bus drive cycles were estimated by matching similar empirically tested cycles in similar buses (excluding Orange BRT).
- Estimated system fuel consumption (based on mileage) was 4% lower for buses, and 7% lower than locomotives.
- Metrolink drive cycles developed from similar locomotive operation impacts from Fritz (1994).



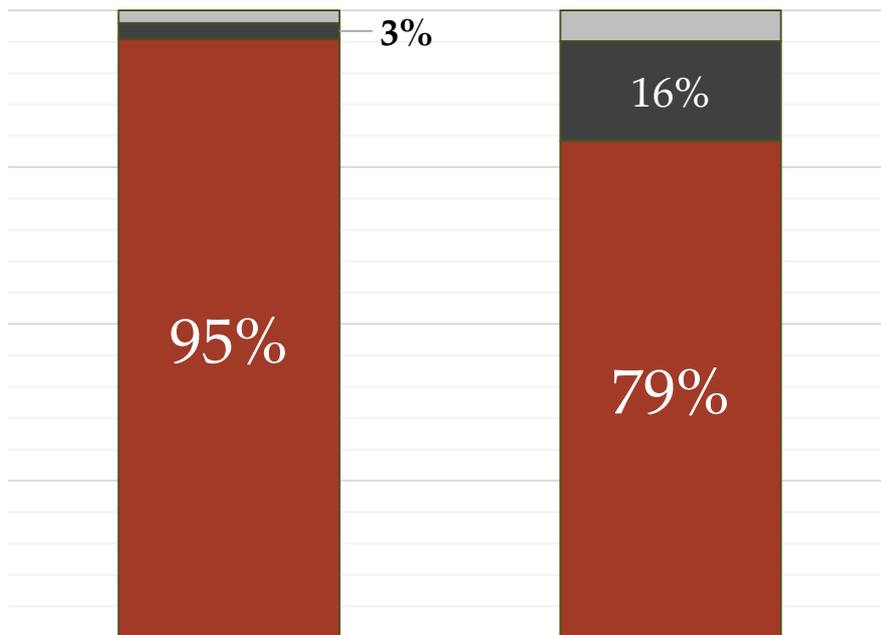
Trip Characteristics (CHTS)

- Trip characteristics determined for each region/transit system.
- Aggregation at the zip code level, over 900 sub-regions.
- Auto trips are shorter distance than transit for same ODs.



Transit Access & Egress in LA

Access & Egress Modes
(2012-13 CHTS)

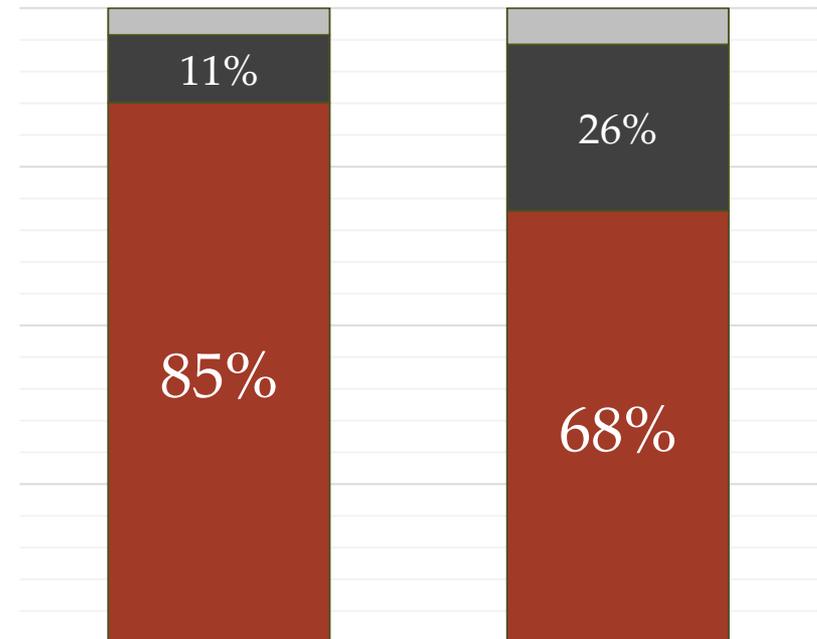


Metro Bus

Metro Rail

■ Walk/Bike ■ Auto ■ Other

Access Mode
(2012-13 Metro Surveys)



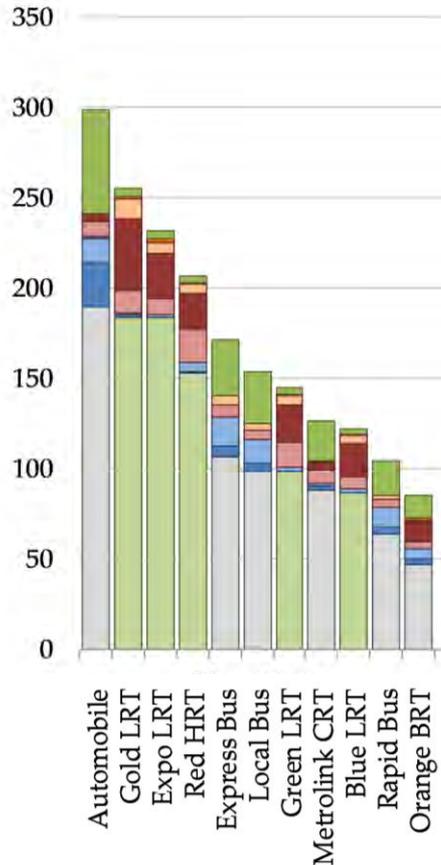
Metro Bus

Metro Rail

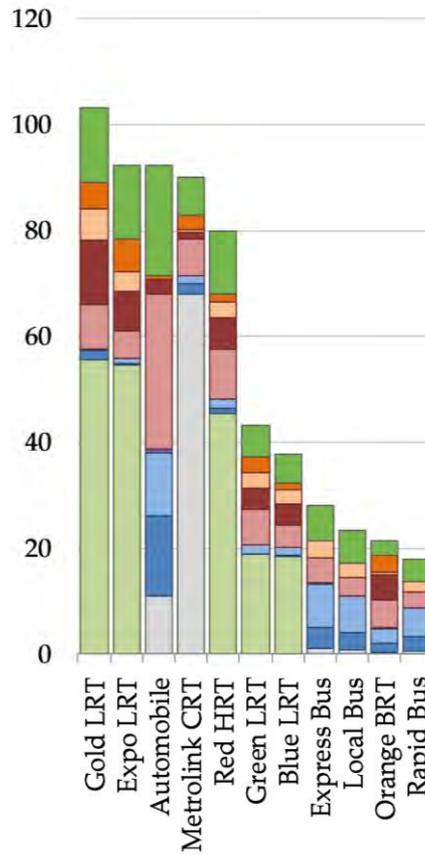
■ Walk/Bike ■ Auto ■ Other

Per Passenger-mile Impacts

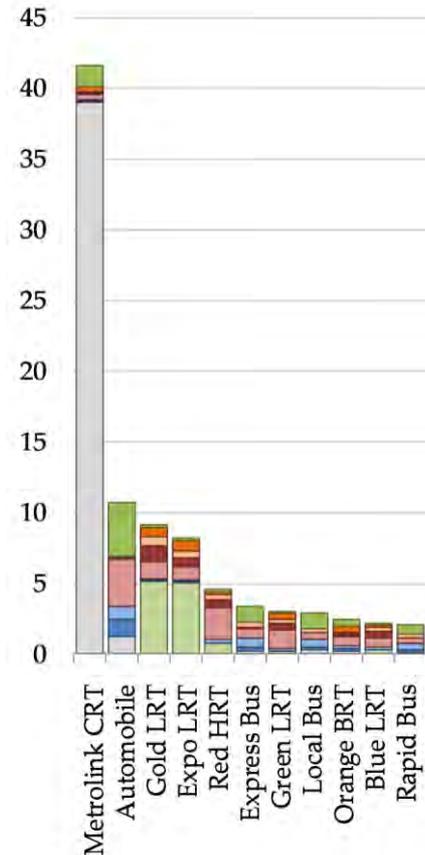
GHGs (g CO₂e/PMT)



Respiratory (mg PM_{2.5}e/PMT)



Smog (g O₃e/PMT)

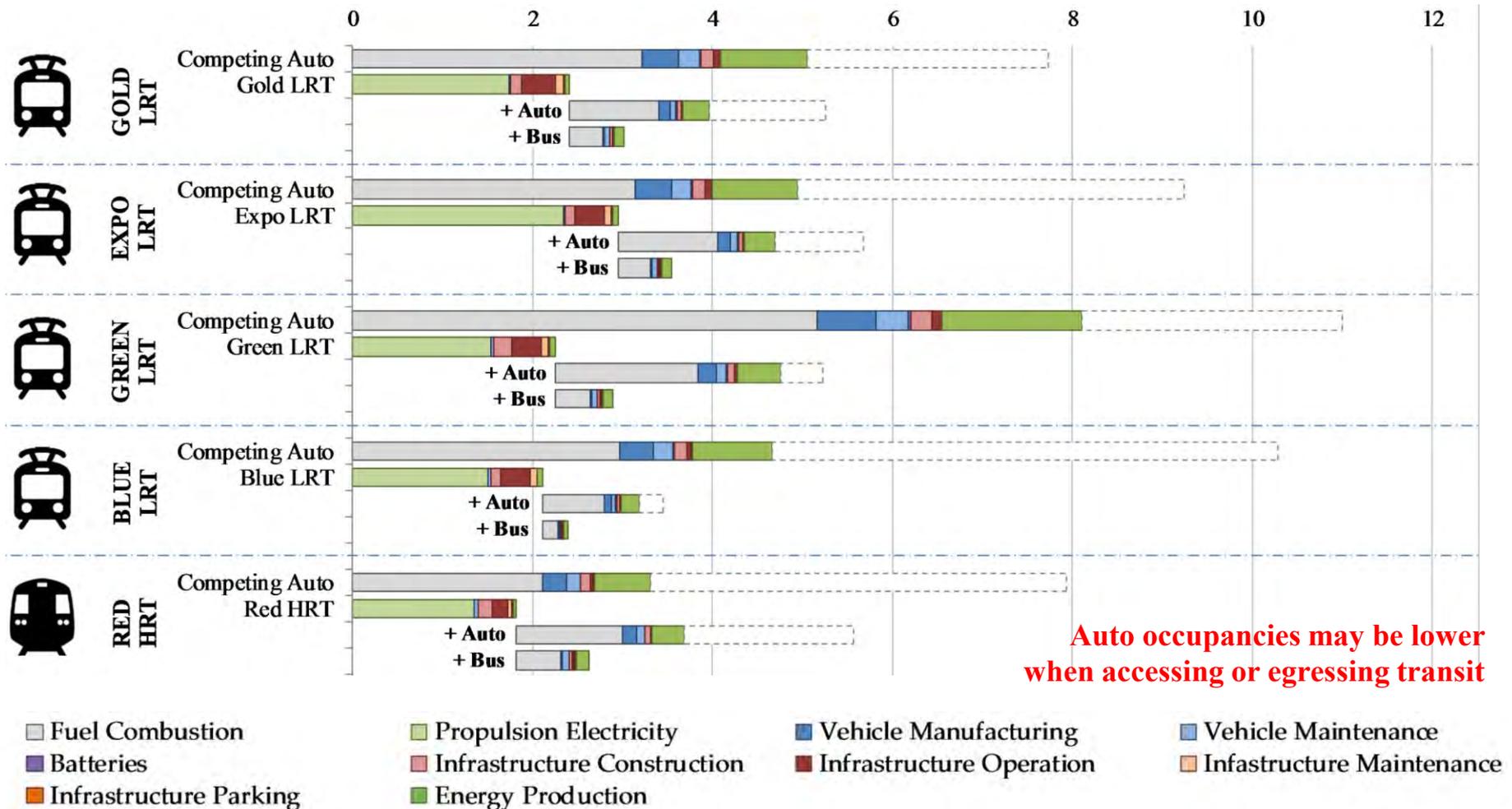


Note that auto trips in LA are ~2 pax per trip

- Fuel Combustion
- Propulsion Electricity
- Vehicle Manufacturing
- Vehicle Maintenance
- Batteries
- Infrastructure Construction
- Infrastructure Operation
- Infrastructure Maintenance
- Infrastructure Parking
- Energy Production

GHGs per Passenger-Trip

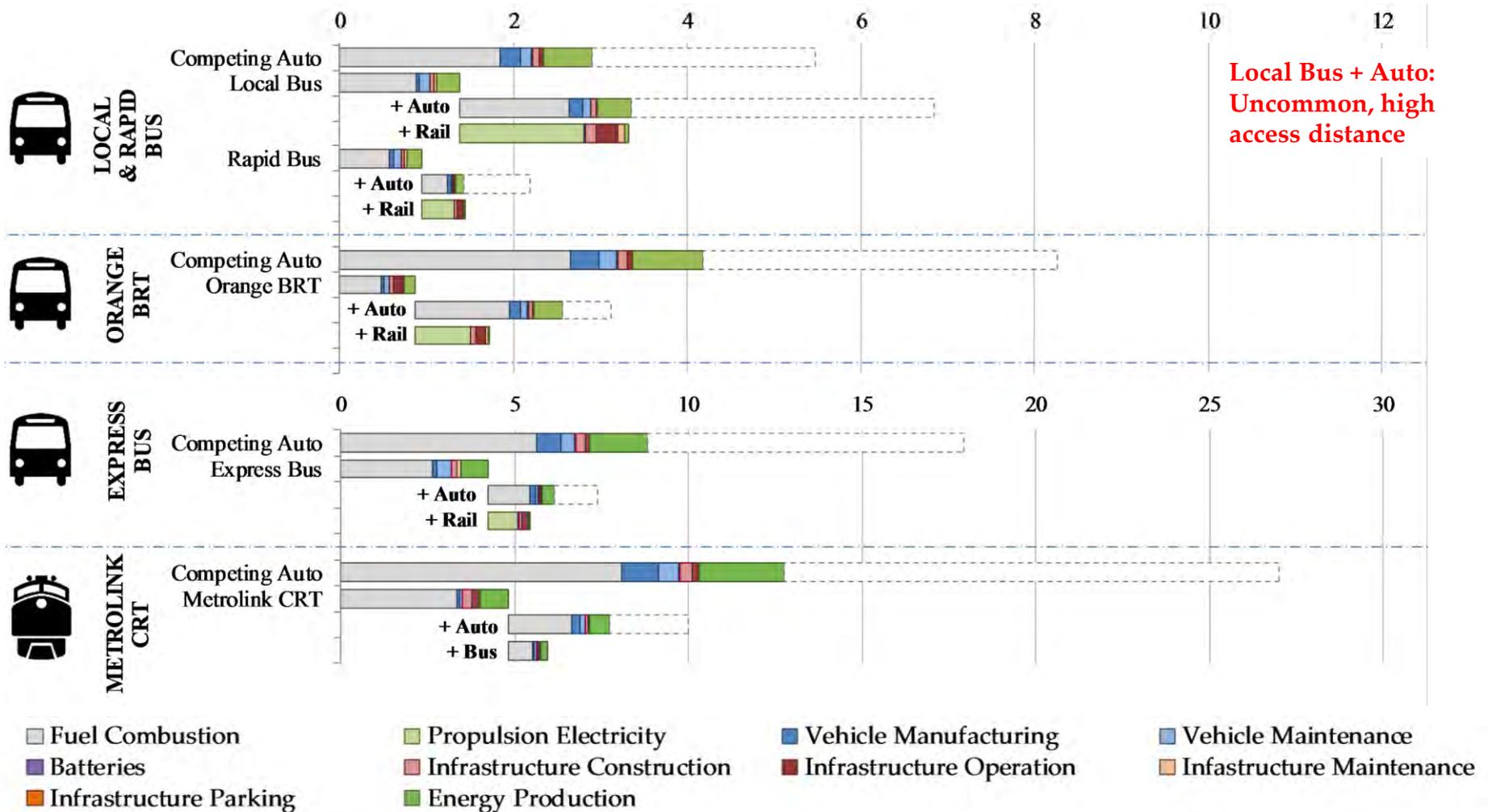
GREENHOUSE GAS EMISSIONS (kg CO₂e per passenger trip)



Auto occupancies may be lower when accessing or egressing transit

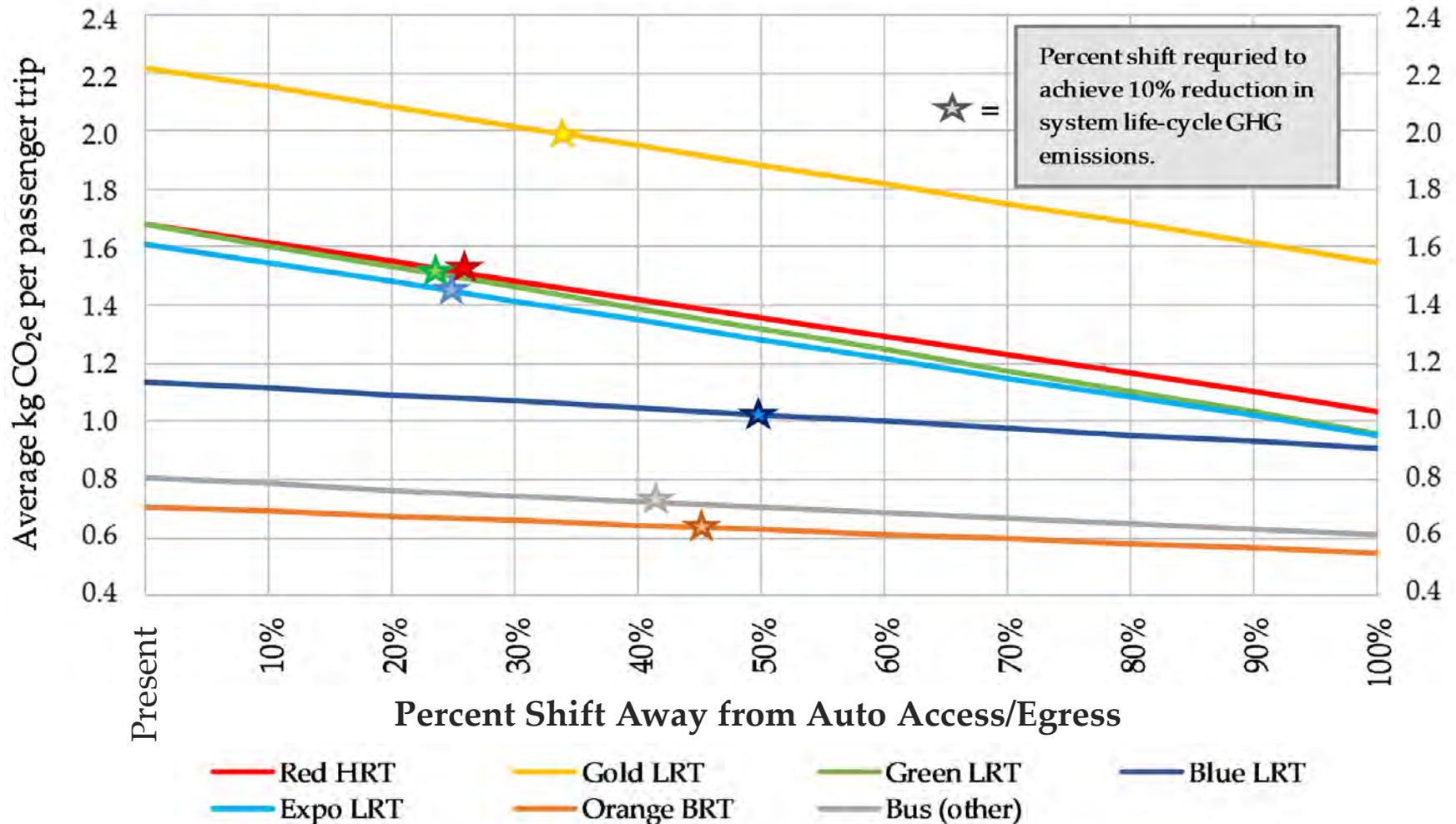
GHGs per Passenger-Trip

GREENHOUSE GAS EMISSIONS (kg CO₂e per passenger trip)



Reducing 10% of GHG Impacts

Average GHG emissions per passenger trip vs auto shift



la.transportationlca.org

REPORT and DATA



chris.hoehne@asu.edu



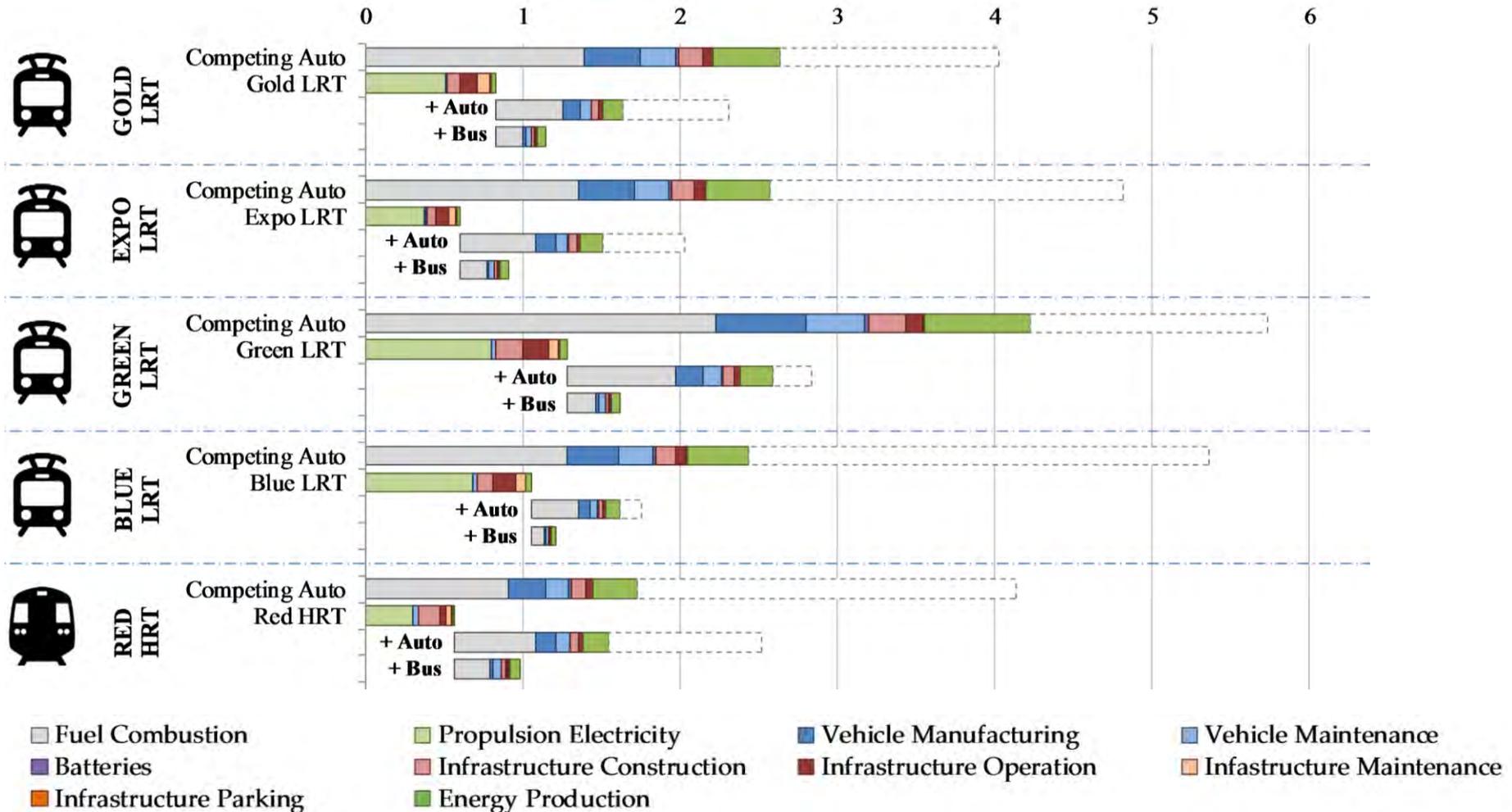
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System Boundary

Life Cycle Grouping	Automobiles/Buses	Rail
Vehicle		
Manufacturing	<ul style="list-style-type: none"> ▪ Vehicle Manufacturing ▪ Battery Manufacturing ▪ Transport to Point of Sale 	<ul style="list-style-type: none"> ▪ Train ▪ Transport to Point of Sale
Operation	<ul style="list-style-type: none"> ▪ Propulsion ▪ Idling 	<ul style="list-style-type: none"> ▪ Propulsion ▪ Idling
Maintenance	<ul style="list-style-type: none"> ▪ Typical Maintenance ▪ Tire Replacement ▪ Battery Replacement 	<ul style="list-style-type: none"> ▪ Typical Train Maintenance ▪ Train Cleaning ▪ Flooring Replacement
Infrastructure		
Construction	<ul style="list-style-type: none"> ▪ Roadway 	<ul style="list-style-type: none"> ▪ Track ▪ Station
Operation	<ul style="list-style-type: none"> ▪ Roadway Lighting ▪ Herbicide Use 	<ul style="list-style-type: none"> ▪ Track, Station, and Parking Lighting ▪ Herbicide Use ▪ Train Control ▪ Miscellaneous (Escalators, Equipment)
Maintenance	<ul style="list-style-type: none"> ▪ Roadway Maintenance 	<ul style="list-style-type: none"> ▪ Track and Station Maintenance
Parking	<ul style="list-style-type: none"> ▪ Curbside Parking 	<ul style="list-style-type: none"> ▪ Dedicated Parking
Energy Production		
Extraction, Processing, & Distribution	<ul style="list-style-type: none"> ▪ Gasoline/Diesel/Natural Gas Extraction, Processing, & Distribution 	<ul style="list-style-type: none"> ▪ Raw Fuel Extraction and Processing, Electricity Generation, Transmission & Distribution

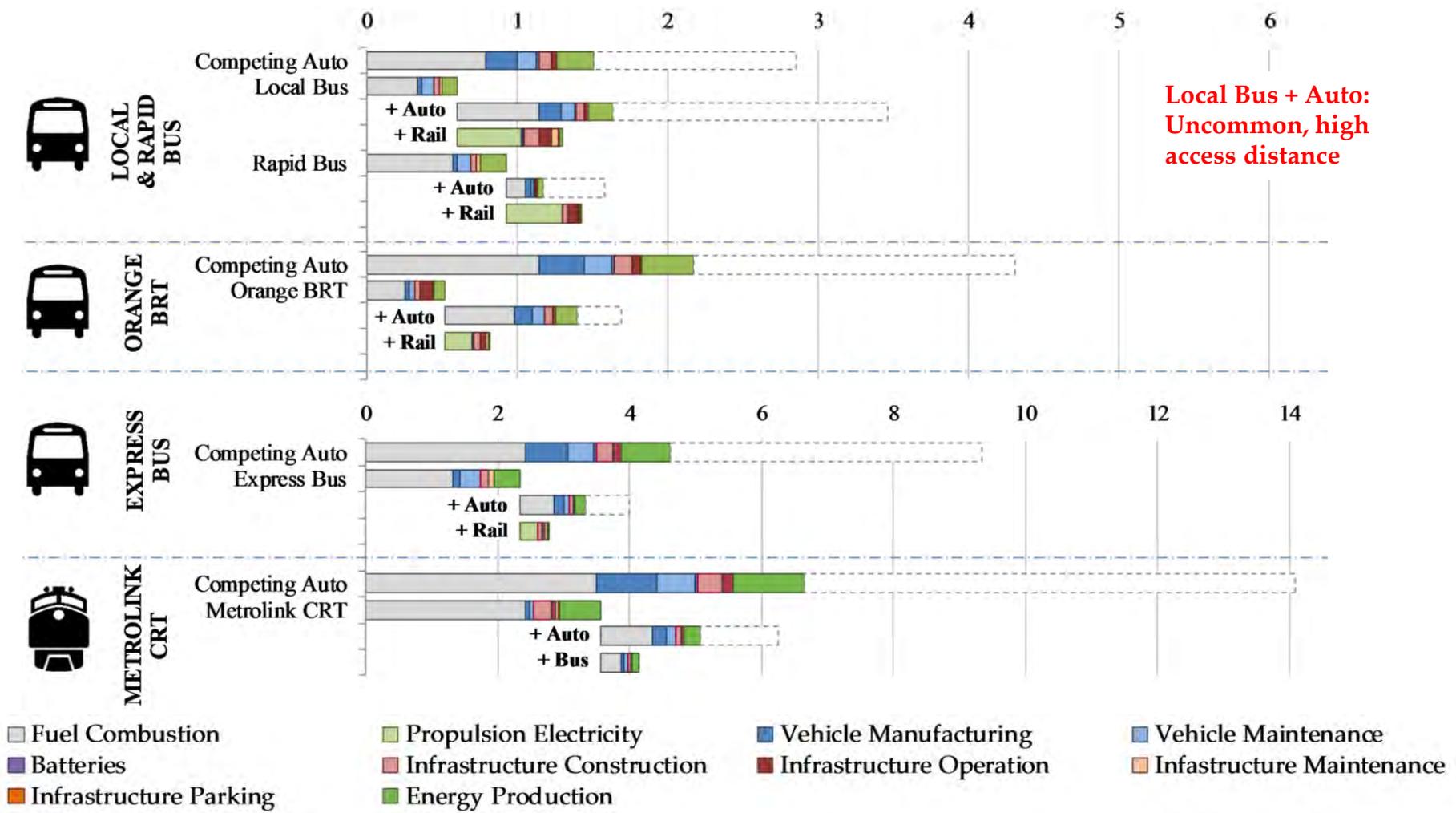
GHGs per Passenger-Trip (LT)

GREENHOUSE GAS EMISSIONS (kg CO₂e per passenger trip)



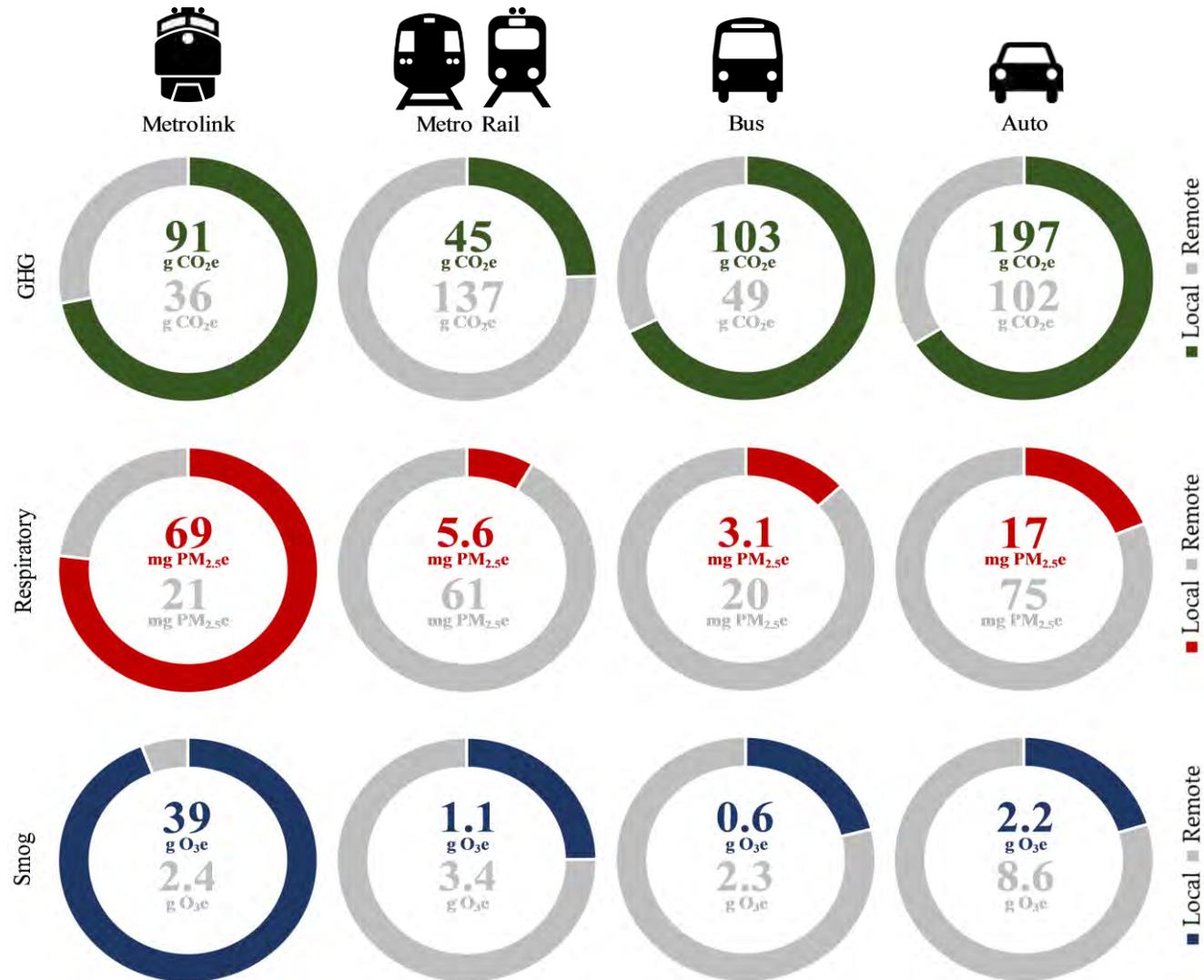
GHGs per Passenger-Trip (LT)

GREENHOUSE GAS EMISSIONS (kg CO₂e per passenger trip)



**Local Bus + Auto:
Uncommon, high
access distance**

Local vs Remote Impacts Per Passenger Trip



Attachment A

Los Angeles County and Puget Sound MOD Partnership

This pilot demonstration is a joint project with the Los Angeles County Metropolitan Transportation Authority (Metro), the lead applicant, and Seattle Sound Transit (ST). Metro is the regional transportation planning agency serving Los Angeles County, which is home to 10.7 million inhabitants, representing almost 27 percent of the total population of California. The agency plans, coordinates, designs, builds, and operates transportation services for the most populous county in the United States and employs over 9,800 full-time individuals with an annual budget of over \$5.5 billion. Metro also administers Los Angeles County's Proposition A, Proposition C, and Measure R sales taxes, which has enabled the agency to embark on one of the largest capital infrastructure expansions in the nation.

Passed by voters in 2008, Measure R is expected to generate \$35 billion in funding over 30 years for transportation investments in Los Angeles County, with 12 transit and 16 highway projects in the works, \$5.2 billion in local return distributed to 89 jurisdictions in the County for roadway improvements, 3 rail lines under construction, and 2 rail lines that opened this year. Metro's transit system provides 450 million rides per year and includes 100 rail stations, over 100 miles of rail lines, and 170 Metro bus routes with nearly 16,000 bus stops. In June 2016, the Metro Board decided to place a new sales tax on the November 2016 ballot measure that would generate over \$120 billion dollars for new transit and highway projects; commuter rail; transit operations and projects to keep buses, trains and facilities in good repair; pedestrian and cycling connections; and funding to keep fares affordable for students, seniors and the disabled. This measure demonstrates Metro's commitment to building and sustaining a world-class transportation system by vastly improving infrastructure that is critical to the future growth of Los Angeles County.

In the Puget Sound, ST provides 28 commuter bus routes, 82 miles of commuter rail, and 20 miles of light rail service in urbanized areas of King, Pierce, and Snohomish counties. The ST service area spans over 1,100 square miles and carries 145,000 riders each weekday. The region has the nation's fastest-growing transit ridership with transit boardings on all modes increasing by 3.6 percent per year since 2005. Currently 54 percent of commuters in downtown Seattle take transit. ST's first light rail segment in Seattle opened in 2009, and by 2023, the region's light rail system will be over 50 miles, connecting three counties.

The Puget Sound is one of the fastest growing metropolitan areas in the United States; in 2015, 3.9 million people lived in the region, accounting for 55 percent of Washington's population and 70 percent of its economic activity. By 2040, the region is expected to grow by 1 million people, a 32 percent increase, and add 1.2 million new jobs. Downtown Seattle, the largest employment center in the region,

has 154,000 jobs alone. These changing demographics are expected to boost demand for travel throughout the region by 40 percent.

This fall, Puget Sound voters will decide on new tax measures valued at \$53.8 billion to fund the Sound Transit 3 (ST3) Plan, which originated from nearly 35,000 public responses. ST3 would fund an additional 62 miles of light rail with 37 new stations. ST3 would also decrease bus headways and increase speed by allowing buses to run on highway shoulders. The plan is to quintuple transit ridership by increasing capital programs and using resources more efficiently.

Executive Summary

Offering two diverse regions and geographies as test beds, Los Angeles County and the Puget Sound transit operators propose a partnership with the on-demand transportation network company (TNC) Lyft to explore the viability and benefit of using TNC services to provide first and last mile (FMLM) solutions for trips originating and ending at select regional transit stops.

These two regions are unique. Both have committed to historic, voter-supported transit investments, and both are seeing major growth of Mobility on Demand (MOD) services.

But this new mobility marketplace is disconnected. Each region's transit plan recognizes the need to more effectively move people to and from transit services, and the inherent challenges in providing these connections solely through traditional options.

Mobility on Demand could help solve this problem. MOD and transit services are natural complements to one another, but if they are not aligned, we won't realize the full benefits offered by either.

Our proposed model utilizes the key strengths of each mode to complement the challenges of the other to create a whole that is greater than the sum of its parts. Our partnership aims to not only harness the mobility benefits provided by TNCs, but to ensure that those benefits are accessible across all socioeconomic statuses and minority populations.

TNCs can improve mobility by expanding travel choices, reducing car dependency, and supporting public transit service. TNC users are likely to utilize a wide range of transportation options, including walking, riding a bike, and taking public transit. However, if TNC use continues to expand without public sector collaboration, there is a risk of leaving mobility benefits on the table, exacerbating a digital divide, and creating separate systems for the rich and the poor.

Given each region's need to equitably expand first and last mile(s) access, and promising new mobility options offered by TNCs, Los Angeles County and the Puget Sound have partnered to demonstrate analogous Mobility on Demand (MOD) pilot projects that will define:

1. How TNC services can be aligned with existing and planned transit service to serve an effective FMLM solution and identify other niche markets relevant to improving overall system mobility;
2. How the key partners can cost-effectively ensure equal access is provided for individuals with disabilities and low incomes on the platform; in addition to
3. Demonstrating payment integration across transit operator and TNC platforms, specifically to enable service to lower income and unbanked populations.

Data generated from the pilot will be shared, analyzed, and evaluated by the Eno Center for Transportation (Eno), the University of Washington, and UCLA. Research will quantify potential benefits and challenges to incorporating TNCs into a public sector FMLM mobility menu and will also document the processes created to enable the partnership. This research will serve as a blueprint for transit agencies partnering with technology enabled mobility companies.

Our mobility on demand guiding principles are exemplified as follows:

System Integration. The project will weave private sector TNC services into the regional transit framework by providing Lyft as a publicly supported transportation option for customers to reach the mass transit network. In Los Angeles County, as technology comes online, payments for Lyft rides will be incorporated into the regional Transit Access Pass (TAP) network, allowing for seamless transfers from Lyft to public mass transit service. In both Los Angeles County and in the Puget Sound region, numerous transit agencies will participate and learn. In LA: Metro, Foothill Transit, and Access Services will work in collaboration; in the Puget Sound: Sound Transit, King County Metro, Pierce Transit, and Community Transit will all work together.

Partnership Driven. We are partnering across disciplines and with non-traditional private sector partners. We are also creating a forum to identify synergies amongst local agencies and across state lines, creating a nationally transferable approach. This project will bring together eight transit agencies to collaborate on the common goals of improving regional mobility, incorporating technological innovation into our framework, and ensuring that mobility services are equitable and in the public interest. Through working together to reach these goals we will develop new, long-lasting relationships that will enable our agencies to learn from one another and work together, creating an improved product for our customers.

Innovative Business Model. The partnerships created through this project will create three innovative business models, described as follows:

1. **TNC and Transit Operator.** Participating transit agencies will define discount structures for Lyft rides that end or originate at participating transit stations, within an approximately 3 mile radius of the transit station. Over the 12-month duration of the pilot demonstration, the project team will test a variety of subsidy structures, aiming to identify a structure that is beneficial for the customer, the transit agency, and Lyft.
2. **Transit Operator and Transit Operator.** Los Angeles County is home to over 26 transit agencies and the Puget Sound is home to 8 transit agencies. Many of these operators have overlapping service areas and shared regional mobility goals and resources. This project will expand business relationships for operators in each of the participating regions, enabling and incentivizing participating agencies to collaborate to meet shared goals of serving our customers.
3. **Transit Operator, TNC, and Think Tank.** The project will create a business relationship between participating transit operators, Lyft, and Eno. This is an opportunity for the transit operators and Lyft to incorporate data-driven public policy research into their decision making process, ultimately improving mobility options.

Equity of Service Delivery. We plan to meet the needs of our customers in the following ways:

- **Individuals with Disabilities.** Lyft will onboard drivers from wheelchair accessible vehicle (WAV) providers onto the Lyft platform.

- **Low income and minority populations.** Lyft will use its concierge service dispatch to provide customers the option to hail a Lyft by phone. The concierge service will be available in multiple languages, as required by Limited English Proficiency (LEP) guidelines. The selection of geographic test locations will specifically evaluate and consider the needs of low income and minority populations. Through our test location selection, we will aim to provide FMLM Lyft services to populations that may not currently have ease of access to TNC platforms. In the Los Angeles region, when the technology comes online users will be directed to pay for their participating Lyft rides with their TAP card. This will provide a means for those who are unbanked to access the service, as well as provide opportunities for TAP to provide transfer incentives. In the Puget Sound region, this MOD project will be integrated with the region's special low-income fare programs.
- **Aging populations.** Lyft's concierge service will provide any alternative means for aging populations to access the service in cases where the smart phone application is inaccessible to such populations.

The following entities will be partnering for this project:

Los Angeles County Team

- **Los Angeles County Metropolitan Transportation Authority (Metro):** Countywide transit operator and funding distributor in Los Angeles County
- **Foothill Transit:** Fixed route bus transit operator, providing service in the San Gabriel Valley in Los Angeles County
- **Access Services:** Paratransit provider for Los Angeles County's operators.
- **City of Los Angeles:** Largest and most populous city in LA County, and the second largest city in the United States.
- **University of California, Los Angeles (UCLA) Institute of Transportation Studies:** UCLA based academic transportation center.

Puget Sound Team

- **Sound Transit:** Regional transit authority and funding distributor for the Puget Sound.
- **King County Metro:** Public transit operator for King County, Washington.
- **Community Transit**
- **Washington State University Transportation Center:** Washington State based academic transportation center.

Private Sector Partners

- **Lyft:** TNC who operates a peer-to-peer platform connecting drivers with riders.
- **Eno Center for Transportation:** Washington, DC based neutral, non-partisan transportation policy think tank.

Current state of practices/challenges project is designed to address

Los Angeles County and the Puget Sound region are at the forefront of transit agencies identifying FMLM solutions. Metro serves as transportation planner, coordinator, designer, funder, builder and

transit operator, and is constantly working to deliver a regional system that supports mobility for over 10 million residents across 89 jurisdictions. Foothill Transit operates 37 fixed-route local and express lines, covers over 300 square miles in eastern Los Angeles County, and serves approximately 14 million customers each year (approximately 48,000 weekday). Access Services is a local public entity that operates paratransit services on behalf of 44 Los Angeles County fixed-route transit agencies, including Metro and Foothill Transit.

The central Puget Sound's population is 3,898,720 (2015), which is 55 percent of Washington's population. It is home to 70 percent of the state's economic activity and 97 percent of its congestion. The Puget Sound area is one of the fastest growing regions in the United States.

Currently there are over 20 miles of light rail in service and ridership is exceeding projections. By 2023, over 50 miles of light rail will be complete. Ridership is expected to be over 280,000 per day.

In addition to the 50+ miles of light rail, the Puget Sound region has one of the largest bus systems in the country. The region's bus and rail system are integrated and work together. The Seattle Times recently reported that Seattle is now the second most bus-reliant metropolis after San Francisco. Riding the bus is how one out of five- that's 78,000 Seattleites - get to their jobs. Between 2010 and 2014, Seattle experienced the biggest jump in bus ridership of any major U.S. city. In this period, Seattle's workforce population grew by about 44,000 - and nearly 19,000 of those people are commuting by bus (42 percent of the total increase). According to surveys conducted by King County Metro, about 90 percent of its riders have access to a vehicle, so these are people who take the bus by choice. People are taking buses and trains because they've concluded it's a better option than driving.

The following sections explore the current state of FMLM practices in Los Angeles County and the Puget Sound region.

Los Angeles County

- **First and Last Mile Strategic Plan.** Metro's FMLM efforts are built from a First/Last Mile Strategic Plan and Planning Guidelines adopted in April 2014, and subsequently the winner of the 2015 American Planning Association National Best Practice Award. The Plan focuses on infrastructure improvements in the station areas that ease access to the stations and surrounding destinations, but also prompts Metro to explore modal connections (shared mobility services, bus/rail interface, pick-up/drop-off and public/private partnerships) to offer a broader array of travel choices. Metro adopted an Active Transportation Strategic Plan in 2016 which further delineates the process for funding and implementing projects and which also provides a rich array of data for project proponents.
- **Bike Share:** Metro is leading a regional effort to develop a countywide Metro Bike Share program to facilitate first and last mile connections to transit and short point-to-point trips. The system launched in July 2016 with a pilot of approximately 1,000 bicycles and 65 stations in downtown Los Angeles, with a phase II in the works to expand to communities throughout the region. Bike share programs were recently launched in other cities in the county including Santa Monica in November 2015 and Long Beach in March 2016.
- **Payment integration on Bike Share.** The TAP program began integration with Metro Bike Share in July 2016. A customer registers online by connecting a new or existing TAP card with a user's Bike

Share account. Once this action is complete, a Bike Share customer can use the TAP card's NFC capability to unlock a bike using a PIN number. Although the payment is not made with the TAP card itself, the customer's account is associated to that particular TAP card number so that the appropriate credit card may be charged. The TAP card works like an NFC fob to identify the Bike Share account, unlock the bike, and charge the customers' credit card. Plans call for further integration (e.g. transfers to transit, payment through stored value on TAP) once account based capabilities are implemented on the TAP program.

- **Car Share:** In May 2015, Metro partnered with Zipcar, the world's leading car share network, to provide vehicles at 10 Metro park-and-ride locations to further improve first last mile connectivity to Metro transit stops.
- **Mobility Hubs:** Metro is collaborating with the City of Los Angeles to create mobility hubs at major transit stations and provide "on-demand" transportation services to address FMLM connections. Once operational, these mobility hubs will offer an integrated menu of options for customers. Integration of recent technology innovations would allow customers to use all these amenities and services through a single application.
- **Transportation Network Companies (TNCs):** TNCs are prevalent across Los Angeles County and are enhancing connections to our transit system and improving overall regional mobility. In support of these growing mobility options, Metro partnered with Uber to provide a temporary promotion centered on the grand opening of Metro's newest rail line extension, the Expo Line Phase II. This collaboration represented a new kind of partnership between a TNC and a transit agency and involved promotional discounts and direct marketing, designed to encourage travelers to use Uber to connect with Metro's new rail service.
- **Paratransit Service:** Access is a national leader in transportation coordination and promotes all modes of public transit for people with disabilities in Los Angeles County. The Free Fare program, which allows all ADA-eligible customers in LA County to ride the fixed route systems for free using their TAP-enabled Access identification card, is one of the ways that Access increases accessibility and mobility for people with disabilities, demonstrates technological integration with partner agencies, and manages ADA-paratransit costs.

Puget Sound Region

Sound Transit has an existing Research and Development program with 2016 lifetime budget of \$20 million. Recent projects completed include:

- **Permit Parking Pilot Program (Sept. 2015):** The Permit Parking Program aims to increase the number of transit customers accommodated per parking space. The program includes HOV and SOV permits, fees and incentives to carpool/vanpool to the station. The parking permit program includes options for a low-income permit rates.
- **Real Time Customer Information at Stations:** Customers can use the ST website to check parking availability at stations in real time.
- **Bike Share:** Pronto Cycle Share, Seattle's bike share system, makes 500 bikes available at 54 stations to residents and visitors in Downtown, Capitol Hill, Pioneer Square, International District, South Lake Union, and the University District.
- **Car Share:** Seattle is home to Car2Go, Zip Car, and ReachNow. Seattle is Car2Go's second largest market in the U.S. with 750 cars on the road. The city has more than 75,000 registered members. Based on data collected as part of the 2015 annual fee-floating car share survey, 14 percent of car share members in Seattle indicated they have given up a vehicle since joining the service. 50 percent of this group has indicated this was at least partially due to the availability of free-floating car share. Extrapolating these results to approximately 65,000 free-floating car

share members in Seattle indicates that car-share users may have given up approximately 9,100 vehicles.

- **Transportation Network Companies (TNCs):** ST has already partnered with a TNC to provide access to the light rail system for special events. When the University Link light rail opened in March, Uber provided direct uberHOP routes to and from the new University of Washington light rail station. This marketing promotion, however, was only for the weekend of the launch of light rail. This MOD project would provide a more robust demonstration of whether or not transit agencies partnering with TNCs can improve access to the regional transit system in a cost effective and equitable manner.
- **TNC Demand study:** Sound Transit and King County Metro are partnering with the City of Seattle to engage a consultant for a market study of potential TNC demand around representative transit facilities in the Puget Sound. The results of this study, due in late 2016, will dovetail with this demonstration by providing additional insight into the markets to be served in the pilot, and providing a detailed baseline and market response hypothesis against which to test pilot results.

As part of the ST3 plan going to the region's voters this fall, this Innovation and Technology program would fund research, analysis, and implementation of innovative best practices, partnerships, and technologies to increase ridership, improve service, and enhance efficiency of regional mobility. This program is proposed to be funded at \$75 million.

Current Challenges

A number of factors pose challenges for Los Angeles County and the Puget Sound region in providing robust, flexible, and accessible transportation options. The key factors highlighted below are specific to the scope of this grant proposal:

- **Lack of best practices and standards for engagement with TNCs:** Due to the fairly recent emergence of TNCs, transit agencies have not yet defined best practices or standards, and there are not common guidelines for doing so. This can make engagement with TNCs inconsistent even within regions, and can make dealing with a national operator, such as Uber or Lyft, far more difficult for an entire region.
- **Inconsistent regulatory interpretation at the transit operator level and outdated federal regulations:** Metro's temporary partnership with Uber to market the opening of our newest rail line in May 2016 highlighted the inconsistencies across transit agencies in interpreting the regulatory structure for partnering with TNCs. As a consistent national interpretation of appropriate regulations has yet to emerge, such interpretation has occurred on a localized case-by-case basis.
- **Duplicative transportation systems.** The rise of TNCs has begun to create bifurcated, duplicative transportation, which may lead to increased congestion without public sector intervention. The average Metro train rider has a household income of about \$22,000 and Sound Transit riders have a median household income between \$50- 75,000. According to data from the Pew Research Center, current users of TNCs tend to have much higher household incomes. Pew's research survey found that 26 percent of study respondents whose household income was over \$75,000 had used TNC services before, whereas only 10 percent of those whose household income was less than \$30,000 had used the service. With access to on demand services such as TNCs, higher income households willing to utilize modes other than private automobile travel may forego public transit use, resulting in a loss of the many social and mobility benefits that come along with high transit utilization across income classes. Without intervention, it is likely that the divide between mass transit users and TNC

users will grow, creating duplicative transportation networks, increasing congestion, and lowering the utility of both services.

- **Auto-centric built environment:** Individual transit users in both Los Angeles County and the Puget Sound region may experience a range of site-specific physical challenges to access train stations, such as poor walking and bicycling conditions, neighborhood scales that are hostile to those not in a car, poor wayfinding, high vehicle speeds, etc. Between 2009 and 2013 in Los Angeles County, an average of 4,480 bicyclists and 4,904 pedestrians were injured in collisions with motor vehicles each year. Walking and bicycling accounted for 19 percent of all trips, but 40 percent of traffic fatalities, highlighting the need for infrastructure improvements to create a safer transportation system for millions who walk, bicycle, and use transit. By engaging with MOD, we can improve the way we leverage the infrastructure assets we already have, filling the first-last mile gap in areas where infrastructure is inadequate.
- **Low population density in service areas.** Public transportation operates most efficiently in areas with moderate to high population densities, which many areas throughout both regions are not. Serving the FMLM of trips is difficult for many agencies, as the productivity of these routes is very low, the cost of operating them is very high, and they create the need for a scheduled or reliable transfer.
- **Challenges for people with disabilities.** ADA-eligible customers in Los Angeles County can ride any local bus or rail line for free as part of Access' Free Fare program. A significant number of ADA-eligible customers use both paratransit service and fixed route service, making trip-by-trip decisions on what system to use. Local data suggest that even when removing the cost of the fixed-route service, challenges still remain that may deter fixed-route use among a significant portion of this population. These challenges include barriers in the pedestrian environment that inhibit getting to and from stations, distances to or from stations, complex or multiple transfers on a fixed route service, frequency of bus service in some areas, and/or disability-related challenges. Improving FMLM connections may allow ADA-eligible customers to overcome some of these challenges and utilize the fixed-route service for more or all of their trips.
- **Parking.** Many of Sound Transit's parking facilities are at or over capacity utilization. Riders are being turned away at stations, only to complete their trips in personal vehicles on congested roadways instead. Alternative means of accessing transit without requiring a parking stall are needed.

MOD as a Solution

The proposed project will test the viability of delivering affordable, cost-effective FMLM connections to transit stations. By incorporating TNCs into the public sector mobility menu, we will effectively expand transportation options for our customers, and hopefully expand the number of people using public transit for a portion of their transportation need. TNCs have the ability to meet our FMLM needs by providing a service whose payments can be seamlessly integrated into public transit payment systems and faster response times in a cost effective way because of the density of vehicles in reserve in the service area.

Our partnership will enable the participating transit agencies to set the tenor and rules of engagement for partnership with TNCs and other technology enabled mobility options. This will help to create an equitable menu of options for all ages, demographics, and socioeconomic statuses.

Extent/evidence that demonstration builds off of prior research, innovation, and development efforts

Our project identifies and builds from gaps in the existing body of research and experience. Our project is specifically designed to solve for those gaps through our demonstration and our data extrapolation. Research shows that TNCs and other technology enabled transportation options can augment and improve existing transit service, reduce car dependency, and improve overall mobility. Our project is also informed by the experience in preexisting partnerships between TNCs and transit operators including Pinellas Suncoast Transit Authority (PSTA), the Massachusetts Bay Transportation Authority (MBTA), the Metropolitan Atlanta Rapid Transit Authority (MARTA), the Dallas Area Rapid Transit (DART), and the Southeastern Pennsylvania Transportation Authority (SEPTA). Importantly, the design of the demonstration was informed by our first-hand experience at Metro partnering with Uber for the launch of Expo Line extension.

In spring 2016, the American Public Transportation Association (APTA) and the Shared Use Mobility Center (SUMC) published a paper that found that shared modes complement public transit and that “public entities should identify opportunities to engage with them to ensure that benefits are widely and equitably shared.”ⁱ SUMC’s report followed a paper published in early 2016 by the Transportation Research Board (TRB).ⁱⁱ TRB found that these new, innovative mobility services are expanding travel choices and being widely embraced by millions of travelers. Importantly, TRB also found that without public sector intervention, TNCs could exacerbate the ‘digital divide.’ However, through thoughtful partnerships, these services could enhance mobility for low-income and older adults.

TRB recommend that, “policy makers and regulators should seek to integrate the features of TNCs and other innovative shared mobility services into existing transportation systems and services in ways that leverage the new services’ strengths and features.”

In February 2016, Eno released a paper titled “Emerging Technology Trends in Transportation.”ⁱⁱⁱ In this paper, Eno found that the federal government has a role in assisting the creation of partnerships between the public and private sectors to provide innovative mobility solutions and in ensuring equitable access to economically disadvantaged communities. In May 2016, the Pew Research Center released a study that evaluated the rise of new on-demand services, including TNCs. Pew’s study found that TNC users generally capitalize on the larger wider range of transportation options, reducing their reliance on personal vehicle ownership.^{iv}

Pew’s study also found that 26 percent of survey respondents that made over \$75,000 had used TNC services before, whereas only 10 percent of those who make less than \$30,000 had used the service. This finding suggests that without governmental intervention, there may be a continued bifurcation based on income level for those who can and those who cannot access TNCs as a mobility service, something that this pilot program aims to overcome.

In 2014, Berkeley’s Transportation Sustainability Research Center published a report that found “a substantial portion of sampled ridesourcing trips are spatially and temporally not well served by public

transit, suggesting a complementary relationship with transit, at least for some trips.” It also found that, “ridesourcing users also appear to be less likely to own an automobile.”^v

This body of literature continues to grow with many current research projects underway. Our pilot demonstration will work with the research that is being developed by other organizations throughout the duration, and a growing body of research and experiences will inform the final research products and outcomes of this project.

In addition to this growing body of academic research, there has been real world application of TNC and transit agency partnerships. The majority of partnerships that have been forged between transit agencies and TNCs have been temporary marketing agreements. For example, MARTA and DART both entered into temporary marketing partnerships with Uber where no money changed hands. SEPTA is currently running a marketing partnership with Uber where Uber is discounted FMLM rides from selected transit stops, with up to \$10 per discount. Because Uber is paying for the discounts during this pilot, no money has changed hands between SEPTA and Uber.

In May 2016, Metro’s Office of Extraordinary Innovation brokered a marketing partnership with Uber featuring the opening of the Expo Line extension. In this partnership, Metro and Uber offered cobranded marketing and Uber subsidized FMLM pool rides for the newly opened stations for a weekend. The marketing partnership lasted for two weeks.

In March 2016, MBTA announced a Request for Proposals (RFP) for “On-Demand Paratransit Pilot Services.” An MBTA official commented that TNCs had bid on this proposal, but no vendor has yet been awarded the contract.

PSTA is the only transit agency that has executed a partnership with a TNC where public money has changed hands. In February 2016, PSTA announced a partnership with Uber and United Taxi to provide an innovative solution to the region’s first and last mile access to the rapid transit network in a zone that was previously under served.^{vi} Within the defined service area, PSTA subsidizes rides that originate or end at designated transit stops. The subsidy to the rider is 50 percent of the cost of the ride, up to a total of \$3.00.^{vii} PSTA has recently expanded their pilot with a subsidized Uber service specifically for disadvantaged populations, which will provide qualifying customers 23 free rides per month for qualifying trips from Uber or United Taxi from 9 PM to 6 PM from any starting point and end point.

Metro researchers reached out to each agency to determine lessons learned from transit agencies partnering with non-traditional vendors. Based on these conversations Metro researchers identified the following challenges in partnering with TNCs:

- 1. Inconsistent interpretation at the transit agency level of federal regulatory structure.** As a function of the recent emergence of the MOD and TNC model, each agency interviewed had a different interpretation of how to apply Title VI, Environmental Justice (EJ), ADA, and drug and alcohol testing rules and regulations in their partnerships with TNCs. The lack of consistency across agencies makes it challenging to broker new relationships.

2. **Availability of vehicles capable of transporting individuals in wheelchairs (WAV) on a TNC platform.** Both transit operators and TNCs noted that ensuring that WAVs are available on the platform is challenging. PSTA overcame this challenge by offering a wheelchair friendly alternative to the TNC in their pilot. Uber is currently working on providing WAV on their platform, but this service is not yet robust. The taxi industry also historically has a challenge with ensuring that WAVs are available because it is challenging to deploy a density of WAVs to meet the needs of disabled users with similar response times to that of non-WAVs. Based on the technology used to deploy and dispatch TNCs, through a partnership with public sector paratransit, it is possible that we may be able to ensure lower wait times than have been historically possible. In our pilot demonstration we will test the ability to leverage data to provide and improve WAV service.
3. **Providing access for the unbanked is still a challenge.** As PSTA was the only agency directly subsidizing rides, they were the only agency to provide an option for the unbanked. The taxi option provided by PSTA, however, did not enable those who are unbanked to actually access the TNC service. This is an ongoing challenge and will likely have to be resolved agency-by-agency through innovative payment integration approaches. Through our pilot demonstration, Los Angeles County will be inclusive of unbanked populations by integrating Lyft payments onto the TAP system once account based technology can be incorporated into the program. In the Puget Sound, this program will be integrated with the ORCA LIFT low income fare program.
4. **There is a learning curve when partnering with non-traditional transit vendors.** Many of the agencies that Metro interviewed noted that the key to their success was predicated on selecting someone who has an understanding of the TNC/ for-profit business model, and who understands how the business models differ. Public transit operators traditionally do not partner with technology start-ups; therefore, there are a number of cultural differences in play. Our study contains an in-depth research component that will ultimately provide lessons learned for transit agencies across the country in how to best broker these partnerships.

MOD principles

Our proposal is founded on the principles defined by the FTA, including system integration; partnership driven business models, and equity of service delivery, as described below:

System Integration. The project will weave private sector TNC services into the regional transit framework through providing Lyft as a publicly supported option for customers that are specifically trying to connect with the mass transit service. In Los Angeles County, payments for Lyft rides will be incorporated into the regional Transit Access Pass (TAP), as the technology is deployed, allowing for seamless transfer from Lyft service to public mass transit service. In the Puget Sound region, we will test another approach whereby Lyft rides will be paid for separately, but pricing will be determined by customer type (including consideration of low-income or accessible service use) and experimental protocol. In the Puget Sound region, we will test another approach whereby Lyft rides will be paid for separately, but pricing will be determined by customer type (including consideration of low-income or accessible service use) and experimental protocol.

Partnership Driven. This project provides an opportunity for transit agencies to partner with non-traditional private sector partners, specifically with Lyft and Eno. It will also provide a forum for the identification of synergies amongst agencies in our own service regions as well as lessons from across state lines, creating nationally relevant lessons. This project will bring together five transit partners to collaborate on the common goals of improving regional mobility, incorporating technological innovation into our mobility framework, and ensuring that mobility services are equitable and in the public interest. Through working together to reach these goals we will develop new, long-lasting relationships that will enable our agencies to better learn from one another and work together, ultimately creating a better and more accessible product for our customers.

Innovative Business Model. The partnerships created through this project will create three innovative business models, described as follows:

1. **TNC and Transit Operator.** Our project will create a business relationship between a TNC (Lyft) and transit operators in two regions. Participating transit agencies will subsidize Lyft rides (with an incentive for the customer to use Lyft Line, a service which provides shared rides for customers going the same way) for transit trips that end or originate at participating transit stations, within an approximately 3 mile radius of the transit station. Over the 12-month duration of the pilot demonstration, the project team will test a variety of subsidy structures, aiming to identify a structure that is beneficial for the customer, the transit agency, and Lyft. Goals will include affordability for the customer, sustainability for the transit agency, and profitability for Lyft. The ultimate objective will be to define a structure that will be sustainable after the conclusion of the pilot demonstration.
2. **Transit Operator and Transit Operator.** Los Angeles County is home to over 26 transit agencies and the Puget Sound is home to 8 transit agencies. Many of these operators have overlapping service areas and shared regional mobility goals. Yet, we rarely identify opportunities to partner on shared service delivery. This project will expand relationships for operators in each of the participating regions, both enabling and incentivizing participating agencies to collaborate to meet shared goals of serving our customers.
3. **Transit Operator, TNC, and Think Tank.** The project will also create a business relationship between participating transit operators, Lyft, and Eno. This is an opportunity for the transit operators and Lyft to incorporate data-driven, public policy research into their decision making process, ultimately improving mobility options.

Equity of Service Delivery. The crux of our pilot demonstration is deploying TNCs onto the public transit marketplace in a way that is both equitable and accessible. We plan to meet the needs of our customers in the following ways:

- **Individuals with Disabilities.** Prior to pilot launch, Lyft will enter into a relationship with a wheelchair accessible vehicle (WAV) provider in both markets. Both companies will onboard drivers from this provider onto their respective platforms. Informed by data from LA's Access Services and paratransit in the Puget Sound region, Lyft will aim to provide WAV on the platform in the demonstration areas with wait-times that are similar to the wait times for other vehicles. Lyft will ensure that all drivers are trained to be courteous and sensitive to the needs of individuals with disabilities and drivers of vehicles capable of transporting individuals in wheelchairs are trained in safely securing passengers and their equipment.
- **Low income and minority populations.** Lyft will partner with a concierge service that will provide customers with the option to call a phone number to dispatch a Lyft vehicle. The concierge service will be available in multiple languages, as required by Limited English

Proficiency obligations of the underlying transit provider. The selection of geographic test locations will specifically evaluate and consider the needs of low income and minority populations. Through our test location selection, we will aim to provide FMLM Lyft services to populations that may not currently have ease of access to TNC platforms. In the Los Angeles region, users will be directed to pay for their participating Lyft rides with their TAP card. This will provide a means for those who are unbanked to access the service, as well as provide opportunities for TAP to provide transfer incentives. In the Puget Sound region, this MOD project will be integrated with the region’s special low-income fare programs. King County Metro and Sound Transit provide a fare discount to all riders who pay with special low-income fare programs. King County Metro and Sound Transit provide a fare discount to all riders who pay with special low-income “ORCA-LIFT” cards (example: ORCA LIFT fares on LINK light rail are \$1.50.) The eligibility threshold for a person to qualify for the low-income fare is 200 percent of the Federal Poverty Level, currently \$23,540 for an individual. The Payment platform for this test program will be able to recognize the eligible ORCA-LIFT rider to allow for differential pricing for MOD services.

- **Aging populations.** Lyft’s concierge service will provide any alternative means for aging populations to access the service in cases where the smart phone application is inaccessible to such populations.

Project Scope: MOD products

The pilot demonstration will be designed to test:

1. How TNCs can be used as effective feeders into the rapid transit system or if they have other niche markets relevant to improving overall system mobility;
2. How the key partners can cost-effectively provide service to individuals with disabilities compliant with ADA requirements, including ensuring that individuals with wheelchairs can utilize the services; and
3. Demonstrate payment integration across transit operator and TNC platforms.

The project will consist of three parts:

1. **Mobility on Demand Project Development**
2. **Pilot Demonstration**
3. **Research Development and Dissemination**

The following sections provide an overview of the tasks within each part.

Part 1: Mobility on Demand Project Development

Upon entering into a collaborative partnership with FTA to deliver our MOD product, the team will begin project development. Full project development will be completed within 12 months of entering into the collaborative agreement. Part 1 will consist of the following tasks:

Task 1.1: Environmental Justice and Regulatory Analysis and Mitigation Strategy

Task 1.2: Community Outreach

Task 1.3: Selection of Geographic Locations in Los Angeles and Seattle

Task 1.4: Development and Implementation of Payment Systems

Task 1.5: Designation of WAV Provider and Testing/Deployment of Accessible Vehicle Options

Task 1.6: Analysis and Strategy for Subsidy Models

Task 1.7: Designation of Curb Space and Deployment of Signage

Task 1.8: Marketing and Communication

The following provides a description of each task.

Task 1.1: Title VI, Environmental Justice, and Regulatory Analysis and Mitigation Strategy

The team will conduct analyses of potential Title VI and Environmental Justice concerns associated with the deployment of the demonstration project. This analysis will help to inform the selection of pilot stations. The team will also conduct a regulatory analysis, exploring the legal and regulatory framework at the local, county, state, and federal levels in order to ensure that the project is in full compliance and to identify potential areas of legal ambiguity.

Task 1.2: Community Outreach

The team will conduct online and in-person community outreach in the form of multilingual surveys, meetings, and information output in potential pilot areas. This process will help to identify the communities' desires are for the project; ascertain unanticipated issues; and inform the community of the pilot program.

Task 1.3: Selection of Geographic Locations in Los Angeles and Puget Sound Region

The project team will select geographic locations for the pilot. The selection criteria are as follows:

1. **Equity.** One of the primary goals of transit agencies partnering with TNCs is ensuring that all of our customers have access to the growing menu of mobility options. Therefore, we will select geographic locations with populations that have not yet had the opportunity to utilize these services.
2. **Geographic.** We will select regions that are representative of our diverse regions. That means that we will select locations in urban, suburban, and rural areas, with a variety of different geographic considerations.
3. **Current FMLM access.** We will select locations that have clear FMLM needs. For example, fixed route guideways that are underserved by buses, have poor biking and pedestrian infrastructure, or are otherwise a challenge to reach.

Task 1.4: Development and Implementation of Payment Systems

Los Angeles County and the Puget Sound regions will employ differing approaches to enabling payment. Los Angeles will work with TAP to enable pilot users to pay FMLM Lyft rides with their TAP card. Puget Sound transit agencies will enter into an arrangement with Lyft where Lyft will invoice Sound Transit at the end of each month for the cost of that month's subsidy.

Task 1.5: Designation of WAV Provider and Testing/Deployment of Accessible Vehicle Options

Lyft will identify a WAV provider and enter into a relationship that will enable the selected provider or providers to on-board their employees onto the Lyft platform. Lyft will work with participating transit agencies to identify best practice in ensuring that WAVs are accessible with reasonable wait times for customers who require such services.

Task 1.6: Analysis and Strategy for Subsidy Models

During the pilot phase, the team will test a variety of subsidy models. In task 1.6 we will develop subsidy scenarios to be tested as well as a strategy for how to best test these models over the course of 12 months.

Task 1.7: Designation of Curb Space

Where possible, the team will designate non-exclusive pick up and drop off locations at the pilot locations with signage.

Task 1.8: Marketing and Communication

All partners will develop and implement on-going marketing campaigns for the duration of the pilot demonstration.

Part 2: Pilot Demonstration

After the 12-month project development and outreach period, the pilot demonstration will be deployed over course of 12 months. This includes the deployment of the MOD model, ongoing marketing and outreach, and the collection of information. Part 2 will consist of the following tasks:

Task 2.1: Activation of Subsidy and Incentives Program

Task 2.2: Ongoing Marketing and Media Campaign

Task 2.3: Monthly Team Meeting and Strategy Review

Task 2.4: Rider Survey

The following provides a description of each task.

Task 2.1: Activation of Subsidy Program

The project team will enable the subsidy programs in Seattle and in Los Angeles, and will begin data collection.

Task 2.2: Ongoing Marketing and Media Campaign

All project partners will maintain a robust marketing and media campaign for the duration of the pilot demonstration.

Task 2.3: Monthly Team Meeting and Strategy Review

Each month all of the members of the project team will participate in a conference call to review the prior month and strategize for the next month. These calls will review data on the outcomes of deployed subsidies and incentives. On these calls, a strategy will be devised on how to best alter the parameters determined in Tasks 1.6 and 1.7 to develop an empirical model that will later inform the development of a successful and mutually beneficial business model.

Task 2.4: Rider Survey

The project team will conduct a ridership survey in each of the pilot regions to gain an understanding of how riders are using the Lyft service, their decision making process in selecting the service, and other data points as developed by the project team.

Part 3: Research Development and Dissemination

Eno will lead the research team to document the process, analyze resulting data, develop lessons learned and recommendations, and disseminate the final products to the transit industry. This will be executed through a multi-step process in close partnership with all participating transit agencies and Lyft. The research effort will involve a thorough data analysis from Lyft and the agencies. The following tasks outline the approach to this process, with the primary considerations for each task:

1. **Mobility Analysis** – Describe the mobility needs of the pilot areas and how this pilot can expand mobility options and improve access.
2. **Business Model Analysis** – Understand the subsidy models and other aspects of the program and how they work in practice.
3. **Title VI, Environmental Justice, and Implementation Analysis** – Evaluate the rules and regulations regarding Title VI, EJ, and how this pilot program can help address the needs of disadvantaged communities.
4. **Institutional Processes and Implementation Analysis** – Outline the institutional processes that enabled success, as well as institutional barriers that were challenging to overcome.
5. **Lessons Learned, Best Practices, and Recommendations** – Frame the key lessons from this pilot and what other agencies can learn from our experiences.
6. **Development of Report and Review** – Prepare information to be presented in a way that is accessible to staff and experts at public agencies across the country.
7. **Report Release and Press Event** – Publicize information to be disseminated to as large of an audience as possible.

The details of these tasks and associated questions are in the following sections.

Task 3.1: Mobility Analysis

The first part of the research will be to conduct a mobility analysis of the two regions, with special emphasis on the mobility patterns in the pilot areas. As Lyft rides will be part of FMLM access to and from transit stations, the focus will be on those trips for the period prior to the pilot and during the implementation. The research will include an examination of existing transit services, parking, bikeshare, kiss-and-ride, and land use patterns surrounding the station. Using data from participating transit agencies, Lyft, and other census-based sources, the analysis will examine demographic, age, and income information about users that walk, bike, drive, and use transit to access the rail stations. The research team will also rely on regular rider surveys conducted in each region to collect specific (and anonymous) information on individuals and their trips. This will be conducted at the beginning of the study and routinely during the duration of the pilot. The following data will be used:

From participating transit agencies.

- Number of transfers to local bus (prior to and during pilot)
- Final destination and origin of connecting users (prior to and during pilot)
- Maps of local transit lines in and around pilot study areas
- Passenger information on other connecting modes such as bike share (prior to and during pilot)

- Bus travel times within pilot area to and from pilot stations
- Passenger survey data that includes demographic and income information on connecting users, including those that walk, take a bus, bike, or car to connect (prior to and during pilot)

From Lyft.

- Demographic and income information of users (anonymous)
- Origin and destination of all users in the pilot
- Cost of trip (full cost and subsidy)
- Time of each trip, including travel time

From other sources.

- Maps of land use and transportation connections in pilot areas
- Race, income, and other demographic data in area around station

Task 3.2: Business Model Analysis

The research team will describe and define each agency’s business model and compare those models to Lyft’s model. Oftentimes, public and private sector entities do not fully understand the other’s goals, motivations, and needs, which can create conflicts and miscommunication. This business model comparison will be used to analyze whether the partnership structures that are created to providing this service are mutually beneficial and sustainable beyond the tenure of this project.

Based on the pilot demonstration models outlined in Section 2 of this proposal, the research team will investigate how the market responded to changes in pricing, incentives, and other factors. This is an essential aspect of the pilot that will demonstrate which of the incentives are the most effective. The research will define “effective” in several different ways with explanatory text. For example, the business model will be evaluated in terms of subsidy per rider, total time savings per rider, ease of use, and other metrics. These will help inform a larger discussion about the most effective way implement such a partnership with a TNC-like service.

Task 3.3: Title VI, Environmental Justice, and Regulatory Analysis

This particular pilot program is intended to strengthen last-mile connections to people using the transit systems, lowering travel times and waiting times at an affordable cost. People of all races, incomes, and needs benefit from improved transit service, and regulatory rules exist to ensure equal access. This task will explore Title VI, Environmental Justice, including an in-depth look at federal, state, and local laws that govern these kinds of partnerships, in the following areas:

- President Clinton’s ’94 Executive Order (EO) and FTA’s interpretation this EO.
- Title VI of the Civil Rights law as it relates to minority populations.
- Americans with Disabilities Act
- Drug and Alcohol Laws
- Other Federal, State, and Local laws

This research to inform how transit agencies can be proactive in meeting requirements. Once the pilot is over, the research team will examine the data, particularly with respect to the data in Task 3.1, and see how broad environmental justice goals were met, and how others could be improved upon.

Task 3.4: Institutional Processes and Implementation Analysis

Perhaps one of the biggest challenges of this pilot will be implementation within the existing framework of the agencies. As this is something that is completely new, the researchers will work closely with staff

at LA Metro and Sound Transit to document the challenges, barriers, successes, and other factors that influenced how the pilot was initiated, modified, and concluded. Based on the documentation, the research team will draw out the significant stories and lessons that can be learned through this process so that other agencies developing similar programs can avoid missteps.

Task 3.5: Lessons Learned, Best Practices, and Recommendations

The research team will take the information and data gathered in the first four tasks in this Section to create a report that highlights with lessons learned, best practices, and recommendations. The report will be 15-20 pages in length, and will include several appendices with the details of each pilot program and task.

Task 3.6: Development of Report and Review

An important part of any research paper is to have the product thoroughly reviewed by industry experts and others that were involved in the process. The research team will put together a comprehensive list of reviewers, give time for those reviewers to read through the report and recommendations, and carefully evaluate and incorporate the feedback received. Eno will publish the report both online and in print.

Task 3.7: Report Release and Press Event

The project team will host three public events to present the results of the pilot program. There will be events in Washington, DC, Los Angeles, and Seattle. Eno staff will present the findings and recommendations of the report and then allow for a panel of local experts and industry stakeholders to react to the findings. These will be marketed to a local and national audience, available to be streamed online, and there will be an opportunity for local and national press to cover the event.

Project business model- project design, innovation

The partnerships created through this project will create three innovative business models, described as follows:

1. **TNC and Transit Operator.** Our project will create a business relationship between a TNC (Lyft) and transit operators in two regions. Participating transit agencies will subsidize Lyft rides (with an incentive for the customer to use Lyft Line, a service which provides shared rides for customers going the same way) for transit trips that end or originate at participating transit stations, within an approximately 3 mile radius of the transit station. Over the 12-month duration of the pilot demonstration, the project team will test a variety of subsidy structures, aiming to identify a structure that is beneficial for the customer, the transit agency, and Lyft. Goals will include affordability for the customer, sustainability for the transit agency, and profitability for Lyft. The ultimate objective will be to define a structure that will be sustainable after the conclusion of the pilot demonstration. Lyft and participating transit operators will also define sustainable business approaches to ensuring that individuals with disabilities are provided with equitable service and ensuring that WAVs are available on the Lyft platform. This will be made possible by a relationship originated by Lyft and a third party WAV provider as well as paratransit data from each participating region.
2. **Transit Operator and Transit Operator.** Los Angeles County is home to over 25 transit agencies and the Puget Sound is home to 8 transit agencies. Many of these operators have overlapping service areas and shared regional mobility goals. Yet, we rarely identify opportunities to partner

on shared service delivery. This project will create new business relationships for operators in each of the participating regions, both enabling and incentivizing participating agencies to collaborate to meet shared goals of serving our customers.

3. **Transit Operator, TNC, and Think Tank.** The project will also create a business relationship between participating transit operators, Lyft, and Eno. This is an opportunity for the transit operators and Lyft to incorporate data-driven, public policy research into their decision making process, ultimately improving mobility options.

Stakeholders and how they support the project

Our pilot demonstration's stakeholders include our customers and industry. The following is a description of the stake they hold in this project and their support:

Customers: Our customers are our stakeholders and our mission as public transit operators is to directly serve their needs and ensure their regional mobility. Our customers include all individuals who pay sales taxes in our service regions. Our proposed pilot demonstration will expand the menu of transportation options for our customers, providing them an additional option when planning their transportation trip.

ADA Paratransit Services and Community: As public transit operators, we are here to serve all customers and provide service options to our customers within their varying personal mobility capabilities and needs. By providing a new option for paratransit customers to reach fixed transit routes, we are expanding the variety and number of trips our paratransit customers can make by way of our fixed route service. By expanding the potential use of fix service, we can provide the ability for our customers to make trip decisions on a moments notice and we can invest more funding on serving our on-demand para-transit customers better.

Environmental Coalition: A small body of research has indicated that the thoughtful inclusion of TNCs into the mobility menu can help cut down on single occupancy vehicle trips and decrease green house gas emissions from the transportation sector. Through learning more about how to leverage TNCs as an effective FMLM feeder service into fixed route transit, we will be able to add to this growing body of literature, identifying ways in which to decrease transportation related emissions.

Shared Use Mobility Providers: There is a growing coalition of shared use mobility providers developing and deploying services that enable on demand mobility options and identify opportunities for customers to optimize transportation options through shared service. In order for these services to both be successful and to ensure that they are able to provide services that are in the public benefit, they need to be woven into the public transportation framework. Our pilot demonstration would identify best practices in partnerships, develop a means for integrated payment between public transit operators and shared use mobility providers, and quantify the benefits and synergies between this private mobility market and the public sector.

Equity and accessibility

The crux of our pilot demonstration is deploying TNCs onto the public transit marketplace in a way that is both equitable and accessible. We plan to meet the needs of our customers in the following ways:

- Individuals with Disabilities.** Prior to pilot launch, Lyft will enter into a relationship with a wheelchair accessible vehicle (WAV) provider in both markets. Both companies will onboard drivers from this provider onto their respective platforms. Informed by data from LA’s Access Services and paratransit in the Puget Sound region, Lyft will aim to provide WAV on the platform in the demonstration areas with wait-times that are similar to the wait times for other vehicles. Lyft will ensure that all drivers are trained to be courteous and sensitive to the needs of individuals with disabilities and that drivers of vehicles capable of transporting individuals in wheelchairs are trained to proficiency in safely securing wheelchairs and their occupants. Discounts will be provided for individuals with disabilities in conformity with Federal regulations.
- Low income and minority populations.** Lyft will also partner with a concierge service that will provide customers to the option to call a phone number to dispatch a Lyft vehicle. The concierge service will be available in multiple languages, as required by Limited English Proficiency guidelines. The selection of geographic test locations will specifically evaluate and consider the needs of low income and minority populations. Through our test location selection, we will aim to provide FMLM Lyft services to populations that may not currently have ease of access to TNC platforms. In the Los Angeles region, users will be directed to pay for their participating Lyft rides with their TAP card. This will provide a means for those who are unbanked to access the service, as well as provide opportunities for TAP to provide transfer incentives. In the Puget Sound region, this MOD project will be integrated with the region’s special low-income fare programs. King County Metro and Sound Transit provide a fare discount to all riders who pay with special low-income “ORCA-LIFT” cards. The payment platform for this test program will be able to recognize eligible ORCA-LIFT riders to allow for differential pricing for MOD services as well.
- Ageing populations.** Lyft’s concierge service will provide any alternative means for aging populations to access the service in cases where the smart phone application is inaccessible to such populations.

Project Timeline

Timeline Item Description	Timeline Item Date
Task 1.1: Environmental Justice and Regulatory Analysis and Mitigation Strategy	Months 1-3
Task 1.2: Community Outreach	Months 1-12
Task 1.3: Selection of Geographic Locations in Los Angeles and Seattle	Months 4-5
Task 1.4: Development and Implementation of Payment Systems	Months 1-12
Task 1.5: Designation of WAV Provider and Testing/Deployment of Accessible Vehicle Options	Months 1-12
Task 1.6: Analysis and Strategy for Subsidy Models	Months 4-6
Task 1.7: Designation of Curb Space and Deployment of Signage	Months 7-8
Task 1.8: Marketing and Communication	Months 1-12

Task 2.1: Activation of Subsidy, Gamification, and Incentives Program	Months 13- 24
Task 2.2: Ongoing Marketing and Media Campaign	Months 13- 24
Task 2.3: Monthly Team Meeting and Strategy Review	Months 13-24
Task 2.4: Rider Survey	Months 13-24
Task 3.1 Mobility Analysis.	Month 25
Task 3.2 Business Model Analysis	Month 26
Task 3.3 Environmental Justice and Implementation Analysis	Month 27
Task 3.4 Institutional Processes and Implementation Analysis	Months 13-28
Task 3.5 Lessons Learned, Best Practices, and Recommendations	Month 29
Task 3.6 Development of Report and Review	Month 29
Task 3.7 Report Release and Press Event	Month 30

Replicability/national significance

This project has strong potential to be replicated nationally across transit agencies. Due to the setup of the demonstration, in which Metro and Sound Transit are both launching program in their respective regions with Foothill Transit and King County Transit, the post-pilot analysis will be able to draw robust data from two distinctly diverse markets. Los Angeles County and the Puget Sound region each have their own geographic, economic, social, and political identities. This multi-site approach allows for future replicability in diverse regions across the country.

This goal of this demonstration is not limited to only analyzing the resulting outcomes of each test bed to define the proper cost structure, both also prioritizes documenting the challenges, barriers, successes, and other factors each agency experiences to enable and execute these new partnerships and models. This will include identifying the mobility needs, understanding the subsidy models, outlining the institutional processes, and determining the successes as well as the challenges faced by both pilot areas. From carefully analyzing the factors that influenced the program for the duration of the pilot and ensuring wide dissemination and distribution of the final report the lessons learned will be readily available so that other agencies understand how to best replicate the project.

Finally, as an unprecedented partnership between historically siloed organizations the demonstration program is one of the first to pair public transit agencies with private TNCs to provide FMLM solutions. This groundbreaking approach carries implications for the transit industry as a whole.

Our MOD project is designed to be mechanism for defining industry best practices for:

1. Integrating TNC services into the public transit framework to provide FMLM access to transit;
2. Developing a sustainable business model for partnerships between public transit agencies and TNCs; and
3. Integrating TNC payment platforms into transit payment platforms.

Through deploying our MOD project in two distinct, diverse metropolitan regions, we will be able to identify a variety of barriers and how to overcome those barriers in a way that will be applicable for regions across the country. By compiling our lessons and experience into a report that will be widely syndicated, we will effectively create a playbook for similar partnerships to be replicated across the country.

Exemptions/waivers

As a result of the recent emergence of MOD relationships between public transit agencies and private sector, technology enabled mobility providers, the interpretation of federal regulations have varied transit agency by transit agency. Our project team has identified a four regulations and one Executive Order that we have found unclear as to how to ensure compliance, as a precedent has not yet been set by the industry. The following identifies those areas and how we intend on complying.

49 CFR 37.44: This regulation directs public entities operating a demand responsive service to ensure equivalent service to persons with disabilities, including those to require WAVs. Equivalent service is defined through a number of parameters, including response times. In our pilot demonstration Lyft will onboard WAVs to the Lyft platform through a third party provider. Using paratransit data to help identify when and where demand will occur, the project team will seek to provide WAV service with equivalent response times. During project demonstration, we seek flexibility in efficiently providing this service as we work towards defining best practices.

Civil Rights Title VI Fare Equity Analysis: It is our understanding that fare equity analyses must be conducted after six months of a new fare change, reflective of every new fare change. During demonstration, Lyft's fare structure will be subject to change and the first and last mile subsidy structure will also periodically change. This is an important component of our study, as we will evaluate how a variety of fare structures and subsidy models influence our customers' choice. Based on the lack of stability in our fare structure, we intend on completing a fare equity analysis at the conclusion of our study.

49 CFR Parts 653, 654, 655: The regulation requires the testing of safety sensitive employees for the use of controlled substances and the misuse of alcohol as well as education and awareness about the problems associated with prohibited drug use and misuse. Testing must follow specific guidelines as defined by FTA, and each agency has created its own testing program based on those guidelines. According to FTA policy, drug and alcohol testing rules do not apply to taxi cab drivers when patrons (using publicly subsidized vouchers) or transportation providers can choose from a variety of taxicab operators. FTA policy continues to recognize the practical difficulty of administering a drug and alcohol testing program to taxi companies that only incidentally provide transit services. It is our understanding that there would likely also be a practical difficulty in administering a drug and alcohol test program for Lyft for the purposes of our pilot demonstration.

49 CFR 609.23: This regulation directs grantees to provide rates that are half-price for elderly and handicapped persons during non-peak hours when they are using facilities that were built with 5307

money. We seek flexibility in fulfilling this regulation due to the dynamic and changing nature of our subsidy structure. During our demonstration, we will seek to identify best practices for compliance under this regulation.

Executive Order 13166, Limited English Proficiency (LEP): As described in official guidance, all USDOT recipients are required to take reasonable steps to ensure meaningful access to their programs and activities by LEP persons. USDOT’s guidance directs grant recipients to complete a four-factor analysis to determine the appropriate mix of LEP services required. During our pilot demonstration we will provide a concierge service that will be accessible in languages as appropriate for each participating region.

Descriptions of partners involved in project, their roles, capacities, and anticipated contributions

Los Angeles County Team

Los Angeles County Metropolitan Transportation Authority (Metro): Metro is the lead applicant and will serve at the MOD project manager. Metro will oversee all aspects of project implementation in Los Angeles County and all project research.

Foothill Transit: Foothill Transit will provide technical support for Metro in conducting community outreach, selecting pilot locations, reviewing all documents produced through this project, and participating in the monthly meetings in part 2. Foothill Transit will also work with Metro to market the pilot demonstration.

Access Services: Access Services will provide technical support to Lyft in deploying WAV. Access services will provide additional support through collaborating on selecting pilot locations, reviewing all documents produced through this project, and participating in the monthly meetings in part 2. Access Services will work with Metro to market the pilot demonstration, ensuring that Access customers are fully aware their options to reach fixed route service.

City of Los Angeles: The City of Los Angeles will provide technical support for Metro in conducting community outreach, selecting pilot locations, reviewing all documents produced through this project, and participating in the monthly meetings in part 2. The City will also work with Metro to market the pilot demonstration.

University of California, Los Angeles’ Institute of Transportation Studies: UCLA will work the Eno and Washington State to analyze data generated through the pilot demonstration.

Puget Sound Team

Sound Transit: Sound Transit will serve as the lead agency in the Puget Sound region, overseeing all aspects of project implementation. Sound Transit will collaborate with Metro’s project managers to ensure projects are analogous. Sound Transit will select and provide transit facilities and existing transit customer markets for pilot purposes; provide subsidies for FMLM pricing to incentivize MOD use;

provide program marking support, provide performance tracking, assessment and reporting and oversee research design for Puget Sound pilot activities.

King County Metro: King County Metro will provide technical support for ST in conducting community outreach, selecting pilot locations, reviewing all documents produced through this project, and participating in the monthly meetings in part 2. King County METro will also work with ST to market the pilot demonstration.

Washington State Transportation Center (TRAC) at University of Washington: University of Washington will provide performance tracking, assessment, and report and oversee research design for Puget Sound pilot activities. University of Washington TRAC will work with Eno and UCLA to analyze data generated through the pilot demonstration.

Private Partners

Lyft: Lyft is a Transportation Network Company (TNC) who matches local riders (customers) with local drivers through a smartphone application. Lyft will enter into contractual relationship with Metro and Sound Transit for the duration of the pilot demonstration. Metro and Sound Transit will provide subsidies for qualifying rides to and from participating transit agencies within a specified radius. Lyft will work with a third party WAV provider and on-board WAV drivers. Lyft will work with Access Services in paratransit in Puget Sound for technical support in deploying WAV. Lyft will also work with a concierge service who provides service in multiple languages as an alternative method of dispatching rides.

Eno Center for Transportation: Eno is a neutral, non-partisan transportation policy think tank in Washington, DC. Eno will serve as the lead research manager for the duration of the project. Eno will work in close collaboration with UCLA and Washington State for the data analysis component of the project. Eno will also work in very close collaboration with participating agencies in Los Angeles County and the Puget Sound region.

Financial commitments of partners

Los Angeles County Metropolitan Transportation Authority (Metro) has committed \$200,000 in matching funds for the pilot demonstration.

Seattle Sound Transit has committed \$200,000 in matching funds for the pilot demonstration.

Technical/legal/financial capacity of applicant

Los Angeles County Metropolitan Transportation Authority (Metro):

Metro's Office of Extraordinary Innovation (OEI) was specifically designed to manage partnerships between Metro and the private sector. In May, OEI successfully developed and executed a marketing partnership with the TNC Uber in conjunction with the opening of our Expo Line extension. For this partnership, Uber offered discounts for rides to and from the transit stations on the Expo line. For this

weekend promotion, 10,000 people applied the promotional code. Informed by this experience, OEI is uniquely positioned to manage a new relationship with Lyft.

Metro Team:

Joshua Schank, Chief Innovation Officer, Office of Extraordinary Innovation, LA Metro, 20 years of experience

Nadine Lee, Deputy Chief Innovation Officer, Office of Extraordinary Innovation, LA Metro, 24 years of experience

David Sutton, Executive Officer, Transit Access Pass, LA Metro, 30 years of experience

Robin O'Hara, Deputy Executive Officer, Transit Access Pass, LA Metro, 26 years of experience

Colin Peppard, Innovation Manager, Office of Extraordinary Innovation, LA Metro, 13 years of experience

Jacob Lieb, Transportation Manager, 17 years of experience

Marla Westervelt, Senior Transportation Planner, Office of Extraordinary Innovation, LA Metro, 4 years of experience

Foothill Transit

In 2015, the Federal Transit Administration completed a triennial review of Foothill Transit which demonstrates that Foothill Transit has the technical, legal and financial capacity to implement the project. Foothill Transit was found to be in compliance in the review of Legal Capacity in Foothill Transit's 2015 Triennial Review. Foothill Transit is a sub-recipient of Federal Transit Administration funds, and remains current on all certification and assurances and reporting requirements, including Equal Employment Opportunity (EEO) and Title VI. Foothill Transit was found to be in compliance in the review of Financial Capacity in Foothill Transit's 2015 Triennial Review. Foothill Transit receives operating subsidies through three voter approved half-cent sales tax ordinances allocated to all Los Angeles County regional operators through the Metropolitan Planning Organization (MPO).

Foothill Team:

Doran Barnes, Executive Director, Foothill Transit, 30 years of experience

Kevin McDonald, Deputy Executive Director, Foothill Transit, 16 years of experience

Jarrett Stoltzfus, Director of Procurement, Foothill Transit, 9 years of experience

Joe Raquel, Director of Planning, 9 years of experience

Katie Gagnon, Special Projects Manager, Foothill Transit, 6 years of experience

Access Services

Access is a national leader in transportation coordination, promoting accessible and innovative solutions, and providing cost effective ADA paratransit services. Access is one of the leaders in the use of independent contractors in the delivery of ADA paratransit services. Access is currently leveraging technology to develop the Access "Where's my Ride" app, a customer information tool scheduled for release in 2016.

Team:

Sarah Boden, Chief Operating Officer, 20 years of experience
Alfredo Torales, Special Projects Administrator, 8 years of experience

Sound Transit

Sound Transit has implemented multiple complex bus, light rail and commuter rail projects and has successfully administered large, federally funded projects for more than 15 years. In Sound Transit's recent Triennial Review (April 2016), the agency was found to be fully compliant with FTA legal and financial requirements to implement projects. The FTA currently has Project Management Oversight (PMO) teams assigned to 13 ST projects. FTA has found that ST has the capacity to build and operate the light rail, commuter rail and express bus projects of the Sound Transit system.

Puget Sound Team:

Sound Transit / Puget Sound Team:

Brian Brooke - Senior Manager Research, Policy and Board, 18 years of experience

Michael Berman - IT Research & Technology Program Manager, 24 years of experience

Rachel Wilch - Transportation Planner, 10 years of experience

Brittany Esdaile, Next Generation ORCA Regional Program Manager, 13 years of experience

Mark Hallenbeck - Director, Washington State Transportation Center (TRAC) College of Engineering, Univ of Washington

Carol Cooper- Supervisor, Market Development, King County Metro

Ryan Miller- Transportation Planner II, King County Metro

Eno Center for Transportation:

The Eno Center for Transportation is the only policy research organization that analyzes transportation in the service of broad goals (economic, social, environmental), across multiple levels of government (federal, state, local), sectors of transportation (highways, transit, aviation, maritime), and constituencies (corporate, civic, advocacy, finance.) Much of our previous work is applicable to this project as our theory of change is to conduct high-quality empirical research, partner with city and metro leaders to translate our research into on-the-ground knowledge and action, pilot new strategies, and codify those learnings through new tools and resources that ultimately lead to solutions that can be adapted and scaled. We encourage federal and state governments, and private-sector firms and philanthropies, to adopt policy reforms and actions that facilitate metropolitan innovations and solutions. And we convene and empower cross-sector networks of government, business, nonprofit, and philanthropic leaders in cities and regions who work together to solve problems, develop new solutions, and advocate for broader reforms.

Eno Team:

Robert Puentes, President and CEO, Eno Center for Transportation, 21 years of experience

Paul Lewis, Vice President of Policy and Finance, 5 years of experience

Jeff Davis, Senior Fellow and Editor of Eno Transportation Weekly, 20 years of experience

Lyft:

The Lyft service is well established in the proposed pilot areas, launching in Los Angeles in January 2013, and in Seattle in April 2013. The Lyft Line service, which allows passengers headed in the same direction to share a ride is available in both the Los Angeles and Seattle service areas. Lyft Line fares are an affordable mobility option and help cut down on the number of single-occupancy trips. Lyft will work with the project team on enhancements that will allow LA Metro and Sound Transit to deploy WAV vehicles through third party WAV providers on the Lyft platform.

Lyft Team:

Emily Castor, Director of Transportation Policy, 11 years of experience
Debs Schrimmer, Transportation Partnerships Analyst, 5 years of experience
Will Megson, Product Manager, 7 years of experience
Gyre Renwick, Head of Sales, 13 years of experience

Expected outcomes, benefits, impacts

The pilot demonstration will be designed to test:

1. How TNCs can be used as effective feeders into the rapid transit system or if they have other niche markets relevant to improving overall system mobility;
2. How the key partners can cost-effectively ensure that individuals with disabilities are provided with equitable service on the platform, including individuals using wheelchairs; and
3. Demonstrate payment integration across transit operator and TNC platforms.

Expected benefits include:

1. Expanded menu of FMLM delivery options for customers in Los Angeles County and the Puget Sound region, improving mobility in each of our regions.
2. A data-driven blue print for how to develop partnerships between public sector transit agencies and private sector start-up mobility companies.
3. Two analogous case studies that will help inform best practices and FTA guidance for these types of partnerships.

Performance measures will be used to test the MOD project in comparison to existing conditions.

Performance measures may include, but are not limited to:

1. Increased in accessibility to participating transit stations
2. Improved mobility for customers in participating regions
3. Cost of service provided
4. Decrease in green house gas emissions

Data, approach, support, plan

The following data will be generated and made available:

From participating transit agencies.

- Number of transfers to local bus (prior to and during pilot)
- Final destination and origin of connecting users (prior to and during pilot)
- Maps of local transit lines in and around pilot study areas

- Passenger information on other connecting modes such as bike share (prior to and during pilot)
- Bus travel times within pilot area to and from pilot stations
- Passenger survey data that includes demographic and income information on connecting users, including those that walk, take a bus, bike, or car to connect (prior to and during pilot)

From Lyft.

- Demographic and income information of uses (anonymous)
- Origin and destination of all users in the pilot with latitudes and longitudes
- Cost of trip (full cost and subsidy)
- Time of each trip, including travel time

From other sources.

- Maps of land use and transportation connections in pilot areas
- Race, income, and other demographic data in area around station

Details on the plan can be found in the MOD product section.

Project Budget

Item Description	MOD Sandbox Demonstration Federal Amount (\$)	MOD Sandbox Cost Share (\$)	Other Federal Amount, if applicable (\$)	Total Cost (\$)
Research	\$400,000			\$400,000
Development and Communications in Los Angeles	\$600,000			\$600,000
Development and Communications in Puget Sound	\$350,000			\$350,000
Lyft Subsidy in Los Angeles County		\$200,000		\$200,000
Lyft Subsidy in Puget Sound		\$200,000		\$200,000
Totals	\$1,350,000	\$400,000		\$1,750,000

ⁱ <https://www.apta.com/resources/reportsandpublications/Documents/APTA-Shared-Mobility.pdf>

ⁱⁱ <http://www.trb.org/Main/Blurbs/173511.aspx>

ⁱⁱⁱ <https://www.enotrans.org/etl-material/emerging-technology-trends-transportation/>

^{iv} <http://www.pewinternet.org/2016/05/19/the-new-digital-economy/>

^v <http://www.uctc.net/research/papers/UCTC-FR-2014-08.pdf>

^{vi} <https://newsroom.uber.com/us-florida/uber-announces-partnership-to-increase-transportation-access-in-tampa-bay/>

^{vii} <http://psta.net/directconnect/index.php>



OEI

OFFICE OF EXTRAORDINARY
INNOVATION



Metro®

FTA MOBILITY ON DEMAND

- > \$8 million from FTA's research office to pilot and study "Mobility on Demand"
- > Aimed at exploring new business models between public and private sector
- > Included an option for regulatory flexibility or waivers

LA METRO PROPOSAL

- > First and Last Mile service delivery between Metro and Lyft
- > Analogous project conducted by Seattle's Sound Transit
- > \$1.3 million MOD



GOAL: IMPROVE EQUITY AND ACCESS TO NEW MOBILITY

- > Partnership with WAV provider, managed by Lyft
- > Fare payment integration
- > Concierge request service



STATUS

- > 12 Month Planning Phase
- > 12 Month Pilot Phase
- > Comprehensive data analysis and process analysis



QUESTIONS

- > What are the best performance measures for this type of these services? How should we demonstrate success?
- > What should the fares be?
- > What are outcomes you want to see as a result of these pilots?

CONTACT INFORMATION

Marla Westervelt

Senior Transportation Planner

Office of Extraordinary Innovation

LA Metro

westerveltm@metro.net

213-922-5472



A nighttime photograph of a city street. In the foreground, a paved sidewalk leads towards a road. The road is filled with horizontal light trails from moving vehicles, including a prominent blue and white streak and a red streak. In the background, there are trees, a street lamp with two glowing lights, and a traffic light. The overall scene is dark, with the primary light sources being the streetlights and the vehicle light trails.

THANK YOU



Metro[®]

State of OC Transit Report

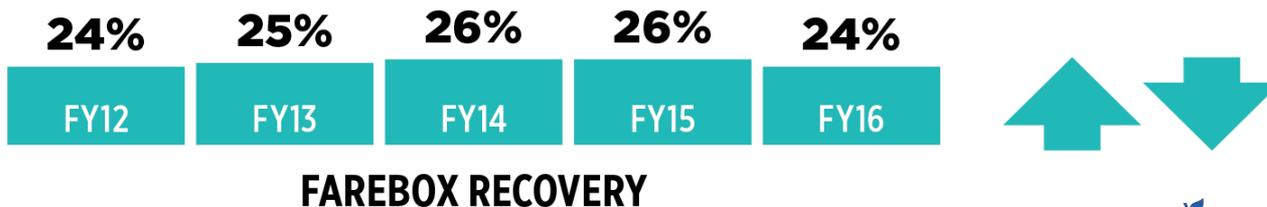
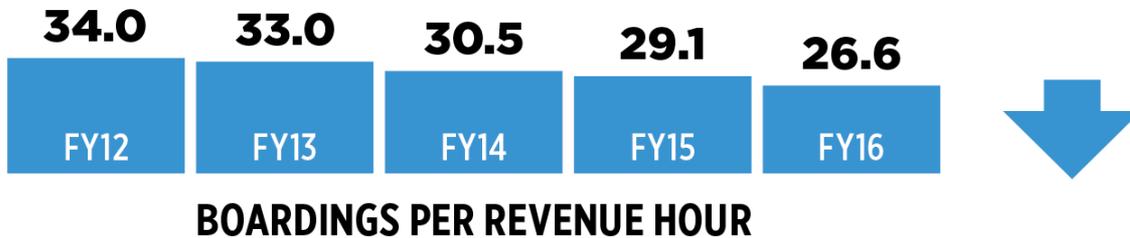
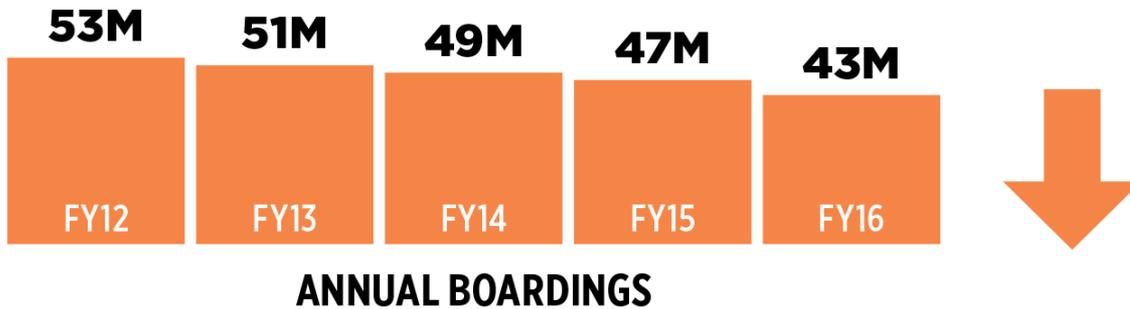


Contents

- **History of transit in OC**
- Description and analysis of **existing system**
- Summary of relevant **plans and policies**
- Recent **trends in transit**
- **Best practices** in modal selection, transit-supportive design, and funding
- **Travel market analysis**
- Initial **stakeholder themes**
- **Synthesis** of findings

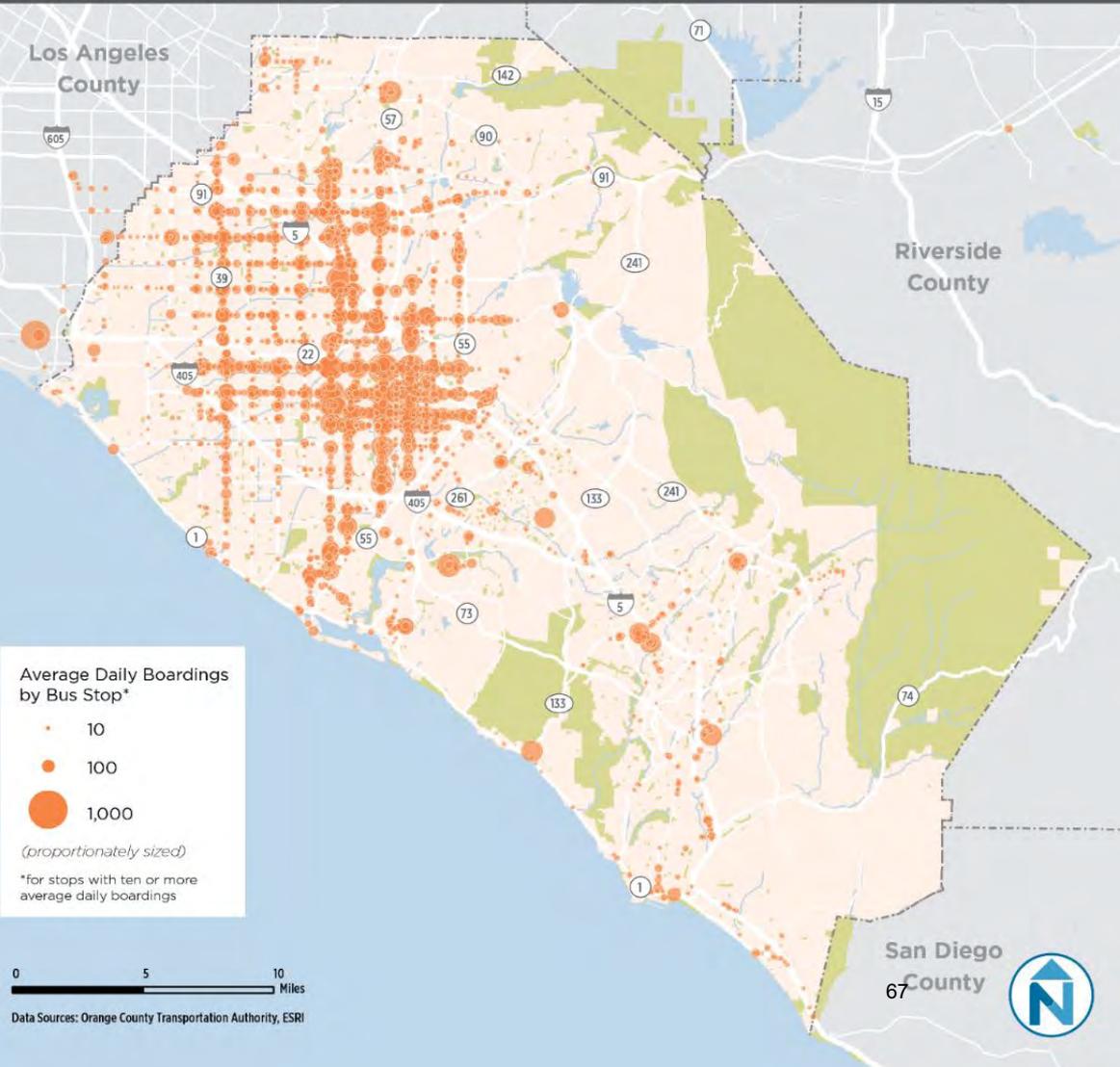


Existing System Analysis



Existing System Analysis

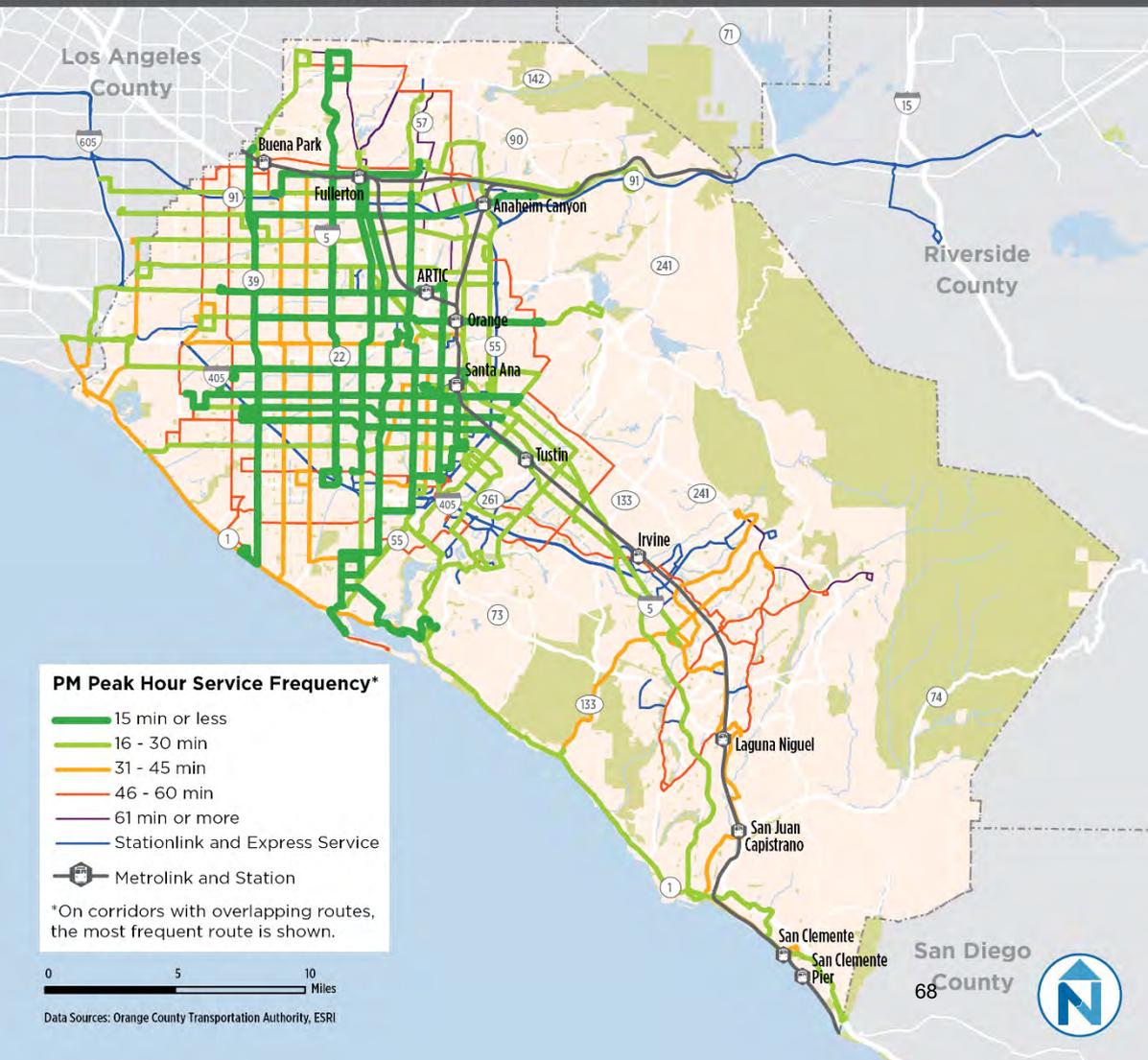
WEEKDAY BUS BOARDINGS



- Existing ridership concentrated in North/Central County, around Santa Ana
- Harbor, Bristol/State College, and 17th/Westminster corridors are 25% of ridership
- Isolated nodes in South County

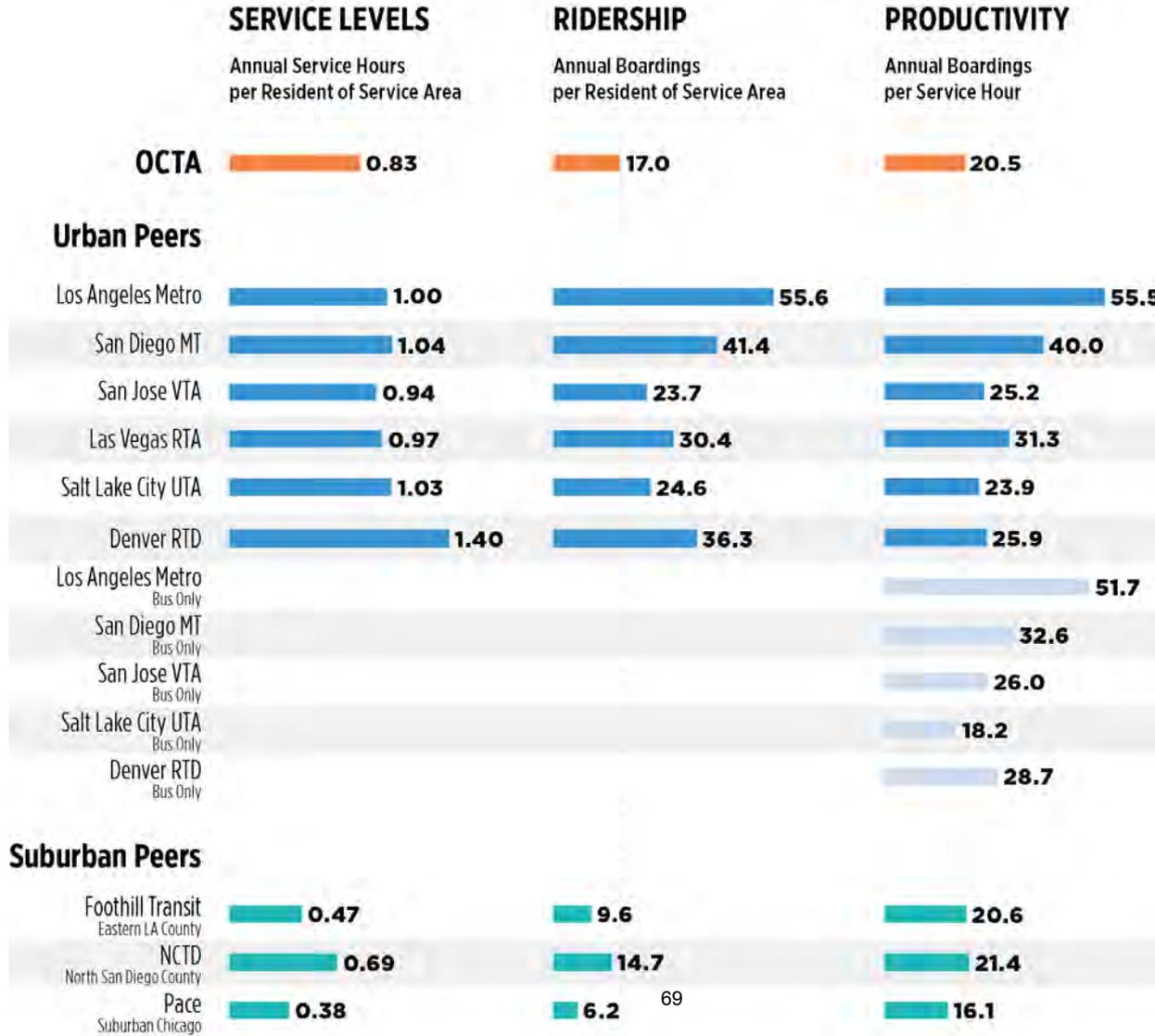
Existing System Analysis

WEEKDAY PM PEAK HOUR SERVICE FREQUENCY



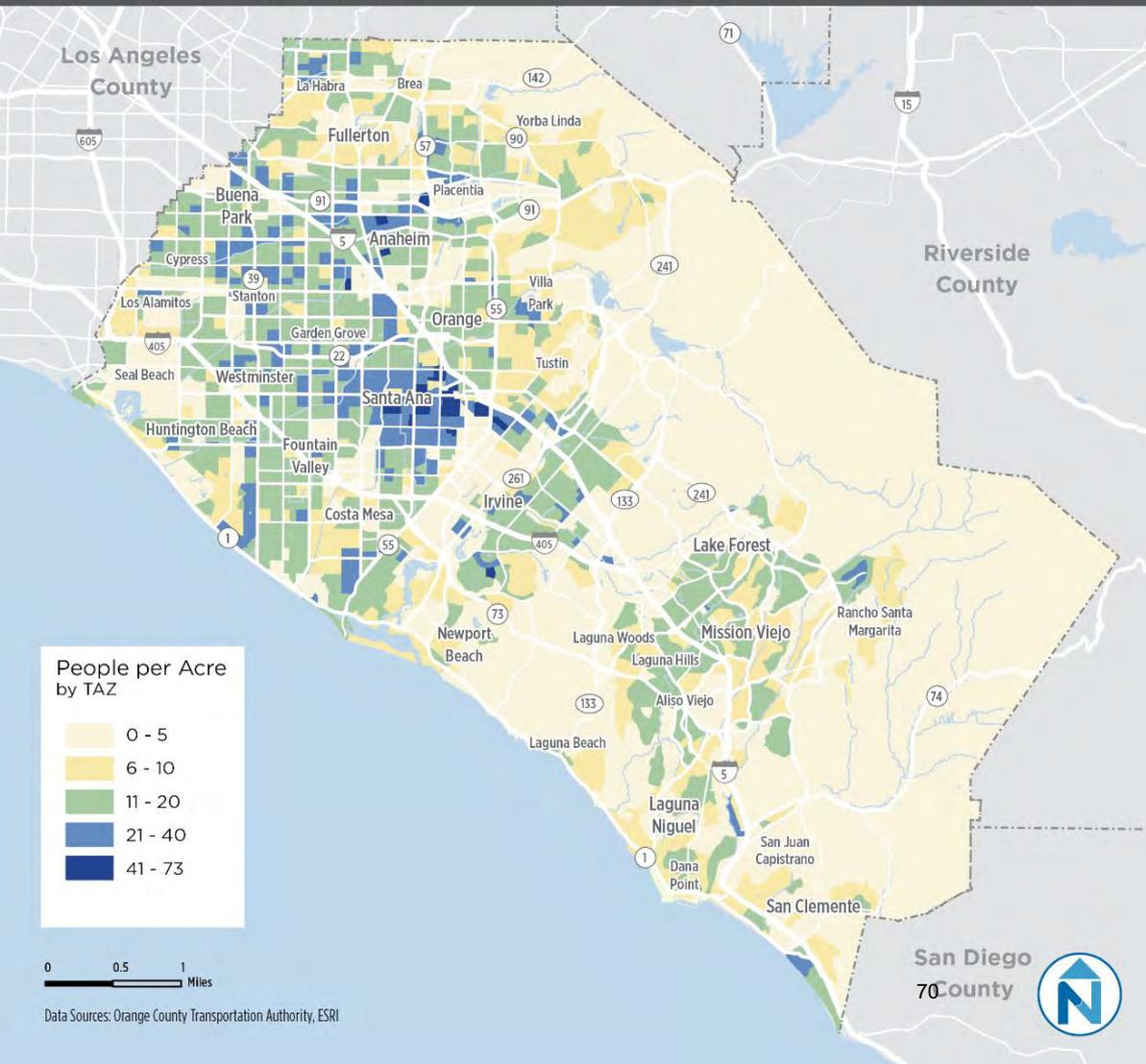
- Ridership partly a function of service levels – but service levels are largely a function of demand
- So, high frequency service is largely in:
 - North County
 - Select major corridors

Existing System Analysis



Market Analysis

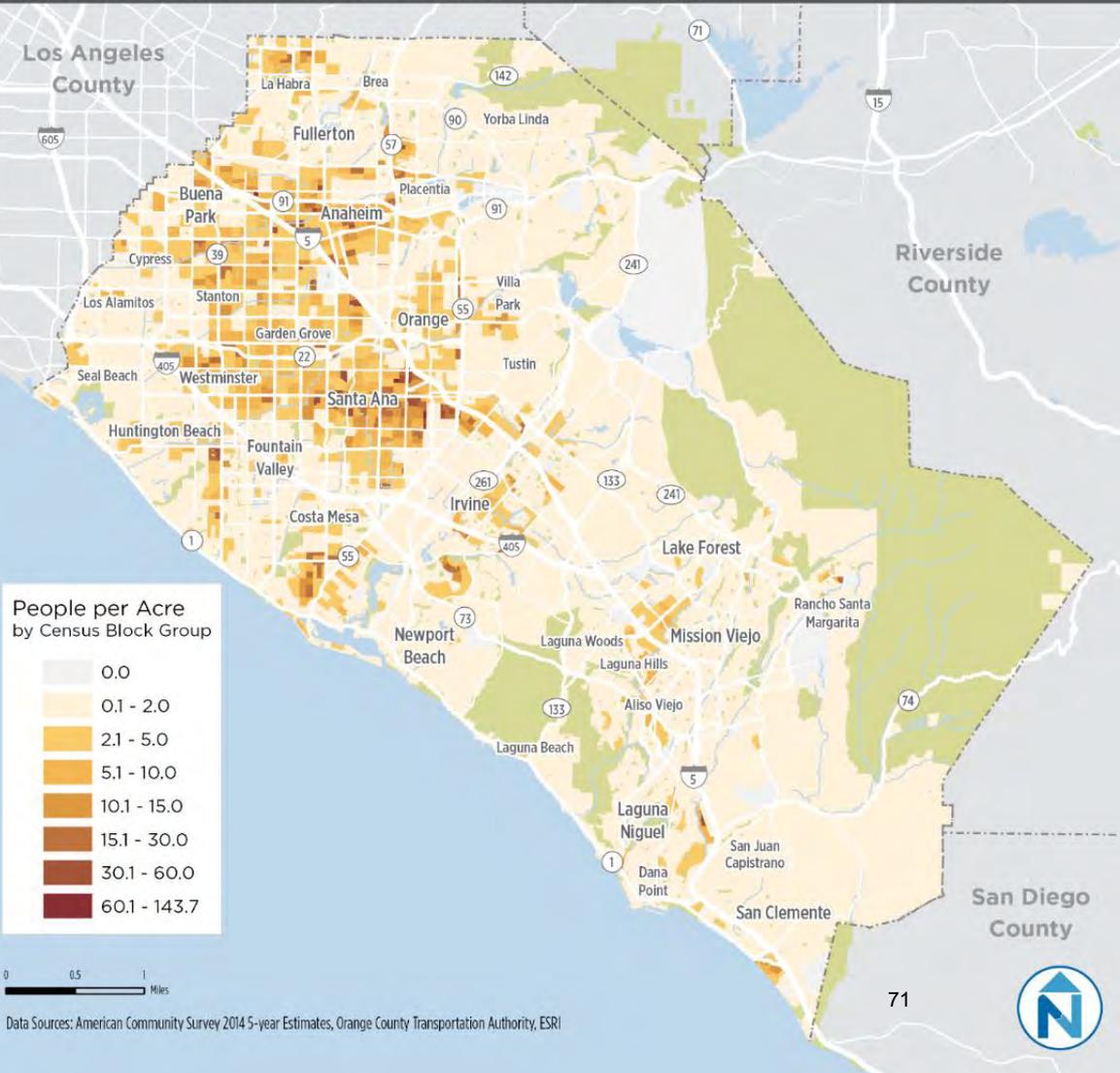
2010 POPULATION DENSITY



- Population density tracks with demographic characteristics favorable to transit use, and with existing ridership

Market Analysis

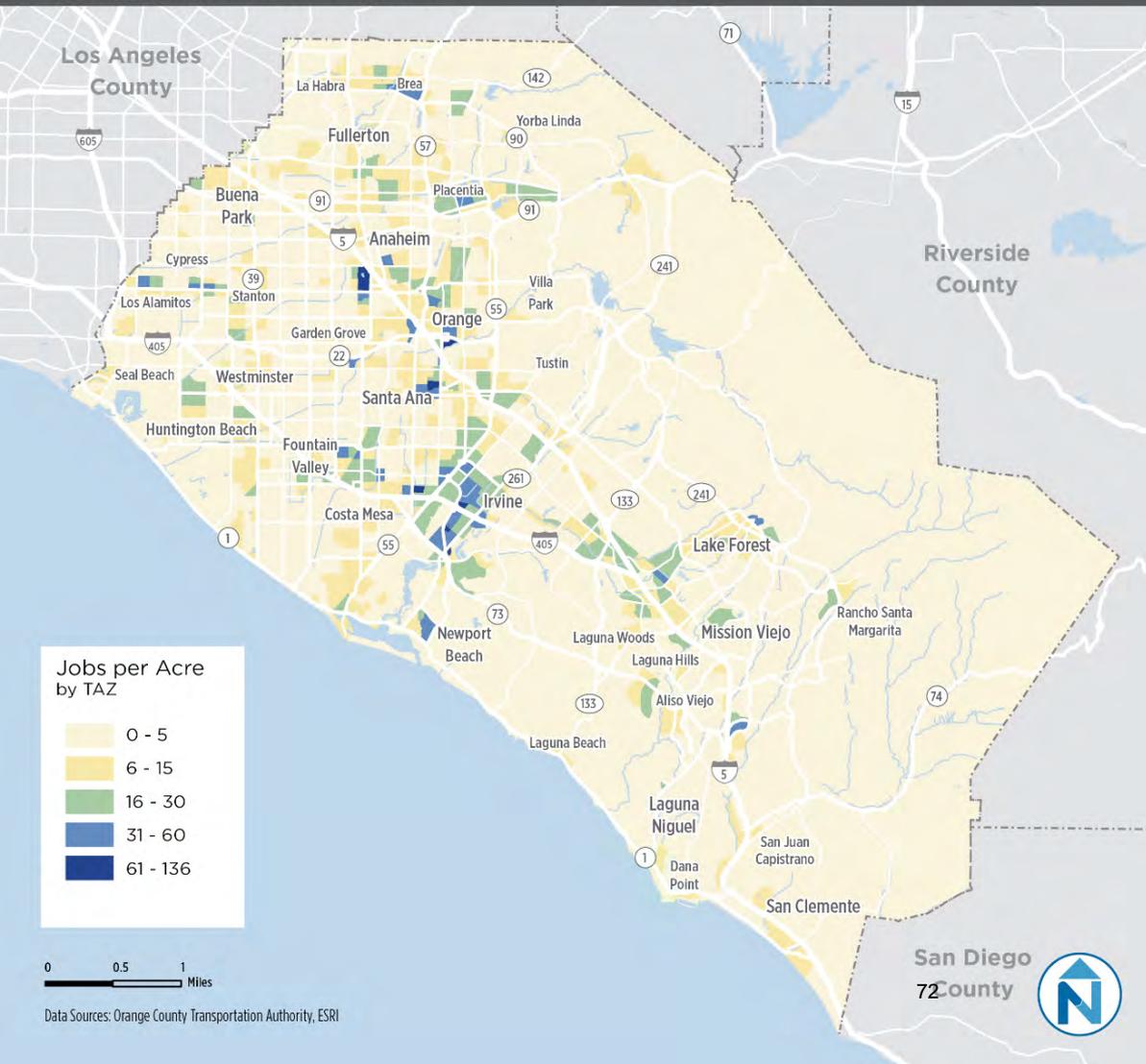
INCOME LESS THAN 150% OF THE POVERTY LEVEL



- Low income households are heavily concentrated in the core of North/Central County, especially in Santa Ana

Market Analysis

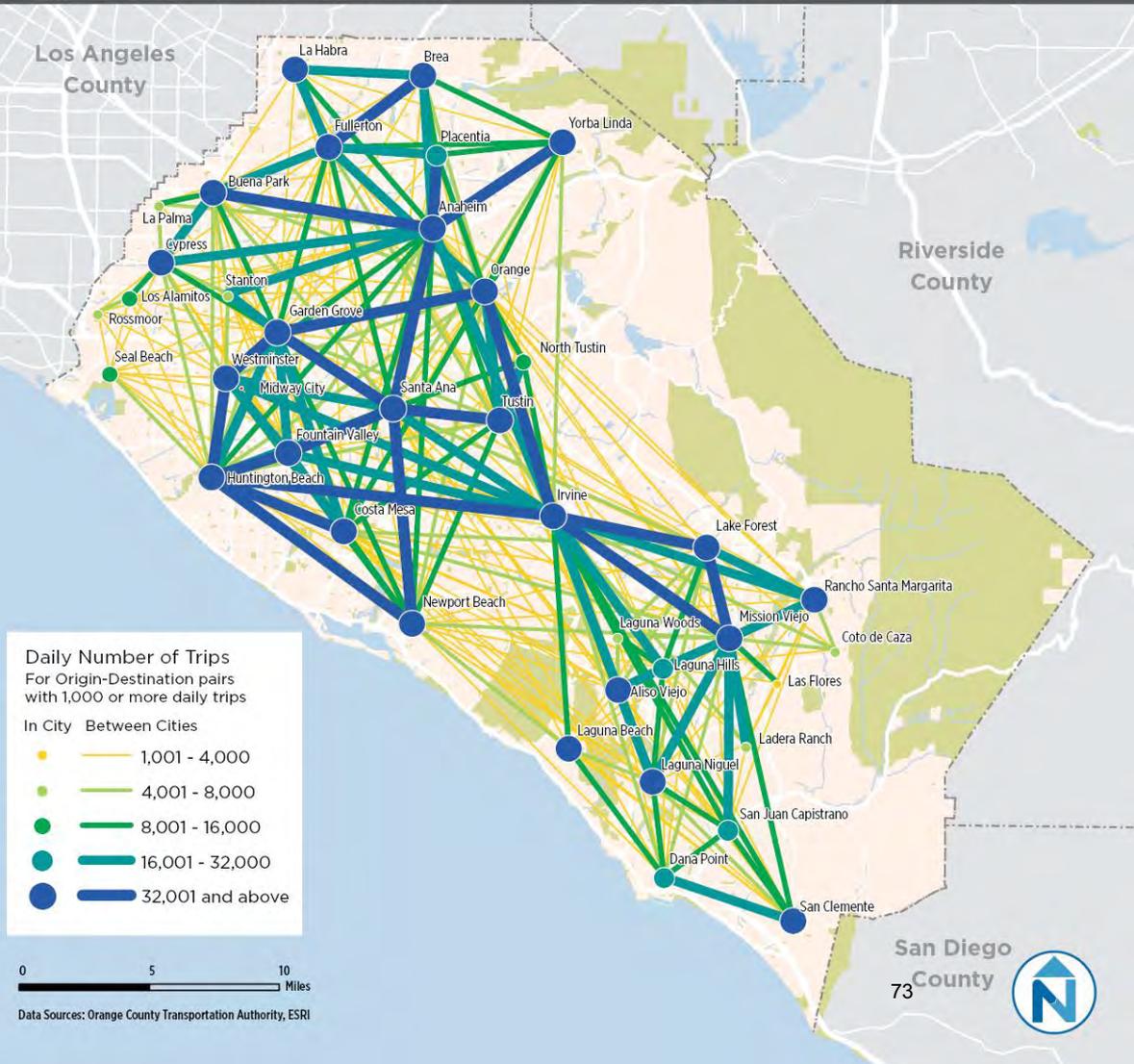
2010 EMPLOYMENT DENSITY



- Employment density much more dispersed, harder to serve
- Largest cluster (Irvine Business Complex/John Wayne) adjacent to high transit demand area – but less pedestrian access, service

Market Analysis

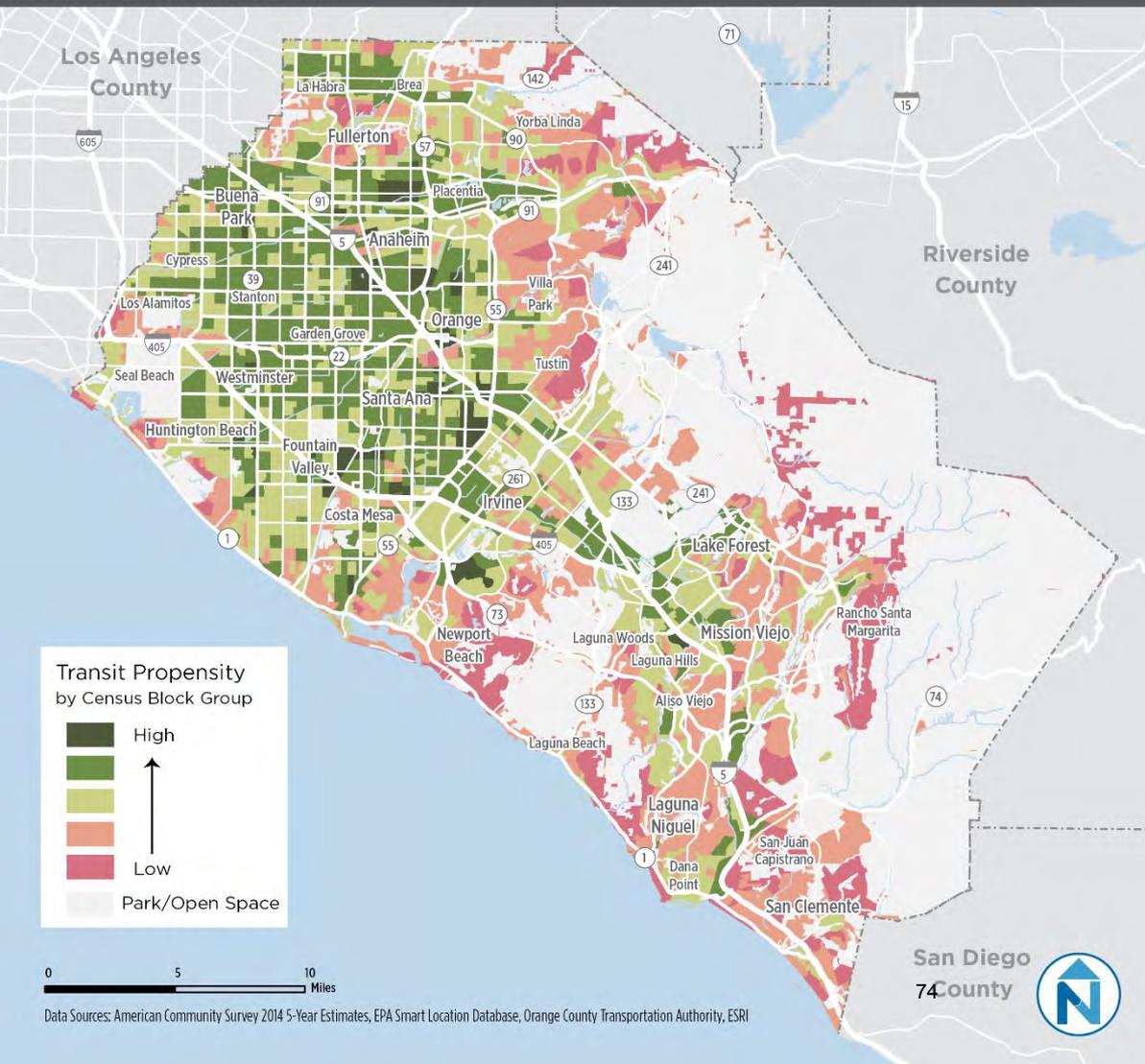
TRIPS FOR ALL PURPOSES 2010



- Population and employment density, as well as demographic factors largely reflected in travel patterns

Market Analysis

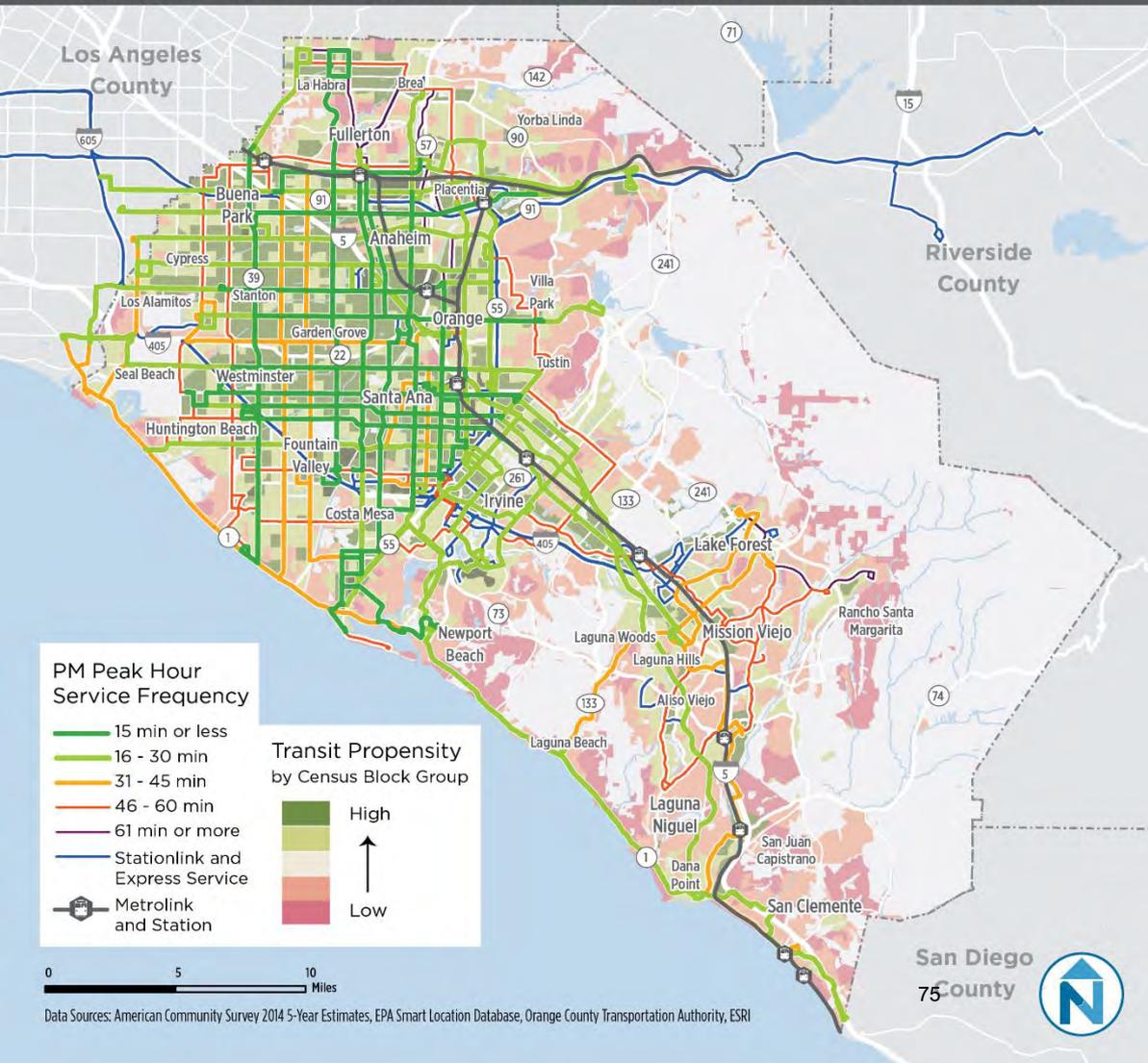
TRANSIT PROPENSITY



- Factors identified by OCTA:
 - Per capita income
 - Total low-income households
 - Employment density
 - Total employment
 - Approach volumes at intersections
 - Intersection density (walkability)

Market Analysis

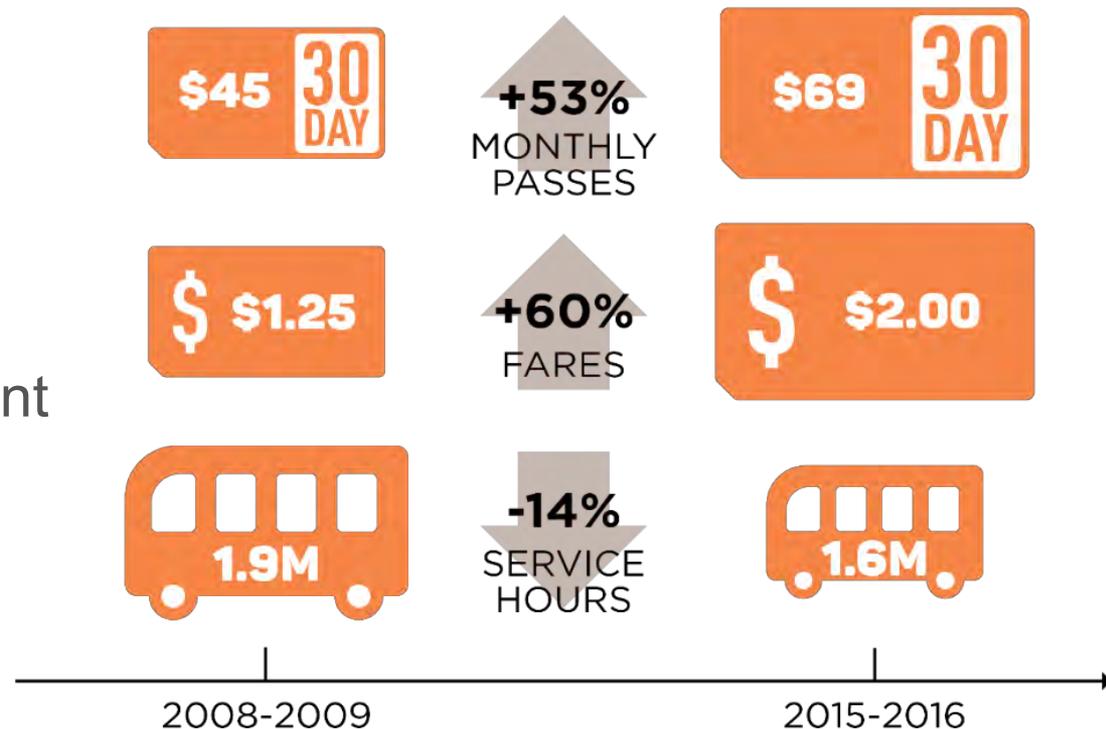
TRANSIT PROPENSITY AND WEEKDAY PM PEAK HOUR SERVICE FREQUENCY



- Service generally matches existing demand
- Potential opportunity along I-5 in South County

Key Themes

- Existing OC Bus ridership is:
 - Concentrated in a few corridors
 - Focused on weekdays
 - Focused on a select number of hubs
- OCTA's response to recent ridership declines is promising
- Limited funding has constrained ridership growth

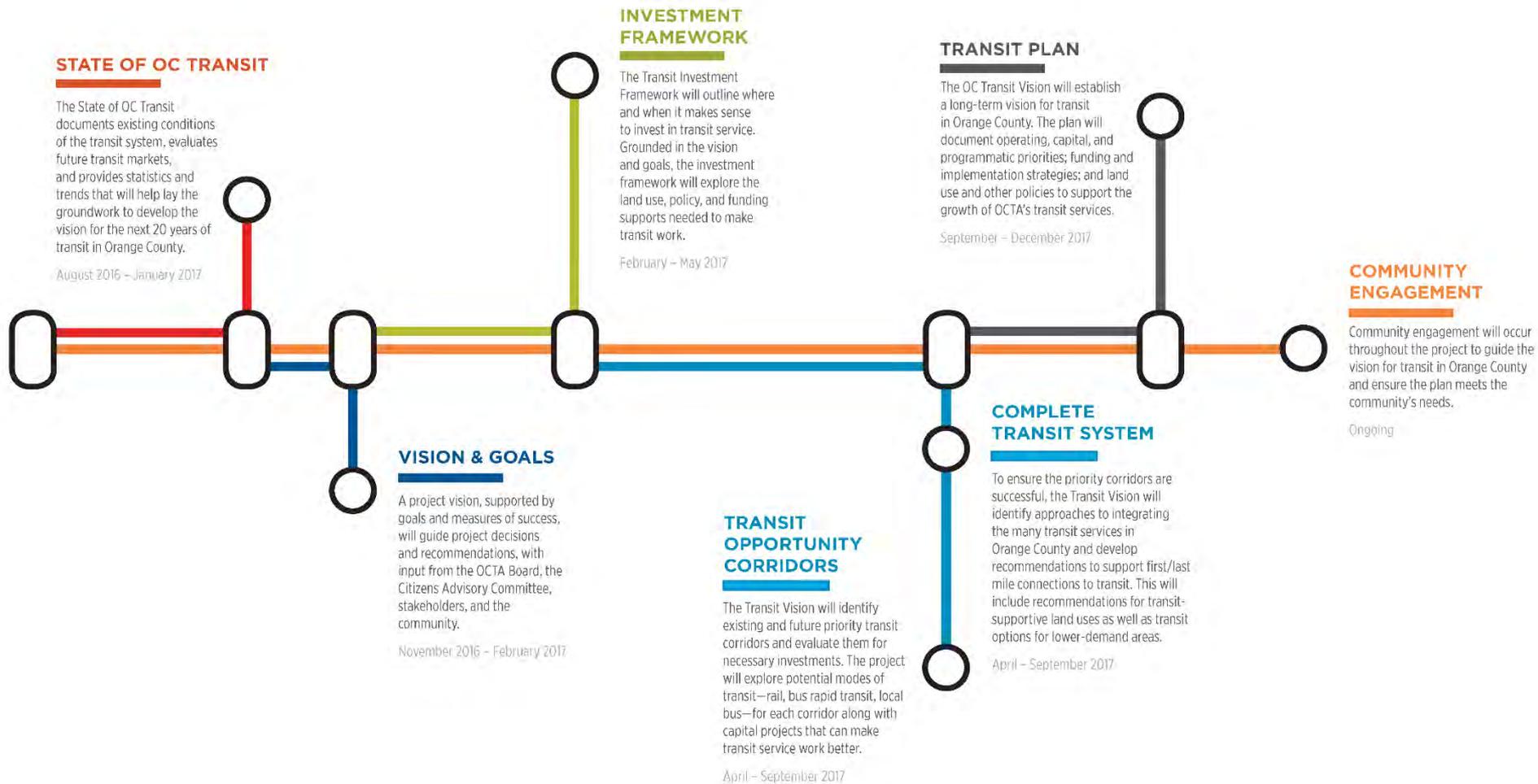


Key Themes

- Challenges and opportunities for effective transit service
 - Land uses
 - Demographics
 - Transportation network
- Long-term trends offer mixed message
- Additional transit use can support GHG reduction targets
- OC Streetcar and Bravo! lines provide a template for future ridership growth



Next Steps



REPORT

DATE: January 31, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Matt Gleason, Senior Regional Planner, gleason@scag.ca.gov, 213-236-1832
Claire Johnson-Winegar, Planning Manager, Gold Coast Transit District

SUBJECT: GCTD Elf on the Go Holiday Bus

EXECUTIVE SUMMARY:

Vanessa Rauschenberger, Director of Planning and Marketing for the Gold Coast Transit District, will provide a report on GCTD's Elf on the Go Holiday Bus.

BACKGROUND:

This year, Gold Coast Transit District decorated an “ELF on the GO” holiday themed bus to bring holiday cheer to the community. The 40-foot bus was decorated inside and out by staff with hundreds of lights-featuring music and had staff as “Elves” riding along passing out candy canes to bus riders and posing for “sELFies!” The specially decorated bus appeared on regularly scheduled select routes from December 6th through December 22nd. The decorated bus also made special appearances at several community events.

The first stop for the “ELF on the GO” holiday bus was to FOOD Share’s (a Ventura County food bank) 5th Annual Holiday CAN-tree Collection on Friday, December 2nd. The bus delivered over 600 cans of food collected by GCTD staff, who were on-site building the District’s can-tree. The “ELF on the GO” bus and District staff also participated in the 2016 Oxnard Christmas Parade on December 3rd and provided over 2,500 candy canes to attendees.

Throughout the month of December, the specially decorated bus served over 700 riders and passed out over 2,300 candy canes. The “ELF on the GO” bus made trips to the Oxnard Christmas Tree Lane, popular destination for holiday lights display. Instead of running “ELF on the GO” during a heavy rain storm, staff “elves” passed out GCTD ponchos to riders waiting to board at Ventura and Oxnard Transit Centers before the storm. Additionally, GCTD held a photo contest on Facebook and Twitter that encouraged riders to tag photos with “ELFontheGO” for a chance to win a prize. Photos were randomly selected to win GCTD goodies and passes.

ATTACHMENT:

A: Elf on the Go Power Point Presentation

ELF ON THE GO HOLIDAY BUS

GOLD COAST TRANSIT DISTRICT PRESENTATION TO RTTAC

1/31/17



Elf on the GO

- 40 foot decorated bus
- Ran December 6th-22nd
- Ran throughout service area – Oxnard, Ventura, Port Hueneme, Ventura



Elf on the GO – All Decorated



- Had staff “elves” riding along and passing out candy
- Included “sELFie” contest⁸³ with prizes

Elf on the GO – All Decorated



- Served over 700 passengers
- Received a lot of feedback from passengers and throughout the community

Decorating in Progress



- **Decorated by over 15 GCTD staff members**
- **Decorated over course of a week**

Can Tree Event



- **Donated over 600 cans**
- **5th annual and 5th time participating in the event**
- **More than a dozen staff members participated**

Holiday Parade



- Over 40 staff and family members participated
- Passed out over 2,500 candy canes

Questions?

REPORT

DATE: January 31, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Marco Anderson, Program Manager, SCAG Clean Cities Coordinator,
anderson@scag.ca.gov, (213) 236-1879

SUBJECT: SCAG Clean Cities Coalition Update

EXECUTIVE DIRECTOR'S APPROVAL:

EXECUTIVE SUMMARY:

The Clean Cities Program, established by the U.S. Department of Energy and administered directly by SCAG since 2010, is designated to support locally-based and government partnerships to expand the use of vehicles operating on alternative fuels in the SCAG region. SCAG staff will provide an annual update to the Energy and Environment Committee in regard to the Coalition's recent efforts.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a: Create and Facilitate a Collaborative and Cooperative Environment to Produce Forward Thinking Regional Plans.

BACKGROUND:

The Clean Cities Program was established by the U.S. Department of Energy (DOE) and designated to support locally based government/industry partnerships in the expanded use of vehicles operating on alternative fuels. The mission of the Clean Cities Program is to advance the nation's economic, environmental and energy security by supporting local decisions to adopt practices that contribute to the reductions of petroleum consumption. The Clean Cities Program carries out this mission through a network of coalitions, which develop public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction.

In 2010, the Regional Council directed SCAG staff to assume the lead administrative role of the Southern California Clean Cities Program. The SCAG (or Southern California) Clean Cities Coalition (CCC) coordinates the activities of both private and public sector proponents of alternative fuel vehicles (AFVs) by providing a forum to discover commonalities, collaborate on public policy, investigate opportunities for joint projects, leverage scarce resources and cooperate on promoting the benefits of AFVs throughout the region.

2015 ANNUAL REPORT (Stakeholder Survey) UPDATE:

As part of its reporting to the DOE, the SCAG CCC conducts a survey of its stakeholders each year in order to gauge the use of alternative fuels in the region. SCAG received 38 responses from SCAG member cities, local jurisdictions, transit operators and private fleets. The regional survey accounted for 82,662,822 of Gasoline Gallon Equivalent (GGE) displaced.

PROJECT UPDATE(S):

In coordination with other regional stakeholders and Clean Cities Coalitions, the SCAG Clean Cities program has been working on revamping its stakeholder outreach and participation. Recent project accomplishments include:

- The SCAG Clean Cities Coordinator has continued to work with partners throughout the region to pursue grant opportunities. This included working with applicants, and signing four letters of support for organizations applying the US DOE EV Everywhere Grant, a CA Energy Commission Grant application, and a Department of Defense solicitation for commercial leasing of 100% electric vehicles at Navy and Marine Corp bases in Southern California.
- Using Clean Cities funding, SCAG was also able to provide sponsorship and/or speakers at the 2015 AltCar Expo in Santa Monica, the 2015 WRCOG Advancing the Choice Expo in Riverside, the Imperial Valley Renewable Energy & Water Summit in Brawley, and the e4Advanced Transportation Center / PortTech LA Expo in Long Beach.

DOE RE-DESIGNATION UPDATE:

In January 2016, the SCAG Clean Cities program was re-designated by the DOE for another three year cycle. The SCAG Clean Cities program will be due for re-designation in February 2019. The DOE recommended the SCAG Clean Cities program consider pursuing the following measures:

- Continue outreach to all jurisdictions represented by SCAG to document as much petroleum displacement from alternative fuel use, vehicle miles traveled reduction and other Clean Cities portfolio elements as possible, and to attract additional stakeholders to the coalition.
- Follow up on opportunities for DOE to train SCAG stakeholders on Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) and other tools, utilizing SCAG's webinar capabilities.
- Continue to work closely with the other Clean Cities Coalitions in Southern California and the e4Advanced Transportation Center to develop a coordinated regional approach to meeting the national Clean Cities goals.
- Recruit potential partners for the National Clean Fleets Partnership Program in the Southern California region.

NEXT STEPS:

In April 2016, SCAG executed its agreement with the Luskin Center for Innovation at the University of California, Los Angeles to work on a California Energy Commission (CEC) grant for \$125,000 to analyze barriers and propose solutions for increasing installation of Plug-in Electric Vehicle recharging in Multi-family Housing (referred to as Multi-Unit Dwellings by CEC). SCAG staff will leverage Clean Cities Coalition resources to conduct outreach and manage that grant opportunity.

REPORT

In FY 2016-2017, the SCAG Clean Cities Program plans on preparing an inventory of Alternative Fuel Vehicle profiles for all SCAG member jurisdictions. This inventory will include information on internal fleet operations, electric charging station provisions, as well as external resident-facing policies to encourage alternative vehicle purchases.

FISCAL IMPACT:

Funding is included in SCAG's FY 2016-17 Overall Work Program (OWP) Budget in 267. SCG01241.04.

ATTACHMENT:

Clean Cities Coalition update January 2017 PowerPoint.

SCAG Clean Cities Coalition 2016 Annual Survey

Tuesday, January 31, 2017

Marco Anderson
Program Manager



SCAG Clean Cities Coalition

The SCAG (Southern California) Clean Cities Coalition includes parts of Los Angeles County, Orange, San Bernardino, Ventura and Imperial

- Originally designated in 1996
- Clean Cities is SCAG program component (since 2010)
- The Coalition **reports to SCAG's** Energy & Environment Policy Committee (EEC) & RTTAC
- 200 + stakeholders/ members
- Four other Coalitions located within SCAG region: LA City, Long Beach, Western Riverside, & Coachella Valley
- Coalition funded through US Dept of Energy (DOE) program contract and available California Energy Commission (CEC) Grant Funding



Successes, Opportunities & Challenges

- Plug-in Electric Vehicle Multi-Family Housing Implementation Strategies
- Sacramento Liaison
 - CA Energy Commission (CEC)
 - CA Public Utilities Commission (CPUC)
- Stakeholder Database Refinement & Outreach
- AltCar Expo, Santa Monica Annual Sponsorship
- SoCalGas stakeholder engagement
- Hydrogen Fuel Cell Partnership engagement

Successes, Opportunities & Challenges

The SCAG Coalition's biggest challenges are:

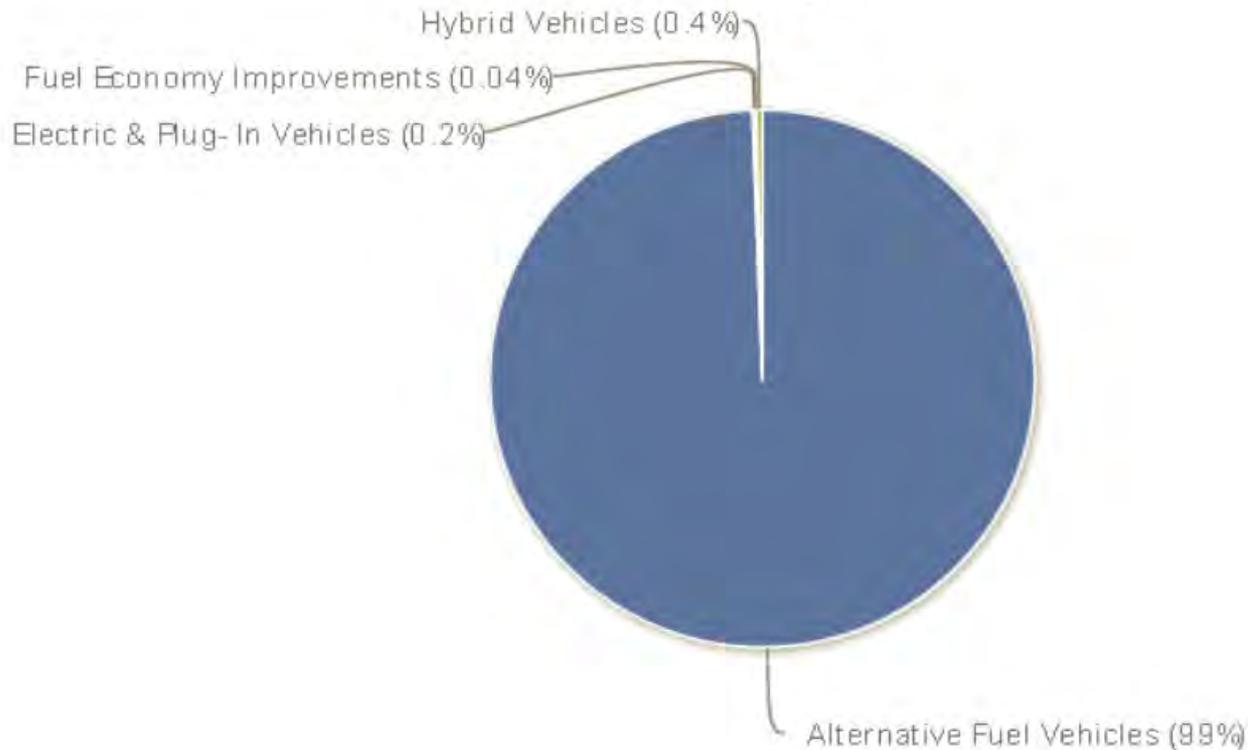
- Geographic
- Providing Incentives to local jurisdictions/ fleet providers to pursue alt. fuel implementation measures
- SCAG is Policy focused, while stakeholders are operational

Here are the steps we're taking to deal with those challenges:

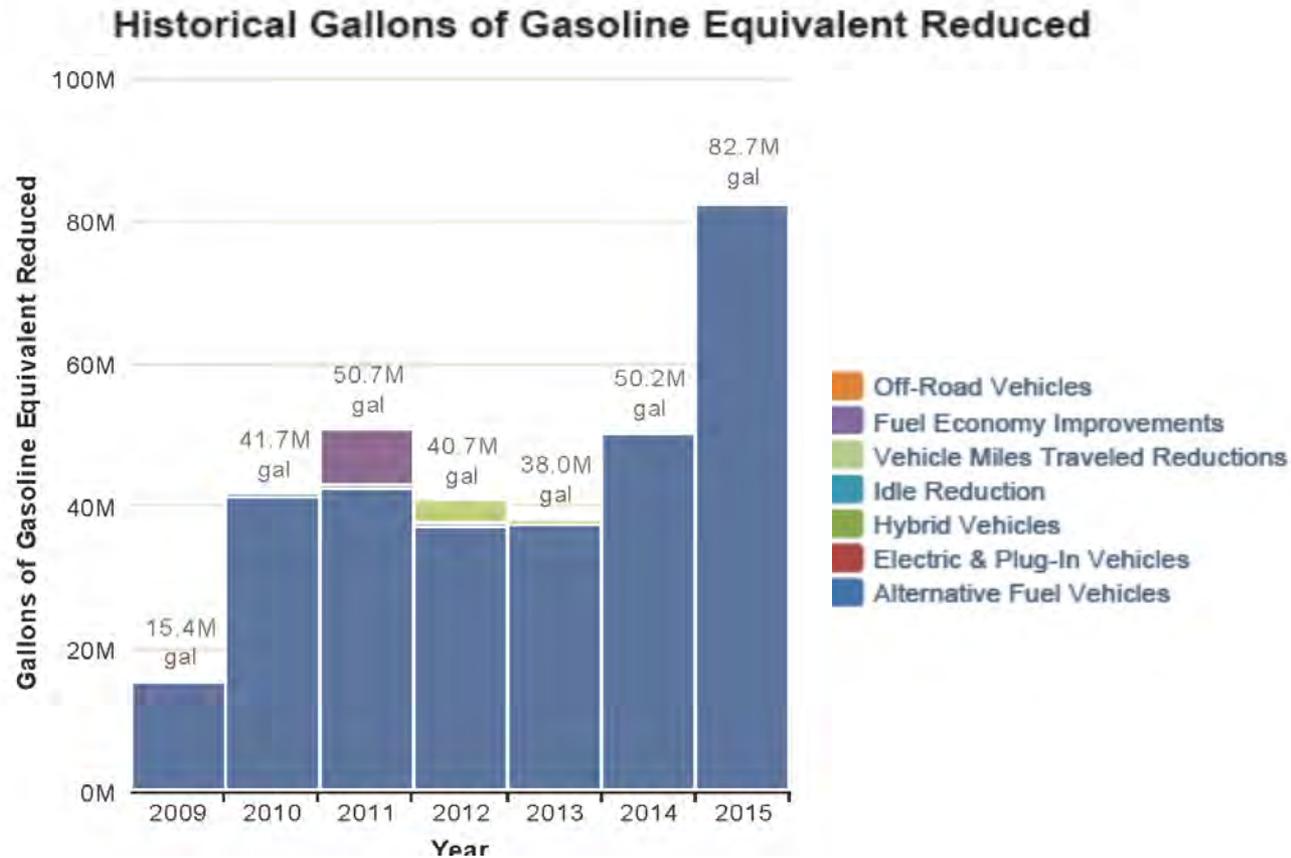
- Increased/ enhanced coordination with regional coalitions
- Program integration with agency funding directed toward energy & sustainability initiatives

2015 Gallons of Gasoline Equivalent (GGe) Reductions

2015 Gallons of Gasoline Equivalent Reduced 82,662,822 gallons

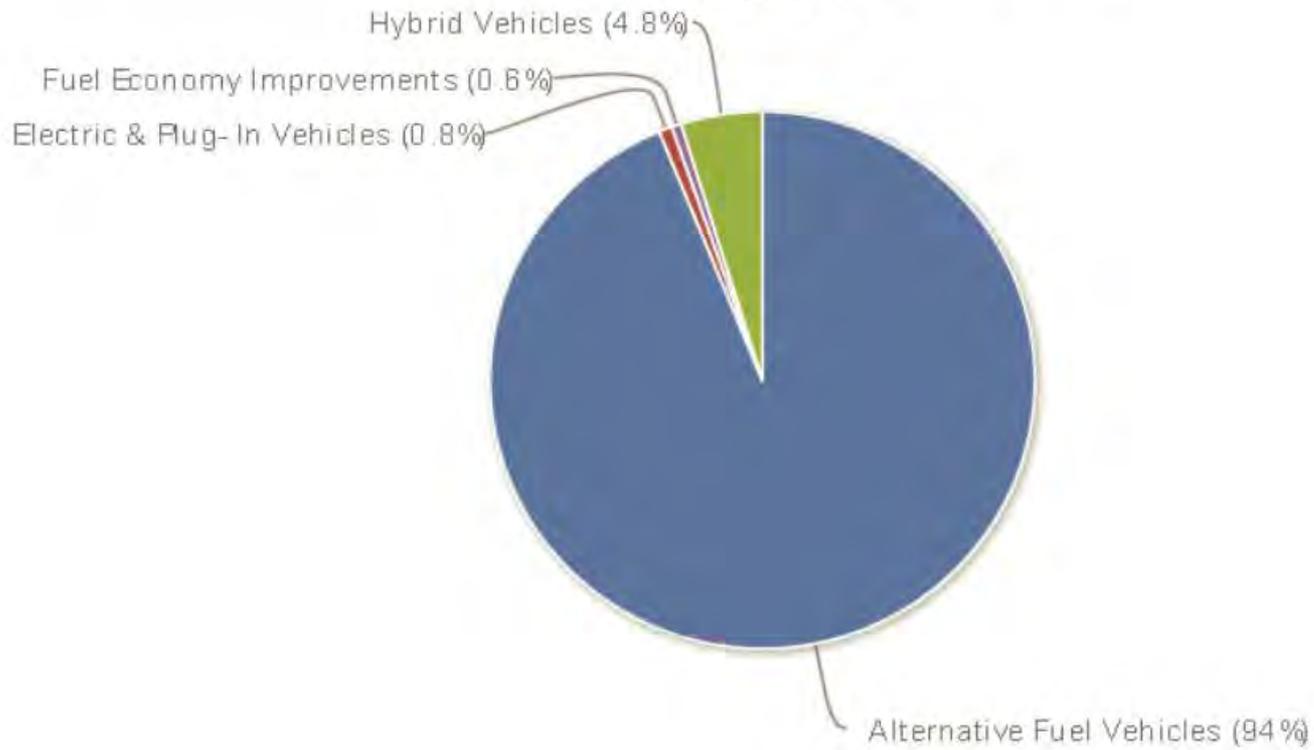


Petroleum Displacement Trends

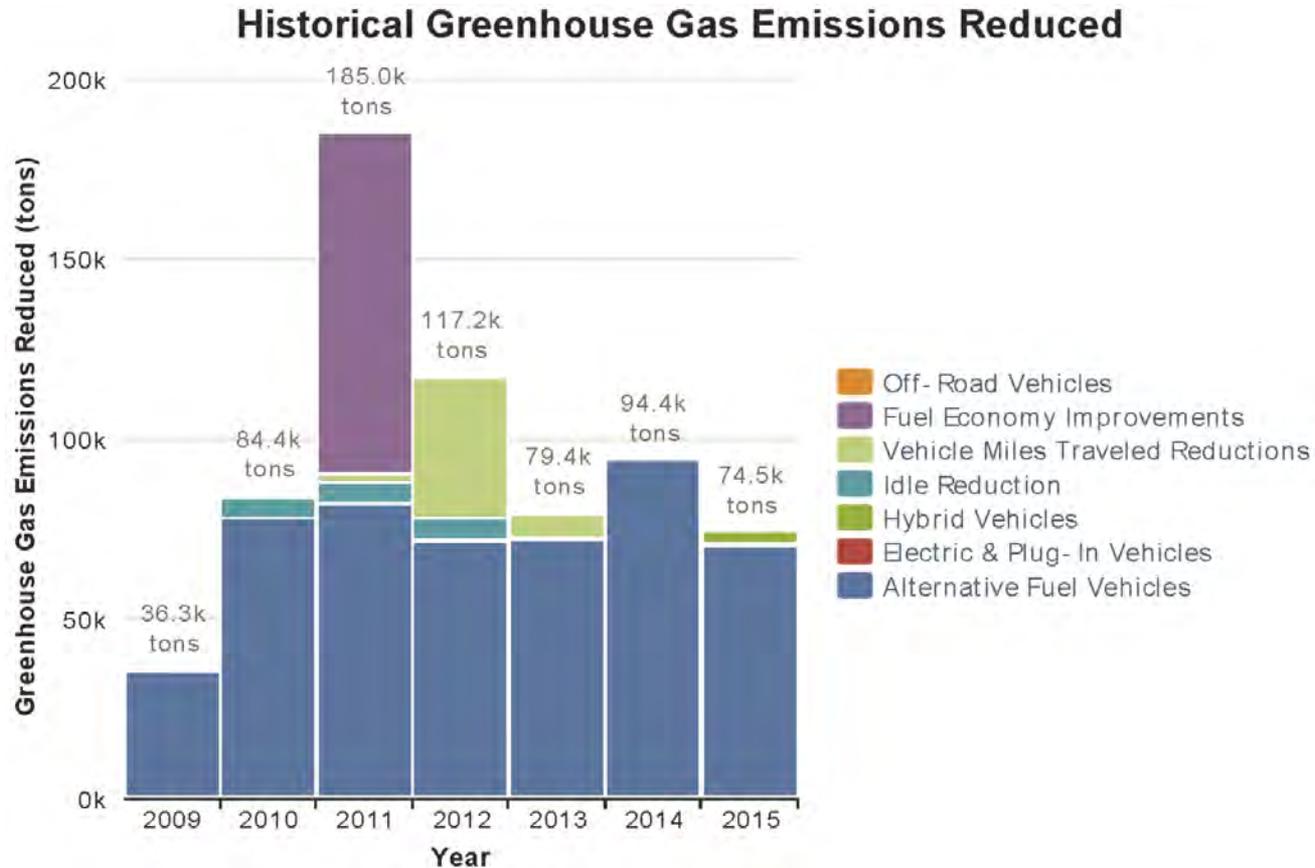


2015 Greenhouse Gas Emissions (GHG) Reductions

2015 Greenhouse Gas Emissions Reduced
74,528 tons



GHG Reduction Trends



Petroleum Displacement: the Next 3 Years

- Improve Grant Assistance:
 - Coordinate with SCAG Grant Administrators to provide application sponsorship when possible
 - Continue Partnership with e4 ATC to co-sponsor Grant Education webinars
- Partnership Coordination:
 - Coordination with Regional Coalitions
 - Develop Municipal Alt Fuel Capacity Database
 - Refine proposed SCAG Regional Charging Network
 - Develop Partnership Network for SCAG focus fuels:
 - PEV
 - Natural Gas
 - Hydrogen
- Implement proposed SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) Policies

Next Steps

- 2016 Survey – Solicitation begins immediately
- Survey Complete March 2017
- Upcoming Coalition Activities
 - VW Settlement Coordination & Support
- One-on-One Stakeholder Interviews
 - Funding opportunities
 - Information distribution
 - Additional input?
 - Questions?

Marco Anderson
Program Manager
anderson@scag.ca.gov



REPORT

DATE: January 31, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Marco Anderson, Program Manager, SCAG Clean Cities Coordinator,
anderson@scag.ca.gov, (213) 236-1879

SUBJECT: SCAG Sustainability Planning Grants Program Award Recommendation and Next Steps

EXECUTIVE DIRECTOR'S APPROVAL:

EXECUTIVE SUMMARY:

On September 29, 2016, the Regional Council approved the guidelines and scoring criteria for the 2016 Sustainability Planning Grant (SPG) program. Staff subsequently released the SPG Call for Proposals and received a total of 139 project proposals requesting approximately \$35.5 million dollars across all project categories and types by the November 18, 2016 deadline. The SPG is a multi-year program designed to support and implement the policies and initiatives of the 2016 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) and continues the themes of the previous round of grant funded projects.

Staff has completed a ranking of proposals, and has identified fifty-four (54) top ranked projects for funding totaling approximately \$9.6 million dollars. Staff is seeking RC approval of award recommendations and authorization to begin contacting project sponsors in order to develop and release RFPs. Staff is seeking RC approval concurrent with CEHD recommendations in order to meet the California Transportation Commission's deadline of February 2 for receiving SCAG's recommendations for programming the regional Active Transportation Program funds, which will support eleven of the projects included in the Sustainability Planning Grant Program. Staff intends to return to the RC in April to recommend funding for an additional \$2 million in awards for proposals that can be modified to better align with available funding sources, along with recommendations for supporting all the member agencies that applied in advancing their planning goals.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; and Goal 4: Develop, Maintain and Promote the Utilization of State of the Art Models, Information Systems and Communication Technologies.

BACKGROUND:

Consolidated Call for Proposals

A consolidated SPG Call for Proposals framework with associated guidelines and scoring criteria was developed by SCAG staff to help support innovative approaches to addressing and solving regional issues. Active Transportation (AT) grants will fund planning and non-infrastructure projects or programs that promote safety and encourage people to walk and bike more. Integrated Land Use (ILU) grants will

continue to focus on sustainable land use and transportation planning. Green Regions Initiative (GRI) grants will assist local jurisdictions in funding sustainability plans or studies, such as climate action plans and water, energy, resiliency or open space studies. The new consolidated Call for Proposals solicited project proposals for all three program areas. Following the Regional Council's approval, on September 29, 2016, of the 2016 SPG Program guidelines and scoring criteria staff released a call for proposals on and set an application deadline of November 18, 2016. SCAG received a total of 139 project proposals requesting approximately \$35.5M in funding across all project categories and types.

Evaluation Process

The evaluation process was documented in the program guidelines as follows. For AT projects, six (6) evaluation teams, one (1) per county, were established to review, score and rank applications submitted to the SPG. Each team was comprised of staff from the county transportation commissions and SCAG. Projects were ranked against other projects within their respective county, except as noted below. To avoid any conflict of interest, if a county transportation commission submitted a proposal for any of the project types, the application was reviewed and scored by SCAG staff only. Final award recommendations are based on application score, regional equity targets and funding eligibility.

For ILU/GRI projects three (3) evaluation teams, one (1) for each project type category, were established to review, score and rank applications submitted to the SPG. Each team was comprised of staff from partner agencies, stakeholder groups, and from SCAG. Projects were ranked against other projects within their respective categories. Final award recommendations are based on application score, regional geographic equity and funding eligibility.

Both AT and ILU/GRI Capacity Building Mini-Grants were awarded competitively across the region and were scored by SCAG staff only to avoid any conflict of interest.

Award Recommendations

Staff has completed a ranking of proposals, and is recommending fifty-four (54) top ranked projects for funding totaling approximately \$9.6 million dollars. These highest ranking proposals reflect stated SPG program goals, including but not limited to:

- Identifying regional strategic areas for infill and investment;
- Focusing new growth around transit;
- Planning for growth around livable corridors;
- Supporting local sustainability planning and climate action planning;
- Increasing the proportion of trips accomplished by biking and walking;
- Increasing safety and mobility of non-motorized users; and
- Implementing the goals, objectives and strategies of the 2016 RTP/SCS.

The following tables summarize the proposed award recommendations by county:

Active Transportation Projects	
Imperial	\$200,000
Los Angeles	\$2,283,452
Orange County	\$731,054
Riverside	\$796,418
San Bernardino	\$716,373
Ventura	\$200,000
Total	\$4,927,297
Integrated Land Use / Green Region Initiative Projects	
Imperial	\$200,000
Los Angeles	\$2,253,000
Orange	\$820,000
Riverside	\$445,000
San Bernardino	\$740,000
Ventura	\$242,000
Total	\$4,700,000
Grand Total	\$9,627,297

Because the awards recommendations will not be released to the Regional Council until later this week and attachment will be provided at the meeting. The table will list all fifty-four (54) top ranked projects. Following the evaluation process AT projects will be grouped by county, and the other categories are will be grouped by project type. The funding awards represent the maximum funding available and do not represent the final cost estimates for future RFPs. In order to best reflect SPG program goals and to expand the pool of project awards, in some cases SCAG is recommending reduced funding amounts from an applicant’s request. SCAG staff will contact project sponsors to discuss reductions in funding and the related scope of work; no project sponsors will be expected to complete the same amount of work where reduced funding is recommended. Staff will work to ensure that reduced funding still results in meaningful benefits for project sponsors.

Approximately \$2.8 million of the project awards being recommended for active transportation projects will be funded through the Regional Active Transportation Program (ATP). These projects are concurrently being reviewed and approved by the TC as part of the larger \$50 million, Regional ATP. The Regional ATP is anticipated to be approved by the California Transportation Commission in March.

REPORT

Selecting ATP projects through the SPG Call for Projects provided the opportunity for planning and non-infrastructure projects to access ATP funding through a more focused and simplified application process. Adding ATP funding to the SPG also helped leverage additional funds from the Mobile Source Reduction Fund. SCAG will administer ATP funds for SPG applicants, if desired.

Next Steps

Pending RC approval, staff will contact all top-ranking project applicants to discuss details of their award, refine scopes of work, and develop RFPs. Where applicable, staff will submit recommended projects to funding partners, CTC and MSRC, for approval; as well as pursue allocation and finalize funding agreements. Additionally, staff will reach out to unfunded applicants to explore opportunities and develop strategy for addressing unmet needs.

Staff intends to return to the CEHD and RC in April to recommend funding for an additional \$2 million in awards for proposals that can be modified to better align with available funding sources. Through the support of the Mobile Source Reduction Committee, the SPG for the first time will provide resources for active transportation programs, including Go Human demonstration projects that encourage walking and biking. Within the current budget, SCAG has capacity to support additional programs and will be reaching out and working with interested applicants over the next month to better align project proposals with funding requirements for such programs.

Additionally, to support all member agencies that applied in advancing good projects that promote SCS implementation, staff intends to work with all unfunded applicants to develop a refined, potential Phase II list that is subject to future funding availability. The potential Phase II list and a funding strategy for addressing unmet needs will be presented to the CEHD and RC in April.

FISCAL IMPACT:

Staff's work budget for the current fiscal year is included in FY 2016-17 OWP 065.00137.01 and OWP 150.04094.01

ATTACHMENT:

Sustainability Planning Grant Program Award Recommendation Tables will be provided at the meeting.

REPORT

DATE: January 31, 2017

TO: Regional Transit Technical Advisory Committee (RTTAC)

FROM: Matt Gleason, Senior Regional Planner, 213-236-1832, gleason@scag.ca.gov

SUBJECT: Transit Asset Management Data Collection

EXECUTIVE SUMMARY:

The Federal Transit Administration (FTA) issued the Transit Asset Management Final Rule (49 CFR 625), effective October 1, 2016, to implement the asset management provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21). This Final Rule mandates the development of a National Transit Asset Management System, defines “state of good repair,” requires transit providers to develop asset management plans. It further requires States, Metropolitan Planning Organizations (MPOs), and transit providers to develop locally coordinated performance targets, and to report on progress towards meeting the targets to the National Transit Database. The Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning Final Rule (23 CFR 450), published on May 27, 2016, outlines the timelines and processes by which states and MPOs must coordinate in target setting.

Staff previously reported on these rulemakings to the RTTAC at the December 2015, June 2016 and October 2016 meetings. Since these reports, staff have conducted meetings with each of the county transportation commissions, and have worked with commission staff to identify each agency employing Federal Transit Act Chapter 53 funds to operate public transportation. Staff are distributing a letter to the General Manager/City Manager/Chief Executive Officer of these agencies outlining SCAG’s data needs to move the Final Rule compliance process forward.

BACKGROUND

Staff has previously reported to the RTTAC regarding new requirements for Transit Asset Management and state of good repair (SGR), and the federal rulemaking process initiated by the FTA at the December 2015, June 2016 and October 2016 RTTAC meetings. The Final Rule (49 CFR 625) establishes a National Transit Asset Management System to monitor and manage public transportation capital assets to enhance safety, reduce maintenance costs, increase reliability, and improve performance. The FTA defines SGR as the condition in which a capital asset is able to operate at a full level of performance. SGR standards must be met in order for an asset to achieve a state of good repair. These SGR standards include:

- The asset is able to perform its designed function
- Use of the asset in its current condition does not pose a known and unacceptable safety risk
- Life-cycle investment needs of the asset have been met or recovered, including all scheduled maintenance, rehabilitation, and replacements

The FTA identifies four categories of assets (equipment, rolling stock, infrastructure, and facilities)

and a measure for each class. These categories and measures are further discussed in the table below.

Asset management planning requirements apply to all recipients and subrecipients of federal financial assistance under Federal Transit Act Chapter 53 (49 USC Chapter 53) that own, operate, or manage capital assets used in providing public transportation.

REQUIREMENTS FOR TRANSIT PROVIDERS

Transit providers are separated into two tiers. All tier I providers (having 101 or more vehicles in peak revenue service, or operating rail fixed-guideway service) must develop and implement an individual asset management plan. Group asset management plans are to be developed by a State or a direct recipient to cover tier II transit providers (those with 100 bus vehicles or less and which do not operate any rail service) and all subrecipients under the 5311 Rural Area Formula Program. Native American tribes can elect to participate in a group asset management plan or develop their own asset management plan. Tier II providers must carry out the asset management plan. Transit providers that are also direct recipients of FTA Section 5307 funds must develop their own tier I or tier II asset management plan.

Requirements for asset management plans include:

- Asset management plans must include an inventory of capital assets and a condition assessment
- Asset management plans must include a project-based prioritization of investments, by year
- Asset management plans must cover at least four years, be updated every four years, and coincide with the Federal Transportation Improvement Program and Federal Statewide Transportation Improvement Program (FTIP/FSTIP)
- An initial asset management plan must be developed within two years of the effective date of the rule
- Tier I providers have additional asset management plan requirements, including an asset management and SGR policy, implementation strategy, list of key annual activities, identification of resources, and evaluation plan

Requirements for target setting include:

- SGR performance targets must be set for the following fiscal year for each asset class in the asset management plan, and this must be done within three months of the effective date of the rule
- At least once every fiscal year, every transit provider or group asset management plan sponsor must set performance targets for the following fiscal year
- To the maximum extent practicable, a transit provider or group asset management plan sponsor must coordinate with the State and MPO in selecting the State and MPO performance targets

Requirements for documentation and reporting include:

- A transit provider or group asset management plan sponsor must make its asset management plan and any supporting documents available to the State and MPO to aid in the planning process

REPORT

- Annual reports must be submitted to FTA’s National Transit Database (NTD) including targets for the following fiscal year, a current assessment of the condition of the provider’s system, and a narrative description about the progress made to meet targets set in the previous year

Asset management plans are self-certified by the transit provider’s designated Accountable Executive, (examples could include the Chief Executive Officer, City Manager, or General Manager) who is responsible for ensuring that the necessary resources are available to carry out the asset management plan. FTA will review asset management plans and progress during Triennial and State Management Reviews, as well as during MPO Certification Reviews. SCAG’s next MPO Certification Review is expected to begin in late 2017.

The table below contains the asset categories to be tracked in an asset management plan, and the measures the FTA will require. All vehicles will be measured with Useful Life Benchmarks, and facilities will require a condition assessment and the use of the FTA TERM model or a similar tool. Only two agencies, Metro and Metrolink, are currently expected to have to address the infrastructure category.

Category	Asset Inventory	Condition Assessment	Performance Targets	Measure
Equipment	All non-revenue service vehicles and equipment >\$50K used in the provision of public transit, except 3 rd -party equipment assets (e.g., construction, service vehicles, maintenance)	Only equipment with direct capital responsibility, no 3 rd -party assets	Only non-revenue service vehicles	<u>Age (ULB)</u> % of vehicles that have met or exceeded their ULB
Rolling Stock	All revenue vehicles used in the provision of public transit (e.g., railcars, buses, ferries)	Only revenue vehicles with direct capital responsibility	Only revenue vehicles by vehicle class/mode	<u>Age (ULB)</u> % of revenue vehicles within a particular asset class that have met/exceeded their ULB
Infrastructure	All infrastructure used in the provision of public transit (e.g., fixed guideway, signal systems, structures, power)	Only infrastructure with direct capital responsibility	Only fixed rail guideway with direct capital responsibility	<u>Performance (%)</u> % of track segments with performance restrictions by class
Facilities	All facilities used in the provision of public transit (excluding bus structures) (e.g., support, parking, passenger facilities)	Only facilities with direct capital responsibility (excluding bus structures)	Maintenance and administrative facilities, passenger stations, and parking facilities with direct capital responsibility	<u>Condition (TERM)</u> % of facilities with a condition rating below 3.0 on the FTA TERM scale

REQUIREMENTS FOR MPOS

MPO requirements for the development of performance measures and target setting are included in the Metropolitan Transportation Planning Final Rule (23 CFR 450). Asset management targets must be set every four years in the MPO's RTP. Each MPO must establish initial targets within 180 days after the State or transit provider establishes their performance targets. MPOs must integrate into their RTP, either directly or by reference, the goals, objectives, performance measures, and targets from the transit providers' asset management plans.

The RTP must include a system performance report evaluating the condition and performance of the transportation system with respect to the performance targets, including progress achieved in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data. Similarly, the FTIP must include, to the maximum extent practicable, a description of the anticipated effect of the FTIP toward achieving the targets identified in the RTP, linking investment priorities to those performance targets.

METROPOLITAN PLANNING AGREEMENTS

The Metropolitan Transportation Planning Final Rule also includes requirements that MPOs, the State, and transit providers cooperatively determine mutual responsibilities in carrying out the metropolitan transportation planning process, and that these responsibilities be clearly identified in written agreements among the MPO, the State, and transit providers. This is in keeping with previous requirements, dating back to the SAFETEA-LU era. Under MAP-21, these metropolitan planning agreements may include jointly agreed upon, specific written provisions for cooperatively developing and sharing information related to transportation performance data and the selection and reporting of performance targets. Otherwise, the written provisions must be documented in some other means, as collectively determined by the MPO, State, and transit providers.

SCAG has metropolitan planning agreements in place with five of the county transportation commissions and most transit providers, which were executed in 2007. These agreements acknowledge the role of the county transportation commissions within the SCAG region for countywide planning and programming, and specify that the county commissions will coordinate with the transit providers in their respective county to ensure that transit projects, plans and programs are recommended to SCAG for inclusion in the RTP and FTIP. It is within this framework, with the county transportation commissions responsible for countywide coordination with their respective transit providers, that regional asset management targets will be developed. However, given that the existing metropolitan planning agreements were executed in 2007, they must be updated to incorporate the new MAP-21 requirements, along with several other issues that have been raised by FTA in recent Triennial Reviews of the transit providers in the SCAG region.

TIMELINE AND NEXT STEPS

Transit providers must complete their initial asset management plans by October 1, 2018. However, initial targets must be set earlier, by January 1, 2017, due to requirements specified by Congress in MAP-21. As the MPO, SCAG must set its initial asset management targets within 180 days after the transit providers establish their targets, June 30, 2017.

REPORT

The FTA has recognized the difficulty of setting initial targets before completion of the initial asset management plan, and therefore is not requiring transit providers or group asset management plan sponsors to report their initial targets to the NTD. The first annual data reports are due to NTD within four months of the end of the transit provider's fiscal year 2018, and must include condition information for the transit provider's system and performance targets for the following year. The first annual narrative reports are due to NTD within four months of the end of the transit provider's fiscal year 2019, and must include a description of any change in the condition of the provider's transit system from the previous year, and a description of the progress made to meet the performance targets set in the previous year.

Staff have conducted meetings with each of the county transportation commissions, and have worked with commission staff to identify each agency employing Federal Transit Act Chapter 53 funds to operate public transportation. These meetings included a discussion of steps towards setting up a framework for regional target setting,

A letter is being sent to the General Manager/City Manager/Chief Executive Officer of these agencies outlining SCAG's data needs to move the Final Rule compliance process forward. Staff have identified the following key pieces of information necessary to comply with the target setting mandate in the rulemakings:

- The agency's Accountable Executive
- The staff point of contact for asset management and metropolitan transportation planning related issues
- Group plan participation and group plan sponsor
- Initial asset management performance targets:
 - Rolling Stock
 - Non-Revenue Vehicles
 - Facilities
 - Right of Way

Staff are requesting that this information be returned by local agencies by February 28.

In addition, staff are working with the county transportation commissions to establish a target development framework. Key issues of those discussion have included the geographic scope of the targets (regional vs. county by county) the planning assumptions needed to establish 20 year targets using locally developed annual targets, and what kinds of disaggregation to use in the target setting. As mentioned above, it is envisioned that the target setting process will reflect the decentralized planning process laid out in the metropolitan planning agreements.

Staff also anticipate that pending the FTA's promulgation of a final rule regarding safety target setting, work will begin to update the metropolitan planning agreements. It is anticipated this may occur in the summer of 2017.

At the March 29, 2017 meeting of the RTTAC, staff will return with an overview of the

REPORT

information returned by local agencies, and a discussion of a target setting framework.

ATTACHMENTS:

A: Letter from FTA Associate Administrator Lucy Garliauskas 2017-01-19

B: Draft Transit Asset Management Data Collection Letter

C: Compliance Information Table



U.S. Department
Of Transportation
**Federal Transit
Administration**

Headquarters

1200 New Jersey Avenue S.E.
Washington DC 20590

JAN 18 2017

Dear Colleague,

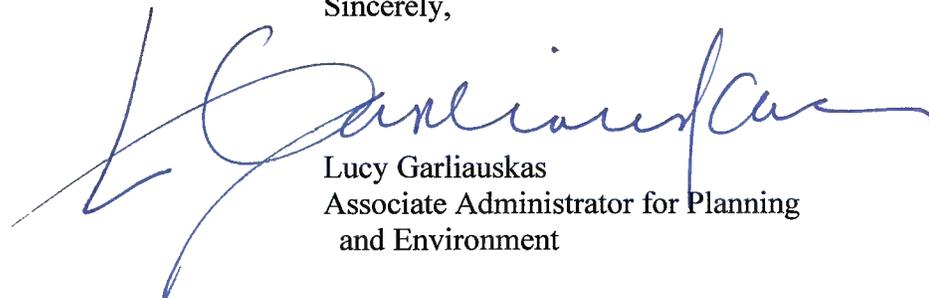
The Federal Transit Administration (FTA) continues to advance efforts to implement a performance based approach to planning. I am sending this letter to remind you of up-coming timeframes to meet requirements of the Transit Asset Management (TAM) Final Rule that became effective on October 1, 2016 and the Metropolitan and Statewide and Nonmetropolitan Transportation Planning Final Rule (Planning) that became effective on June 27, 2016.

The TAM Final Rule requires transit providers to set performance targets for state of good repair (SGR) by January 1, 2017. The Planning Rule requires each Metropolitan Planning Organization (MPO) to establish targets not later than 180 days after the date on which the relevant State or provider of public transportation establishes its performance targets. This is a reminder that transit providers must provide those performance targets to their respective MPOs so that the MPOs can establish their SGR targets before June 30 2017.

The Moving Ahead for Progress in the 21st Century Act of 2012 (MAP-21) required the FTA and the Federal Highway Administration (FHWA) to develop a performance-driven and outcome-based program that provides a greater level of transparency and accountability, improved project decisionmaking, and more efficient investment of Federal transportation funds. The Fixing America's Surface Transportation Act of 2015 (FAST Act) further affirmed the transition to performance management.

If you have any questions or need additional information, please contact Dwayne Weeks, Director of FTA's Planning Programs at (202) 493-0316 or Dwayne.Weeks@dot.gov.

Sincerely,



Lucy Garliauskas
Associate Administrator for Planning
and Environment



January 25, 2017

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
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Los Angeles, CA 90017
T: (213) 236-1800
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[Name]
[Title]
[Company/Organization]
[Address]
[City, State ZIP]

Subject: Transit Asset Management and Metropolitan Planning Coordination

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Bill Jahn, Big Bear Lake
- Energy & Environment
Carmen Ramirez, Oxnard
- Transportation
Barbara Messina, Alhambra

Dear [Salutation] [Name]:

I am writing regarding the Federal Transit Administration (FTA) Transit Asset Management (TAM) Final Rule [49 CFR 625]. As you may know, this rule applies to all recipients and sub-recipients of federal funds under 49 USC Chapter 53 that own, operate, or manage capital assets used for providing public transportation. Transit providers must develop and implement TAM plans, including an asset inventory and condition assessment, and a prioritized list of investments to support the state of good repair of their capital assets. Transit providers are required to establish initial TAM performance targets by January 1, 2017. Further information on the Final Rule can be found at www.transit.dot.gov/TAM/rulemaking.

As the federally designated Metropolitan Planning Organization for Southern California, SCAG is required to establish regional TAM targets in coordination with the state and providers of public transportation, and to incorporate local TAM plans into the Regional Transportation Plan (RTP). SCAG must establish initial regional TAM targets within 180 days after the transit providers establish their initial targets, or by June 30, 2017.

SCAG has begun coordinating with the county transportation commissions, and in collaboration have identified those providers of public transportation who receive Chapter 53 funds from the FTA Sections 5307, 5310, 5337, and 5339 programs. Your agency is one of those we have identified as potentially falling under the TAM requirements. We are requesting that your agency provide feedback to the regional target setting process, by filling out the attached TAM compliance information table.

The attached table requests that you identify:

- the Accountable Executive responsible for developing the TAM plan,
- a staff point of contact,
- your group TAM plan sponsor (if applicable), and
- the initial TAM performance targets established by your agency.

Subject: Transit Asset Management and Metropolitan Planning Coordination

In addition, to further comply with the mandates of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and its successor, the Fixing America's Surface Transportation (FAST) Act, SCAG will be seeking to amend the metropolitan planning agreements that outline how transportation planning and programming is coordinated in the region. Currently, FTA Section 5307 direct recipients and the county transportation commissions are party to these agreements. SCAG seeks to amend the agreements to incorporate written provisions for sharing data and information related to the development of performance measures and targets required under MAP-21 and the FAST Act.

Our coordination process will be conducted through SCAG's Regional Transit Technical Advisory Committee (RTTAC) composed of staff representatives from the county transportation commissions and transit providers. I encourage your agency's participation on the RTTAC, as is outlined in the existing metropolitan planning agreements.

Please complete the attached table and return it to Philip Law, Manager of Transit/Rail (law@scag.ca.gov, 213-236-1841) on or before **February 28, 2017**. Please also contact him with any questions, or to request further information about participating on the RTTAC.

Sincerely,



Hasan Ikhata
Executive Director

Attachment A: Transit Asset Management Compliance Information Table
Attachment B: Metropolitan Planning Agreement

C: [RTTAC representative, county transportation commission TAM staff]

Attachment A: Transit Asset Management (TAM) Compliance Information Table

Who is the Accountable Executive for your agency?	
Who is the staff point of contact for TAM and metropolitan transportation planning related issues at your agency? Please provide phone number and email address.	
Are you participating in a Group TAM Plan, and if so, what agency is your Group TAM Plan Sponsor?	
What are your initial TAM performance targets?	
Rolling Stock	
Non-Revenue Vehicles	
Facilities	
Right of Way	

RTTAC 2017 Agenda Look Ahead

The RTTAC meets quarterly on the fifth Wednesday of the month (with the Jan. 31 meeting being an exception to this general rule). Following is a tentative look-ahead to the proposed RTTAC agendas for 2017. It includes three new 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) Responses to Ridership Declines – 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.

March 29, 2017

- Regulatory Compliance Standing Item
 - SCAG Asset Management Target Setting Update
 - ARB SB375 GHG emissions reduction targets update
- Responses to Ridership Decline Standing Item
 - SCAG\UCLA Transit Ridership Trends Study
- Technology and Mobility Innovations Standing Item
 - Summary of On-Going TNC Pilots
 - Using GTFS Feeds to analyze job access travel times
- SCAG General Assembly

May 31, 2017

- Regulatory Compliance Standing Item
 - SCAG Asset Management Target Setting Update
 - Metropolitan Planning Agreements
- Responses to Ridership Decline Standing Item
 - Research on SCAG\UCLA Transit Ridership Trends Study
- Technology and Mobility Innovations Standing Item
 - SBCTA Customer Based Ridesharing and Interconnectivity Study
- Bus Rapid Transit impacts on gentrification
- SCAG Climate Adaptation Assessment

August 30, 2017

(Staff have begun tentatively discussions to hold this meeting in Riverside County)

- Regulatory Compliance Standing Item
 - FTA Safety Rule
 - Metropolitan Planning Agreements
- Responses to Ridership Decline Standing Item
 - SCAG/UCLA Transit Ridership Trends Study
 - Metrolink Ridership update
- Technology and Mobility Innovations Standing Item
 - CVAG CV Link
 - Las Vegas Automated Shuttle Pilot
- SunLine Transit Fuel Cell Bus/Facility Tour
- RTA Route 1 Rapid Bus project
- FY2016-17 Caltrans 5304 Program Completed Work
- Coachella Valley/San Gorgonio Pass Rail Corridor Alternatives Analysis or EIR update

November 29, 2017

- Regulatory Compliance Standing Item
 - Metropolitan Planning Agreements
 - FTA Safety Rule
- Responses to Ridership Decline Standing Item
 - LA County Regional Ridership Study
- Technology and Mobility Innovations Standing Item
 - Big Blue Bus Blue at Night update
- SCAG Intercounty ITS Architecture Update