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MEETING OF THE

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

Monday, August 29, 2018
10:00 a.m. – 11:30 a.m.

SCAG LOS ANGELES MAIN OFFICE

900 WILSHIRE BLVD., STE. 1700
POLICY COMMITTEE ROOM A
LOS ANGELES, CALIFORNIA 90017
(213) 236-1800

TELECONFERENCE

TO JOIN THE MEETING: https://zoom.us/j/220315897
CONFERENCE NUMBER: 1 (646) 558 8656
MEETING ID: 220 315 897

VIDEOCONFERENCE

Riverside
SCAG Office
3403 10TH STREET, SUITE 805
RIVERSIDE, CA 92501

San Bernardino
SCAG Office
1170 W. 3RD ST, STE. 140
SAN BERNARDINO, CA 92410

Ventura
SCAG Office
950 COUNTY SQUARE DR, STE 101
VENTURA, CA 93003

PLEASE NOTE NEW LOCATION

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 email gleason@scag.ca.gov

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1908. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA
Wednesday, August 29, 2018

==========

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

TIME **PG#**

1.0 CALL TO ORDER
(Gary Hewitt, OCTA, Regional Transit TAC Chair)

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

3.0 RECEIVE AND FILE

3.1	Revised Minutes of the January 31, 2018 Regional Transit TAC Meeting	1	3
3.2	Minutes of the April 30, 2018 Regional Transit TAC Meeting	1	7
3.3	Eno Transportation Center Policy Brief		12
3.4	TCRP Reports 188 and 195		19
3.5	SB-1 Transit Funding		21
3.6	Public Transportation Agency Safety Plan		24
3.7	RTTAC 2018 Agenda Look Ahead		38

REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE AGENDA
Wednesday, August 29, 2018

4.0 INFORMATION ITEMS

4.1	Metro NextGen Study ***(Conan Cheung, LA Metro)***	20	40
4.2	OCTA Microtransit Pilot ***(Gary Hewitt, OCTA)***	20	72
4.3	Draft FY2015-16 Assessment of Transit System Performance ***(Matt Gleason, SCAG)***	30	84

5.0 STAFF REPORT

5.1	Regional Planning Working Groups ***(Steve Fox, SCAG)***	10	111
5.2	FTA Triennial and SCAG Public Participation ***(Philip Law, SCAG)***	10	113

6.0 ADJOURNMENT

The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, October 31, 2018.

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

January 31, 2018

Minutes

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

The Regional Transit Technical Advisory Committee held its meeting at SCAG's Downtown Los Angeles Office. The meeting was called to order by Chair Gary Hewitt.

Members Present:

Medford Auguste	LACMTA

Teleconference:

Gary Hewitt (Chair)	Orange County Transportation Authority
Joyce Rooney (Vice Chair)	Redondo Beach Transit
Claire Grasty	Ventura County Transportation Commission
Sheldon Peterson	Riverside County Transportation Commission
Scott Paige	LACMTA
Tracy Beidleman	Long Beach Transit
Alex Porlier	City of Santa Clarita
Norm Hickling	Antelope Valley Transit Authority
Josh Landis	Foothill Transit

Web Meeting:

Kirk Schneider	Caltrans District 7
Kristin Warsinski	Riverside Transit Agency
Lori Huddleston	LACMTA
Stephen Tu	LACMTA
Scott Jackson	City of Los Angeles
Matt Miller	Gold Coast Transit District
Vanessa Rauschenberger	Gold Coast Transit District
Joe Raquel	Foothill Transit
Conan Cheung	LACMTA
Anita Petke	SunLine Transit Agency
Fina Clemente	Riverside County Transportation Commission
Kevin Kane	Victor Valley Transit Authority
Scott Jackson	

SCAG Staff:

Philip Law	Stephen Fox
Kome Ajise	
Matthew Gleason	

1.0 CALL TO ORDER

Gary Hewitt, OCTA, 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 RECEIVE AND FILE

3.1 Minutes of the January 31, 2018 Regional Transit TAC Meeting

4.0 INFORMATION ITEMS

4.1 Metro Ridership Growth Action Plan

Conan Cheung, LACMTA, reported on Metro's Ridership Growth Action Plan. Mr. Cheung stated initial efforts in developing a ridership growth plan include examining recent demographic changes which show household growth in downtown Los Angeles and areas northeast of it. He reviewed changes in household income noting a decline in middle class income and an increase in high income population in areas. Additionally, there is a population increase of those 55 years and older. Employment density shows greater concentrations in downtown Los Angeles, midcity and West Los Angeles. Mr. Cheung reviewed travel patterns in these areas.

Next, current service routes were examined showing areas where demand is great and those that may offer opportunities to expand service. Mr. Cheung reported on the growth of other mobility options available in the service area such as Uber. He noted that Metro's Office of Extraordinary Innovation is exploring micro transit service and other options to respond to contemporary mobility trends. Mr. Cheung noted next steps include additional survey and focus group research as well as peer agency interviews. He noted market research will examine market segments and focus on population segments that may be on the cusp of using transit and those who may be considering leaving transit.

Philip Law, SCAG staff, asked if any efforts are underway to explore ridership declines on rail lines. Mr. Cheung reviewed efforts for specific rail lines noting that speed and reducing delays will be important to drawing and retaining riders.

4.2 Metro NextGen Bus Study

Stephen Tu, LACMTA, reported on Metro's NextGen Bus Study. Mr. Tu stated the study will explore ways to improve service to current riders as well as attract new riders and investigate potential new markets. He reviewed the project's guiding principles and internal and external stakeholder groups noting that public input and buy-in is critical to the project's success. Mr. Tu reviewed the study phases including understanding important travel attributes of current and potential riders,

establishing service concepts and strategies as well as investigating opportunities to restructure routes, schedules and services to current, potential and future riders. Mr. Tu noted next steps include completing market segmentation as well as establish project committees and public engagement.

4.3 OCTA Transit Master Plan

Gary Hewitt, OCTA, provided an update on OCTA's Transit Master Plan. Mr. Hewitt stated the plan is a strategic framework for the most appropriate capital investments and examines service corridors of opportunity for both rail and bus. He reviewed the corridors under consideration, survey results and which transit services rank highest among respondents. He noted additional Metrolink service ranked highly as well as increased express and special event service. Mr. Hewitt reviewed the short-term action plan to be implemented in the next 5 years including two microtransit pilot projects and continued corridors studies for possible future investment. Mid and Long-term investment opportunities were reviewed.

Mr. Hewitt stated recommendations will be forwarded to their Board for feedback and final recommendations will be communicated to the public and stakeholders.

Philip Law, SCAG staff, asked when it will be known which of the mid and long-term recommendations will be placed into the Long Range Transportation Plan. Mr. Hewitt responded that a mix of projects are under consideration and final determination may be affected by available funding.

4.4 Draft 2020 RTP/SCS HQTC and Major Transit Stop Methodology

Steve Fox, SCAG staff, provided an update on Draft 2020 RTP/SCS High Quality Transit Corridor and Major Transit Stop Methodology. Mr. Fox stated that SCAG is currently updating its list of major transit stops in preparation for the 2020 Regional Transportation Plan/Sustainable Communities Strategy. He noted the RTTAC as well as other major metropolitan planning organizations were involved in the development of the methodology. Mr. Fox reviewed the 2016 methodology and the refinements for the 2020 RTP/SCS. He noted that next steps include incorporating additional input from the RTTAC, consulting with other MPOs, the Office of Planning and Research then to return to the RTTAC with a final methodology.

Scott Paige, LACMTA, asked about the methodology noting that some bus service lines are frequent but fail to qualify according to the statute. Philip Law, SCAG staff, reviewed the qualifying elements under both SB 375 and SB 743. Mr. Law indicated that feedback will be summarized and encouraged members to forward other comments.

5.0 STAFF REPORT

Philip Law, SCAG staff, stated that SCAG is continuing its effort to update metropolitan planning agreements for each county noting that Imperial and

Riverside counties have given their approval. Additionally, the SCAG/UCLA Falling Transit Ridership Report is released to the public today and the next transit resiliency workshop will be held February 12, 2018 at SCAG's San Bernardino office and the final one will be February 13, 2018 at SCAG's downtown Los Angeles office.

6.0 ADJOURNMENT

Gary Hewitt, OCTA, adjourned the meeting at 12:07 p.m.

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

Monday, April 30, 2018

Minutes

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

The Regional Transit Technical Advisory Committee held its meeting at SCAG's Downtown Los Angeles Office. The meeting was called to order by Chair Gary Hewitt, OCTA.

Members Present:

Gary Hewitt (Chair)	Orange County Transportation Authority
Joyce Rooney (Vice Chair)	Redondo Beach Transit
Kirk Schneider	Caltrans District 7
Joe Raquel	Foothill Transit
Josh Landis	Foothill Transit
Nora Chin	Los Angeles Department of Transportation
Lori Huddleston	LACMTA

Videoconference:

Claire Grasty	Ventura County Transportation Commission
Geraldina Romo	Antelope Valley Transportation Authority
Norm Hickling	Antelope Valley Transit Authority
Josh Lee	San Bernardino County Transportation Authority

Teleconference:

Beth Rodehorst	ICF
Dr. Yachun Chow	California Air Resources Board
Sheldon Peterson	Riverside County Transportation Commission
Monica Morales	Riverside County Transportation Commission
Mike Bonacio	Omnitrans
Bryn Lindblad	Climate Resolve
Diana Chang	Culver City Bus

SCAG Staff:

Philip Law	Stephen Fox
Kome Ajise	Kevin Gilhooley
Matthew Gleason	

1.0 CALL TO ORDER

Gary Hewitt, OCTA, called the meeting to order at 10:03 a.m.

2.0 PUBLIC COMMENT PERIOD

No members of the public requested to comment.

3.0 RECEIVE AND FILE

3.1 Minutes of the January 31, 2018 Regional Transit TAC Meeting

Gary Hewitt, OCTA, requested that item 4.3 be modified to correctly identify OCTA's Transit Master Plan.

3.2 Transit Ridership Update

3.3 Look Ahead – Regional Transit TAC Meeting

4.0 INFORMATION ITEMS

4.1 Innovative Clean Transit Regulations

Dr. Yachun Chow, California Air Resources Board (ARB), provided an update on the Innovative Clean Transit Regulation. Dr. Chow reviewed the development of the Transit Fleet rule and its requirement that qualifying transit agencies make a portion of new buss purchases Zero Emission Busses (ZEB). She noted that the cost of zero emission technology has fallen in recent years and there is renewed interest in moving forward with implementation of the rule which has been on a temporary hold.

Dr. Yachun stated in 2015 the ARB conducted a technology assessment of zero emission bus technology and noted they are in an early commercialization stage and their cost has been reduced although their purchase price remains relatively higher than busses currently purchased by transit agencies. She noted ARB is advocating that transit agencies convert to ZEBs as many riders are transit dependent and bus routes travel through local communities resulting in an environmental impact to those areas. In addition, transit busses are suitable to advanced technology as fueling and storage is done through a centralized location. Dr. Yachun stated ARB is seeking to work with transit agencies to convert to zero emission busses and reviewed the ZEBs currently in use in the state.

ARB's requirements and dates of implementation were reviewed. It was noted ARB is scheduled to consider a new rule on ZEBs summer 2018.

Mike Benacio, Omnitrans, asked about the policy for cutaway busses. Dr. Yachun responded that cutaway busses will not be included in the requirements being considered.

Joyce Rooney, Redondo Beach Transit, noted that in order for smaller agencies to comply with the requirements they may need to add additional equipment and infrastructure and asked if funding would be provided to smaller agencies for additional equipment or property purchase. Dr. Yachun reviewed potential funding sources such as the Low Carbon Fuel Standard Program, SB350 and

ARB's voucher funding plan. In addition, she encouraged transit agencies to first consult with utility providers prior to purchasing ZEBs in order to get a proper assessment of power and infrastructure needs.

Gary Hewitt, OCTA, stated that OCTA commented that there is concern that the technology in not far enough advanced and there can be a gap between what the manufacturers indicate and how the products eventually perform and without funding to fill in the cost gap OCTA would need to reduce service in order to comply with the regulation.

4.2 Transit Climate Adaptation and Resiliency Effort

Rob Kay, ICT International, provided an update on the Transit Climate Adaptation and Resiliency Effort. Mr. Kay stated the undertaking is designed to help transit agencies identify critical assets and routes that could be vulnerable to climate change and to examine ways to integrate climate resiliency measures into local and regional planning. He stated the goal is to provide a path for transit agencies to enhance climate resiliency planning while maintaining compliance with state and federal regulations. He noted a toolbox of resources will be developed by partnering with transit agencies to create a program adaptable to their unique budget constraints. He stated the effort is expected to be completed June 2018.

Mr. Kay further noted the project began spring 2017 with the Exposure Analysis Process, the development of critical criteria and a sensitivity matrix. He noted two workshops were completed; Vulnerability & Criticality in fall 2017 and Adaptation and Toolbox Needs in winter 2018. Next steps include feedback on the toolbox which is sought by May 8, 2018 and a presentation to SCAG's Transportation Committee June 2018.

Beth Rodehorst, ICF, continued the presentation noting that the toolbox will assist transit agencies of all sizes evaluate their vulnerabilities to climate change and identify and implement appropriate adaptation measures. She noted this can particularly benefit agencies with limited resources. Ms. Rodehorst reviewed the 10 proposed toolbox resources and their benefit to transit agencies. She requested feedback on the toolbox items by May 8, 2018.

Gary Hewitt, OCTA, suggested that it would be helpful to agencies who are preparing an application for funding to have a list of resources available where they can access supportive data, for example, census or climate data.

4.3 Proposed Microtransit Pilot

Nora Chin, Los Angeles Department of Transportation (LADOT), reported on a Proposed Microtransit Pilot. Ms. Chin reported that a microtransit pilot using cutaway busses is being planned for West Los Angeles serving a 6-square mile area that includes Mar Vista, Venice, Palms and Del Rey. She stated that it will be an on-call transit service using mobile phone technology offering a demand-based service as compared to the traditional supply-based service. Additionally, it will be

a one-year pilot launched in 2018 with corner-to-corner pick-up service operating within the service area.

Ms. Chin noted the challenges when coordinating the pilot including a need to coordinate across different jurisdictions. Further, she noted that microtransit is meant to augment existing fixed route bus and rail service and as enhancement to Firt/Last Mile mobility. She noted the microtransit pilot provides an opportunity to introduce new riders to public transit, to fill in gaps in the transportation network and as way to improve the customer service experience.

Kirk Schnieder, Caltrans, asked how this service differs from flex routes and dial-a-ride service. Ms. Chin responded that this pilot focusses on a smaller project area designed to meet First/Last Mile needs of a specific area or set of communities.

Joyce Rooney, Redondo Beach Transit, asked if the pick-ups and drop-offs will take place only within the pilot area and will they be to specific destination points. Ms. Chin responded that the microtransit service will operate within its service area and will also be a feeder service to the Palms Station Expo line. Additionally, every 4 intersections within the project area are potential pick-up and drop-off locations.

Gary Hewitt, OCTA, asked how many vehicles would be in service. Ms. Chin responded that 4 cutaway busses will be placed into service with 2 additional vehicles serving as spares.

4.4 2020 RTP/SCS Goals and Objectives

Courtney Aguirre, SCAG staff, provided an update on the 2020 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS). Ms. Aguirre stated that SCAG is currently updating the RTP/SCS for years 2020 to 2045. She noted the RTP/SCS serves as a future vision for the future including policies, strategies and projects for advancing the region's mobility, economy and sustainability. It seeks to coordinate transportation and land use to achieve greenhouse gas emissions and air quality goals as well as overall mobility goals.

Ms. Aguirre stated updating the plan is a multi-year process that began in 2017 with establishing the technical basis and data collection from local jurisdictions. Major policy directions are being explored in 2018. Public engagement occurs in 2019 to more firmly establish major policies, strategies and projects. Adaption of the plan will be sought in April 2020.

Ms. Aguirre reviewed the goals and guiding policies including baseline goals of benefitting the region's economy, mobility, environment, health and complete communities.

5.0 STAFF REPORTS

5.1 Draft 2020 RTP/SCS HQTC and Major Transit Stop Methodology

Steve Fox, SCAG staff, updated the committee on High Quality Transit Corridor Major Transit Stop Draft Methodology. Mr. Fox stated that in response to methodology questions, SCAG contacted three large MPOs; SACOG, MTC and SANDAG. Different approaches to methodology were identified and reviewed. Mr. Fox noted that next steps include contacting the Office of Planning and Research for further consultation. Mr. Fox requested input from the RTTAC.

Joyce Rooney, Redondo Beach Transit, asked about transit stops served by different transit agencies and if they qualify as a HQTC. Mr. Fox responded that a transit stop served by more than one transit agency would qualify if it meets service frequency requirements.

5.2 ADA Forecast Procurement

Matt Gleason, SCAG staff, updated the committee on ADA forecast procurement. Mr. Gleason stated growing ADA average trip lengths have previously been identified as a key issue in system performance measurement. Further, a SB 1 grant has been awarded to produce an ADA Paratransit forecast tool. The objective is to provide a tool that would help local agencies and SCAG project long-term ADA Paratransit demand. Further, a Request for Proposal was submitted for this effort and the committee will be informed of its progress.

5.3 SB-1 Recall Effort

Kevin Gilhooley, SCAG staff, reported on the SB 1 repeal effort. Mr. Gilhooley reported that an effort is underway to repeal tax and fee increases identified in SB 1 and enact additional restrictions on any future tax and fee increase associated with motor vehicles and fuels. He reported voter signatures have been collected in order to qualify a recall proposition.

Lori Huddleston, LACMTA, asked if any polling has been done on support for the recall. Mr. Gilhooley responded that he is aware of two polls which show opinion at approximately 50 percent support for repeal.

5.4 SCAG FTIP Public Participation Process and Compliance with Section 5307 Program Requirements

Philip Law, SCAG staff, reported that FTA's Comprehensive Review Guide for Triennial reviews includes a new table under the 5307 program requirements. The table refers to SCAG's Public Participation Process. It was noted that SCAG staff is reviewing this requirement and will forward details to member agencies.

6.0 ADJOURNMENT

Gary Hewitt, OCTA, adjourned the meeting at 11:57 a.m.

REPORT

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

To: Regional Transit Technical Advisory Committee (RTTAC)

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

Subject: Eno Transportation Center Policy Brief

OVERVIEW:
In July, 2018 the Eno Transportation Center's So Jung Kim and Robert Puentes published a policy brief titled, "Taxing New Mobility Services: What's Right? What's Next?" This document, is an attempt to survey seven cities and 12 states that have a fee or tax on TNC trips. The authors find that while these fees may be a straightforward way to raise revenue, the charges are often budget exercises rather than deliberate public policy. The authors argue that as more states and cities consider taxes on TNC services, policymakers should be cautious and thoughtful about how their decisions affect travel behavior. The report is attached.

DISCUSSION:
The jurisdictions surveyed are listed below. A fuller discussion of the individual fees, the date adopted, and the use of the revenues can be found in a table on page 2 of the report. The State of California's fee appears to apply to total TNC revenue, and to fund regulatory activities at the state's Public Utilities Commission.

Cities
- Chicago, IL
- New Orleans, LA
- New York, NY
- Philadelphia, PA
- Portland, OR
- Seattle, WA
- Washington, D.C.

States
- Alabama
- California
- Connecticut
- Hawaii
- Maryland
- Massachusetts
- Nevada
- New York
- Rhode Island
- South Carolina
- South Dakota
- Wyoming

The authors seek to answer, or at least provide additional clarification regarding 4 key policy questions:

- Can TNC taxes and fees offset negative effects of urban congestion?
- Should TNC taxes and fees fund infrastructure and public transit investment?
- Can TNC taxes and fees provide parity with traditional taxi services?
- Should TNC taxes and fees create funding streams for regulatory costs and community needs?

The authors' discussions of the following questions can be found on pages 3 and 4 of the attached policy brief.

Eno Center for Transportation

Eno Brief

July 2018

Taxing New Mobility Services: What's Right? What's Next?

So Jung Kim and Robert Puentes

Transportation network companies (TNCs)—Uber, Lyft, and Via—are now established parts of many cities' urban mobility systems. Given their popularity, they are also attractive targets for state and local policymakers looking for a way to fund transit and infrastructure, to establish parity with taxis, to cover regulatory costs, and to support programs that improve equitable mobility.

Today, seven major cities and 12 states have some type of fee or tax on TNC trips. While it may be a straightforward way to raise revenue, these charges are often shortsighted budget exercises rather than deliberate public policy. As more states and cities consider taxes on TNC services, policymakers should be cautious and thoughtful about how their decisions affect transportation behavior.

Unfortunately, too little is known about TNC fees. This uncertainty has pitted transit and new mobility advocates against each other in an unhelpful debate that has hindered new kinds of shared-service partnerships and collaborative thinking about the best way to get around increasingly congested places. As services like TNCs proliferate around the globe, it is important to understand what these fees are, what purpose they intend to serve, and how they fit into broader metropolitan transportation policies.

The table on the following page shows the current state and general purposes of TNC taxes and fees to date in the United States.

Earlier this spring, the state of New York levied new surcharges on TNC and taxi trips in the busiest areas of Manhattan, while in Washington State, efforts to apply the taxi sales tax to TNCs failed. Georgia lawmakers proposed a TNC-trip fee as part of a regional transit bill. Philadelphia officials called for switching its per-trip percentage assessment to a $0.50 surcharge in order to generate more revenue.

Policy Questions

There are four main questions cities and states are trying to answer when they levy taxes and fees on TNCs. Some reflect a rational nexus between the fee charged and the needs created and benefits incurred by the service. But that is not always the case.

Can TNC taxes and fees offset negative effects of urban congestion?

TNCs are criticized for exacerbating congestion, particularly in busy downtown areas where they are routinely used for work trips. Despite the growing presence of TNCs on the streets, the vast majority of U.S. commutes are in privately owned, single-occupant vehicles (SOVs). Yet, no major city specifically taxes SOVs for their disproportionate impact.

TNCs generally support taxes on their services as long as they are part of broader transportation initiatives. They have lobbied in support of congestion pricing, fuel tax indexing, toll increases, and ride-pooling incentives across the country. For example, TNCs backed Governor Andrew Cuomo's congestion pricing scheme for New York City, but opposed the final outcome of surcharges only on TNCs and taxis, sparing all other SOV and truck drivers entering super-crowded, lower Manhattan.

Taxes and Fees Levied on TNCs (as of July 2018)

	Location	TNC Tax/Fee	When Enacted or Implemented	Disposition of Funds
Cities	Chicago, IL	$0.67 per trip	January 2018	$0.02 to Business Affairs and Consumer Protection $0.10 to vehicle accessibility fund $0.55 to city general fund
	New Orleans, LA	$0.50 per trip originating inside the parish	April 2015	100% to Department of Safety and Permits
	New York, NY	8.875% of total fare	2014	51% to city general fund 45% to state general fund 4% to Metropolitan Transportation Authority
		$2.75 per trip or $0.75 per rider if pooled	January 2019	100% to Metropolitan Transportation Authority
	Philadelphia, PA	1.4% of total fare of trips originating inside the city	November 2016	By Pennsylvania state law: 66.67% to city public schools 33.33% to city parking authority
	Portland, OR	$0.50 per trip	December 2015	100% to Bureau of Transportation
	Seattle, WA	$0.24 per trip on rides originating inside the city	July 2014	$0.14 to Department of Finance and Administrative Services $0.10 to Wheelchair Accessible Services Fund
	Washington, D.C.	6% of total fare	October 2018	17% to Department of For-Hire Vehicles 83% to Washington Metropolitan Area Transit Authority
States	Alabama	1% of total fare	February 2018	50% to Public Service Commission regulator 50% to trip-originating cities and counties
	California	0.33% of total TNC revenue	September 2013	100% to California Public Utilities Commission Transportation Reimbursement Account
	Connecticut	$0.25 per trip	January 2018	General fund
	Hawaii	4% of total fare	January 2018	General fund
	Maryland	State law allows individual counties and municipalities to impose their own per-trip assessments up to $0.25	July 2015	100% to State Transportation Network Assessment Fund Cities assessing maximum $0.25: Ocean City, Annapolis, Frederick, Brunswick, Baltimore Counties assessing maximum $0.25: Montgomery, Prince George's
	Massachusetts	$0.20 per trip	August 2016	50% to trip-originating cities infrastructure 25% to taxi industry assistance 25% to Commonwealth Transportation Fund
	Nevada	3% of total fare	May 2015	100% to State Highway Fund up to $5 million in a two-year period, then deposits into State General Fund
	New York	4% of total fare on trips originating outside NYC	June 2017	100% to state general fund
		2.5% of total fare	2014	100% to Black Car Fund workers' compensation insurance
	Rhode Island	7% of total fare	July 2016	General fund
	South Carolina	1% assessment on total fare	June 2015	1% to Office of Regulatory Staff 99% to State Treasury Trust and Agency Fund
	South Dakota	4.5% of total fare	October 2017	General fund
	Wyoming	4% of total fare	March 2017	69% to state general fund 31% to local governments

**Note: This table was updated to include Connecticut and Wyoming on July 25, 2018.*

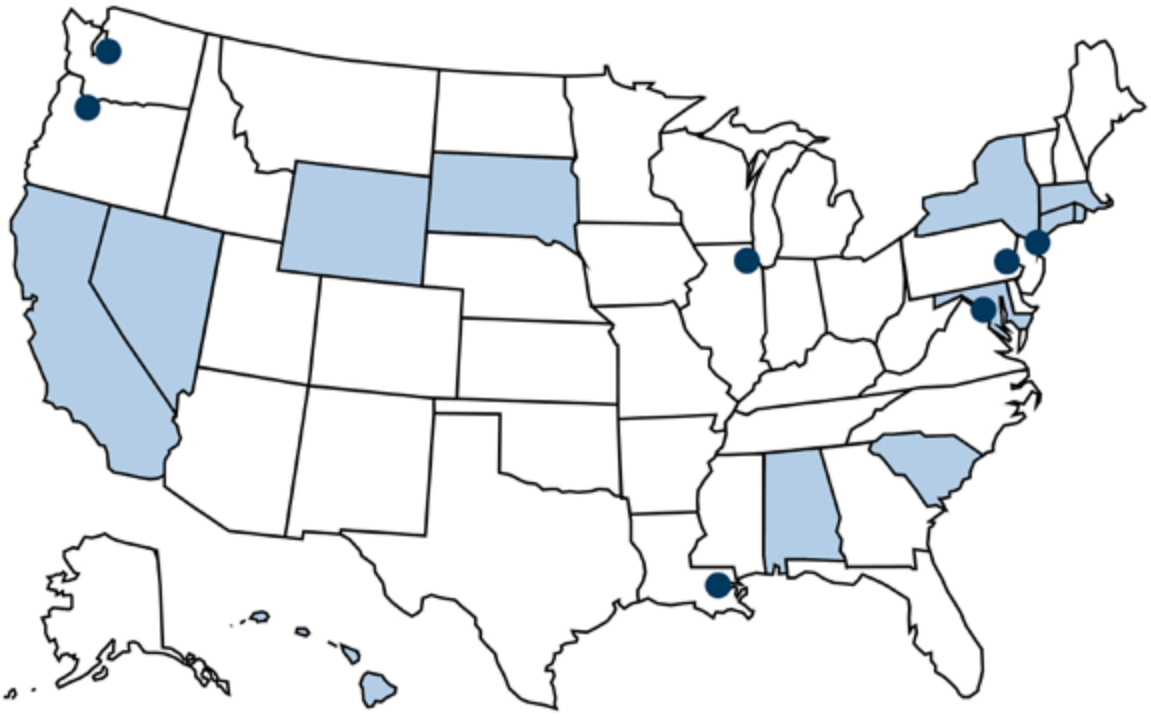
Should TNC taxes and fees fund infrastructure and public transit investment?

Several states deposit tax revenue into generalized state transportation funds for infrastructure. Of those states, a subset, including Maryland, South Carolina, and Massachusetts, return portions of the assessments to each municipality or county where the trip originated, where they are likely to be spent improving local roadways. In a few cities, leaders are wielding TNC fees as a way to both take advantage of growing TNC competition and to prop up the budgets of their public transit authorities, partly to offset ridership losses.

However, the revenues raised from TNC fees are very small compared to transit agency budgets. Chicago's new 15-cent fee increase is dedicated to the regional transportation network and will raise an expected $16 million this year in order to support the agency's $2 billion annual operating budget. The District of Columbia's 2019 Budget Support Act raised the TNC per-ride tax to 6 percent, up from 1 percent, in order to raise an estimated $18 million for its regional transit system's $1.8 billion annual operating budget.

Local D.C. officials justified this escalation saying TNCs are direct competitors diverting local ridership and revenue away from subway trains and buses. In response to these assertions, TNCs point to research indicating their efficacy as first-mile, last-mile and late-night complements that encourage transit use. (Six District of Columbia council members recently introduced legislation to reduce the pooled ride tax back to 1 percent, which would help to encourage sharing of rides.)

Cities and States with TNC Taxes or Fees (as of July 2018)



Cities:
Chicago, IL
New Orleans, LA
New York, NY
Philadelphia, PA
Portland, OR
Seattle, WA
Washington, D.C.

States:
Alabama
California
Connecticut
Hawaii
Maryland
Massachusetts
Nevada
New York
Rhode Island
South Carolina
South Dakota
Wyoming

Can TNC taxes and fees provide parity with traditional taxi services?

Taxes on traditional taxi services predate the advent of TNCs. Eight states apply their general sales taxes to taxi trips. Seattle, Washington, D.C., and New York City have per-trip taxi fees that augment local budgets. Hawaii, South Dakota, and Rhode Island clarified through state law and agency guidance that TNCs are indeed subject to an equal sales tax rate as taxis there. Portland, Oregon levies an equal $0.50-fee on both service providers' rides. Deregulation is another path of equivalence: New Jersey repealed state sales taxes on limousine services effective May 1, 2017 so both TNCs and limousines could compete without extra taxes.

Blanket application of service sales taxes and taxi fees on TNCs make competition for single riders seem fairer, but it could cause unintended consequences. One newer feature of TNC services in major urban hubs is ride pooling: two or more people who happen to be traveling in the same direction can share a trip (UberPOOL, Lyft Line, and Via). With a theoretically unlimited chain of passengers entering and exiting throughout a pooled mega-route, a taxi-like per trip fee added to each rider's bill could tax a shared-use vehicle many times over—discouraging a travel option that has potential benefits for reducing congestion and mitigating environmental impact. Flat fees, such as Chicago's 67 cents per ride, amount to a regressive tax on the lower cost rides, especially those that are shared rides. For example, A 67 cent fee on a $4 shared ride amounts to an 18 percent tax.

Another key difference between TNCs and taxis is how prices are calculated. TNCs are unique for their app-based, on-demand variable pricing, in stark contrast to strict taxi fares charts decided by the local government. A percent-based sales tax on top of TNC-trip surge pricing, after a major sporting event for example, could balloon into a very large amount that costs much more than a similar trip in a traditional taxi charging a constant rate—to the latter's competitive advantage.

Should TNC taxes and fees create funding streams for regulatory costs and community needs?

Without a doubt, regulation costs money and time, especially when the target industry is constantly innovating. Our analysis shows that frequently, revenues go directly toward the operating, administrative, and enforcement costs of regulating the new TNC industry. Governments' first priority and least politically fraught role in regulating modern transportation is safety, as noted by the prevalence of TNC laws regulating and licensing vehicles and drivers. Thus, collecting funds for the cost of inspections, registrations, and permits makes perfect sense.

Policymakers can use modest fees to ensure everyone in the region benefits from TNC services. Chicago and Seattle each set aside a dime from each TNC fee for improved wheelchair accessibility services in for-hire vehicles like taxis. However, TNC drivers are often excluded because regulations make them ineligible for the funds. Portland is considering shifting its surplus revenue toward the needs of passengers with disabilities. From 2016 to 2021, a nickel of Massachusetts' $0.20 per-trip fee funds programs to assist the traditional taxi and livery small businesses to retool in the face of modernizing technology. Philadelphia spends two-thirds of its fee on city public schools, a non-transportation-related, public beneficiary of city spending.

Moving Forward

For now and the near future, cities and states will continue to experiment with a range of rules and regulations as they navigate a rapidly changing mobility landscape. As they do so, they must balance the temptation to quickly raise revenue with the long-term public policy goals they are ultimately trying to achieve.

If policymakers are fixated on reducing congestion, they should focus on actions that reduce SOVs—regardless of whether that trip is in a personal or TNC vehicle. Providing exemptions or lower prices for shared rides, charging flat fees on all SOVs, or some combination of these kinds of policy levers would certainly help tackle congestion in a more meaningful way than narrowly targeted TNC fees alone.

If the goal is to generate revenue for transit agencies, per-trip TNC fees are likely not sufficient replacements for the yawning budget gaps they are facing. The desire to support metropolitan public transit is certainly a worthy one. But the relationship between TNCs and transit appears to be more symbiotic than antagonistic. The very existence of TNCs allows at least a portion of urban residents to live without owning personal cars and to therefore be more reliant on transit. Greater availability of transportation options is a net positive that helps citizens to better access jobs, meet their individual needs and desires, and reach further economic opportunity.

At their best, TNCs enhance mobility and provide access for all community members. Despite robust activity within federalist laboratories of policy, the broader debate is currently fixated on taxation and deems TNCs as special exceptions to the norm. Instead, policymakers might be better served viewing them as now-established presences that should be better integrated into holistic transportation networks and missions.

So Jung Kim is the 2018 Thomas J. O'Bryant Fellow at Eno.
Robert Puentes is the President and CEO of Eno.

Eno wishes to acknowledge its Board of Advisors, a standing body that provides Eno staff with guidance and expertise on all matters related to transportation policy. The opinions expressed are those of Eno and do not necessarily reflect the views of our supporters.

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Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No: 3.4

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Matt Gleason, Senior Regional Planner, 213-236-1832,
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Subject: TCRP Reports 188 and 195

OVERVIEW:
The Transit Cooperative Research Program has published several recent analyses of the impact of new mobility technologies and strategies on public transportation. Two of these efforts were produced by the Shared Use Mobility Center, an advocacy group promoting shared mobility modes. Both reports incorporate analyses of the impact of Transportation Network Companies (TNCs) on public transportation use. The report's methodologies and findings are briefly summarized below.

DISCUSSION:
TCRP Research Report 188: Shared Mobility and the Transformation of Public Transit, published in 2016, examines the relationship of public transportation to shared modes, including bikesharing, carsharing, microtransit, and TNCs. The authors conducted surveys and interviews with staff and passengers in seven cities -- Austin, Boston, Chicago, Los Angeles, San Francisco, Seattle, and Washington, DC. In addition, the authors provide an assessment of transit and ridesourcing capacity, demand, and comparative travel times; practices and regulations relating to paratransit provision; and of current business models and public-private partnerships that build on new technologies from the emerging shared mobility sector.

The report's key findings:

1. Among survey respondents, greater use of shared modes is associated with greater likelihood to use transit frequently, own fewer cars, and less transportation spending
2. Shared modes largely complement public transit, enhancing urban mobility
3. Because shared modes are expected to continue growing in significance, public entities should identify opportunities to engage with them to ensure that benefits are widely and equitably shared
4. The public sector and private mobility operators are eager to collaborate to improve paratransit using emerging approaches and technology
5. A number of business models are emerging that include new forms of public-private partnership for provision of mobility and related information services.

TCRP Research Report 195: Broadening Understanding of the Interplay among Public Transit, Shared Mobility, and Personal Automobiles, published last month, extends the research presented in *TCRP*

Research Report 188: Shared Mobility and the Transformation of Public Transit. A pre-publication draft of TCRP 195 was shared with the RTTAC in January 2018, and the key findings remain unchanged with the formal publication of the report.

TCRP 195 broadens understanding of the interplay between emerging and established modes of transportation by further exploring how shared modes, particularly transportation network companies, are being incorporated into the mix of transportation options. This report will help transit agencies and other public entities to better understand the opportunities and challenges as they relate to technology-enabled mobility services.

The report features an analysis of survey data, model outputs, and origin and destination data provided by a transportation network company.

Key findings from this research include:

1. The heaviest TNC use across the regions in this study is during the evening hours and weekends.
2. Most TNC trips in the study regions are short and concentrated in the downtown core neighborhoods.
3. There is no clear relationship between the level of peak-hour TNC use and the longer-term changes in the study regions' public transit usage.
4. Among survey respondents, people who use transit or commute by driving solo do so as part of a routine; TNCs are used on a more occasional basis.
5. Transit travel and wait times were the top concerns of survey respondents who replaced transit trips with TNC trips.
6. TNC usage takes place in communities of all income levels.
7. TNC use is associated with decreases in respondents' vehicle ownership and single-occupancy vehicle trips.

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No: 3.5
August 29, 2018

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

Subject: SB-1 Funding for Transit

DISCUSSION:
At the April 30, 2018 RTTAC meeting, SCAG staff provided an update on the SB-1 repeal effort, now called Proposition 6. At the Chair's request, staff is providing in this report and attachments additional information on the programs and projects in the SCAG region that have been awarded SB-1 funds to date and/or may be affected by the repeal.

SB-1 provides funding for transit through several programs, as follows.

State Transit Assistance (STA) Program: approx. $250 million annually

- SB-1 augments the existing STA Program, where revenues are allocated by the State Controller's Office via formulas based on agency revenue and population.
- Funds both capital and operations.
- For 2018-19, SB-1 is estimated to more than double the region's STA program, to $285 million.

STA Program - Estimates for 2018-19

County	Base (No SB-1)*	SB-1 Amount*	Total Amount**
Imperial	$810,594	$949,915	$1,760,509
Los Angeles	$89,835,632	$105,276,205	$195,111,837
Orange	$16,236,335	$19,026,968	$35,263,303
Riverside	$10,777,100	$12,629,425	$23,406,525
San Bernardino	$9,899,121	$11,600,540	$21,499,661
Ventura	$3,824,905	$4,482,314	$8,307,219
Total SCAG Region	**$131,383,687**	**$153,965,367**	**$285,349,054**

*Base and SB-1 amounts were estimated using analysis by the California Transit Association, https://caltransit.org/cta/assets/File/Projected%20Increase%20in%20STA%20Allocations%204-12-17%20-%20May%20Revise.pdf

**County totals are from the State Controller's Office, August 1, 2018 estimates, https://www.sco.ca.gov/Files-ARD-Payments/Transit/statetransitassistanceestimate_1819_august18.pdf

State of Good Repair (SGR) Program: approx. $105 million annually

- Funds transit capital projects or services to maintain or repair existing transit fleets and facilities; new vehicles or facilities that improve existing transit services; or transit services that complement local efforts to repair and improve local transportation infrastructure.
- Funds are available to eligible transit operators based on STA formula.
- The SCAG region is estimated to receive over $45 million in 2018-19 from this program.

SGR Program - Estimates for 2018-19

County	Amount
Imperial	$278,610
Los Angeles	$30,877,477
Orange	$5,580,604
Riverside	$3,704,206
San Bernardino	$3,402,435
Ventura	$1,314,661
Total SCAG Region	**$45,157,993**

Source: State Controller's Office, August 1, 2018 estimates, https://www.sco.ca.gov/Files-ARD-Payments/Transit/statetransitassistanceestimate_sgr_1819_august18.pdf

Transit and Intercity Rail Capital Program (TIRCP): approx. $300 million annually

- SB-1 augments the existing TIRCP, which is funded annually by 10% of the Cap-and-Trade Program's auction proceeds deposited into the Greenhouse Gas Reduction Fund.
- TIRCP supports transformative capital improvements to modernize California's intercity, commuter and urban rail systems and bus and ferry transit systems, and reduce congestion and greenhouse gas emissions.
- In April 2018, the California State Transportation Agency (CalSTA) awarded $1.39 billion in TIRCP grants to the SCAG region for the period 2018-19 to 2022-23 (http://www.dot.ca.gov/drmt/docs/sptircp/2018_awardlist.pdf).
- The grants awarded include $763.7 million for Metrolink's Southern California Optimized Rail Expansion (SCORE) proposal and $330.2 million for Metro's Los Angeles Region Transit System Integration and Modernization Program of Projects.

State Rail Assistance (SRA) Program: approx. $39 million in 2018-19

- Directs half of the funds to commuter rail and the other half to intercity rail.
- In January 2018, CalSTA awarded $10.5 million to Metrolink to modernize signal and track infrastructure near Los Angeles Union Station and $2.3 million to the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor Agency for improvements to the Pacific Surfliner (https://calsta.ca.gov/wp-content/uploads/sites/12/2018/01/SRA-Applications-One-page-Summary.pdf)

Additional Competitive Funding Programs:

- SB-1 funds are also awarded to transit projects through competitive grant programs.
- Solutions for Congested Corridors Program – in June 2018, the California Transportation Commission (CTC) awarded $235 million to three transit projects in the SCAG region: Airport Metro Connector/96th Street Transit Station, Orange County Central Corridor Improvements (five hydrogen fuel cell buses), and Redlands Passenger Rail in San Bernardino County (http://www.catc.ca.gov/programs/sb1/sccp/docs/2018_Amended_SCCP.pdf).
- Local Partnership Program – in May 2018, the CTC awarded $144 million in competitive funds to the SCAG region, of which $94.7 million was for transit: Metro Orange Line Bus Rapid Transit, Santa Clarita's Vista Canyon Metrolink Station, and Redlands Passenger Rail (http://www.catc.ca.gov/programs/sb1/lpp/competitive/docs/2018_Adopted_CompetitiveLPP.pdf).
- Trade Corridor Enhancement Program – in June 2018, the CTC awarded funds to several grade separations in the SCAG region, including the Rosecrans/Marquardt Grade Crossing project providing improvement along the LOSSAN Corridor and Metrolink Orange and Riverside lines. (http://www.catc.ca.gov/programs/sb1/tcep/docs/2018_Amended_TCEP.pdf).

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No: 3.6

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Matt Gleason, Senior Regional Planner, 213-236-1832,
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Subject: Public Transportation Agency Safety Plan (49 CFR 673.15)

OVERVIEW:
SCAG has been incorporating the principles of performance based planning into its long range plans since the 1998 RTP. Subsequent to MAP -21 and the FAST ACT, MPOs will be required to incorporate a series of federally mandated safety and asset management measures into their processes. On Thursday, July 19, 2018, the FTA published a final rule titled "Public Transportation Agency Safety Plan (49 CFR 673.15)" regulating how chapter 53 grantees would have to implement federally mandated safety standards. The effective date of the rule is July 19, 2019, and compliance date is July 20, 2020.

DISCUSSION:
The Public Transportation Agency Safety Plan is the last in a series of rulemakings that began with the passage of MAP-21 on June 29, 2012. This statute and the rules it required have enacted new responsibilities for transit providers, state departments of transportation, and metropolitan planning organizations. FTA has adopted five safety specific rules since the passage of MAP-21, that established safety regulatory powers and responsibilities, guide training, and spell out roles, responsibilities and performance measures:

1. Public Transportation Agency Safety Plan Final Rule
2. National Public Transportation Safety Plan
3. State Safety Oversight (SSO) Final Rule
4. Public Transportation Safety Program Final Rule
5. Public Transportation Safety Training Certification Program Final Rule

In addition, FTA and FHWA jointly promulgated the Final Rule on Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning on May 27, 2016, implementing changes to the state and regional planning, including:

- requiring a performance-based approach to planning
- a new emphasis on the nonmetropolitan transportation planning process, by requiring states to have a higher level of involvement with nonmetropolitan local

officials and providing a process for creating regional transportation planning organizations
- adding a structural change to the membership of large metropolitan planning organizations (MPOs) to include transit provider representation
- adding a framework for voluntary scenario planning
- implementing new authority for integrating the planning and environmental review processes as well as programmatic mitigation plans

A series of rules promulgated by FHWA, FTA, or jointly by both agencies have outlined a performance management framework for recipients of federal funds. The Public Transportation Agency Safety Plan Final Rule specifically requires transit agencies employing federal funds to develop a safety pan and annually self-certify compliance with that plan (exceptions are made for commuter rail agencies regulated by FRA, ferries, and recipients that only receive section 5310 or 5311 funds). The National Public Transportation Safety Plan adopted four performance measures to be included:

1. Fatalities
2. Injuries
3. Safety Events
4. System Reliability

These safety performance measures are intended to reduce safety events, fatalities, and injuries. These measures are broad so that they will be relevant to all public transportation modes, and they are intended to focus transit agencies on the development of specific and measureable targets, as well as the actions each agency would implement

The rule also spells out Coordination with Metropolitan, Statewide, and Non-Metropolitan Planning Processes. In accordance with 49 U.S.C.5303(h)(2)(B) and 5304(d)(2)(B), each State and transit agency must make its safety performance targets available to States and Metropolitan Planning Organizations to aid in the planning process. Section 673.15(b) requires, to the maximum extent practicable, a State or transit agency to coordinate with States and Metropolitan Planning Organizations in the selection of State and MPO safety performance targets.

Under the performance management framework established by MAP–21, States, MPOs, and transit providers must establish targets in key national performance areas to document expectations for future performance. Pursuant to 49 U.S.C. 5303(h)(2)(B)(ii) and 5304(d)(2)(B)(ii), States and MPOs must coordinate the selection of their performance targets,

to the maximum extent practicable, with performance targets set by transit providers under 49 U.S.C. 5326 (transit asset management) and 49 U.S.C. 5329 (safety), to ensure consistency.

The National Public Transportation Safety Plan spells out the specific Relationship between Safety Performance Management and Planning, an excerpt from that plan is attached.

NEXT STEPS:
SCAG will engage in safety target setting activities subsequent to the rule's compliance date in July 2020. The Metropolitan Transportation Planning Final Rule allows MPOs 2 years from the effective date of a rule establishing performance measures to comply. This means SCAG must establish transit safety performance targets by July 19, 2021 and any RTP or FTIP adopted on or after this date must comply.

Attachment A: Excerpt from the National Public Transportation Safety Plan discussing performance measures and relationship of the safety plan to other planning efforts.

FTA

FEDERAL TRANSIT ADMINISTRATION

National Public Transportation Safety Plan

January 2017

Version 1.0

U.S. Department of Transportation

Federal Transit Administration

annual review of a Public Transportation Agency Safety Plan, each transit agency should reevaluate its safety performance measures and determine how the measures should be refined, sub-measures developed, and performance targets selected.

What are the Safety Performance Measures?

SAFETY PERFORMANCE MEASURE: **FATALITIES** (total number of reportable fatalities and rate per total vehicle revenue miles by mode)

Reducing the number of fatalities is a top priority for the entire Department of Transportation. As an industry, we must try to understand the factors involved in each fatality in order to prevent further occurrences. Measuring the number of fatalities over vehicle revenue miles, by mode, provides a fatality rate from which to assess future performance.

SAFETY PERFORMANCE MEASURE: **INJURIES** (total number of reportable[8] injuries and rate per total vehicle revenue miles by mode)

Many transit agencies have never had a fatality, and continued safe operation is exactly what is desired. However, injuries occur much more frequently, and are due to a wide variety of circumstances. Analyzing the factors that relate to injuries is a significant step in developing actions to prevent them. Again, measuring the number of injuries by mode, over vehicle revenue miles provides an injury rate from which to assess future performance.

SAFETY PERFORMANCE MEASURE: **SAFETY EVENTS** (total number of reportable events and rate per total vehicle revenue miles by mode)

The safety events measure captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities. A reduction in safety events will support efforts to reduce fatalities and injuries, as well as damages to transit assets. Measuring the number of safety events by mode over vehicle

[8] The thresholds for "reportable" fatalities, injuries, and events are defined in the NTD Safety and Security Reporting Manual.

revenue miles provides a safety event rate from which future performance can be compared.

SAFETY PERFORMANCE MEASURE: **SYSTEM RELIABILITY** (mean distance between major mechanical failures by mode)

The system reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.[9] This is a measure of how well a fleet of transit vehicles is maintained and operated. FTA recognizes the diversity of the transit industry, and that agencies have varied equipment types, with varied rates of performance, so this measure allows agencies to develop safety performance targets that are specific to their own fleet type, age, operating characteristics, and mode of operation.

How are Safety Performance Measures Used to Improve Safety Performance?

The public transportation industry already has parameters for measuring some aspects of safety performance which are reported to the NTD (see Table 3-1). However, these measures need clear definitions to ensure consistency in data reporting, and better baselines against which to make future comparisons. To address these inconsistencies, FTA will develop performance measures for future editions of the National Safety Plan that address industry-wide concerns as well as those that are mode-specific. Transit agencies would have the opportunity to select those that address their particular objectives for safety improvement.

Table 3-1 Data and Information from Safety and Risk Monitoring in the Transit Industry[10]

[9] Major Mechanical System Failures: Major mechanical system failures prevent a vehicle from completing or starting a scheduled revenue trip because actual movement is limited or because of safety concerns. Examples of major bus failures include breakdowns of brakes, doors, engine cooling systems, steering, axles, and suspension.

[10] Table 3-1 illustrates the types of information that is currently collected by the transit industry to measure its safety performance.

Existing safety performance measures (under NTD)

- **Casualties**
  - Fatalities (customers, employees, and the public)
  - Injuries (customers, employees, and the public)
- **Property damage**
- **Reportable events (Accidents)**
  - Train derailments (mainline, yard, side tracks)
  - Collisions (vehicle-to-vehicle, vehicle-to-person, vehicle-to-object)
  - Collisions at grade-crossings
  - Fires
  - Evacuations for life safety reasons

Results from reportable event (accident) investigations

- Probable cause
- Contributing factors
- Corrective actions

Audit results

- Findings
- Corrective actions

Safety risk management and monitoring information

- Safety reporting from all levels of the organization
- Violations of operations and maintenance rules
- Job-based certification and awareness training
- All-hazards preparedness analyses
- Operations and maintenance performance, including state of good repair (SGR) and TAM
- Monitoring of hazard logs
- Crime trends, such as trespassing, perimeter breaches, and fare evasion
- Fitness for duty, including drug/alcohol program results and hours of service
- Liability losses
- Customer complaint information
- Changes to management, operations, or maintenance
- Studies of hazardous materials, spills, and environmental concerns
- Ad hoc studies of hazards and vulnerabilities

For every performance measure selected, FTA and transit agencies can develop baselines and targets against which to measure and compare performance. Meaningful performance targets are timely, accurate, accessible, and complete. When possible, it is best to analyze data over time to determine if trends are present.

Establishing baselines for performance measures provides grounded metrics as the basis for further and future comparison. Safety performance baselines may be established for individual transit agencies, for transit agency modes, and/or for the public transportation industry as a whole.[11] After a baseline is established, a transit agency can develop safety performance indictors and select safety performance targets to allow tracking of safety performance improvement progress. Performance should be measured at least annually by comparing actual performance metrics with targets and original baselines. If safety performance improves, an agency may choose to revise its safety performance targets to be more stringent or select different safety performance indicators and targets for improvement.

Transit safety performance can be measured using a number of measures, including lagging indicators such as accidents, fatalities, injuries, and property damage associated with transit agencies' provision of service, and leading indicators. Leading indicators provide a transit agency with the ability to monitor information or conditions that may affect safety performance. Lagging indicators provide information on events that have already taken place.

In the future, FTA intends to transition to include proactive measures and encourages transit agencies to do the same. Table 3-2 describes lagging and leading indicators in greater detail. In addition to the performance measures set forth in this Plan, FTA strongly encourages agencies to incorporate both lagging and leading indicators directly related to safety issues identified in their agencies as high risk into their performance management portfolio. Agencies should consider including positive measures that assess what people are doing rather than what they are failing to do.

[11] FTA and States can establish baselines for the performance measures within their SMS programs, as well.

Table 3-2. Lagging and Leading Indicators[12]

Lagging indicators characteristically:

- Identify trends in past safety performance
- Assess outcomes and occurrences
- Have a long history of use
- Are an accepted standard
- Are easy to calculate

Leading indicators are safety culture metrics that are associated with, and precede, an accident. They can:

- Reveal areas of weakness in advance of accidents
- Be associated with proactive actions to identify hazards
- Aid risk assessment and management

This is also the starting point from which FTA expects to advance through the development and implementation of a new strategic data management plan which will support the standardization of data and information collection and analysis. Standardized analyses and reporting will enable FTA to apply meta-analyses to transit safety performance results for better national-level monitoring of transit safety performance. Along with continued collaboration with States and the public transportation industry, this national-level monitoring will facilitate FTA's identification of opportunities to assist agencies in improving transit safety through technical assistance, research, and development of resource materials that address emerging safety issues.

FTA expects that each agency, regardless of size, will evaluate its own operating environment and safety concerns to determine its safety risks, link specific safety objectives to agency actions, develop measures for identified actions, and set performance targets based on the measures. After FTA issues a final rule for the Public Transportation Agency Safety Plan, each transit agency will be required to reevaluate its safety performance measures annually when reviewing and updating its agency

[12] Adapted from *Guidance Notes on Safety Culture and Leading Indicators of Safety*. American Bureau of Shipping (ABS), page 3. Available at http://www.eagle.org/eagleExternalPortalWEB/ShowProperty/BEA%20Repository/Rules&Guides/Current/188_Safety/Guide

Relationship between the National Safety Plan and Public Transportation Agency Safety Plans

In accordance with the statutory requirements of 49 U.S.C. § 5329(d)(1)(E), each transit agency must include in its public transportation agency safety plan, performance targets based on the safety performance measures established in this Plan. Each public transportation agency should establish sub-measures and related safety performance targets in their Public Transportation Agency Safety Plans that are appropriate to the agency's size and complexity.[14] Transit agencies will use these safety performance measures and targets to inform evaluation of the effectiveness of their SMS. These measures should evolve in subsequent years based on information learned through the Safety Risk Management and Safety Risk Assurance processes, and should help inform these activities.

The process of setting performance targets would require each transit provider to think quantitatively about its own safety needs and analyze what resources it could leverage to address those needs. How a transit provider sets its performance targets would be an entirely local process and decision; however, each provider should be able to explain what happened as a result of actions taken during the performance measurement period that affected its safety outcomes. For example, what mitigations were put in place that appear to have led to improved safety performance?

Relationship between Safety Performance and Transit Asset Management

The safety and performance of a public transportation system depend, in part, on the condition of its assets. When transit assets are not in a state of good repair, the consequences include increased safety risks, decreased system reliability, higher maintenance costs, and lower system performance.

In passing MAP-21, Congress recognized the critical relationship between safety and asset condition. We note, in particular, the congressional direction that the National

[14] Initially, some agencies may use output measures, such as the number of vehicles inspected, or the percentage of employees who have completed safety training. Outcome measures are useful for establishing benchmark performance and setting targets.

Safety Plan include the definition of *state of good repair* set in the rulemaking for asset management (49 U.S.C. § 5329(b)(2)(B)). The Transit Asset Management rule at 49 CFR part 625 define state of good repair as "the condition in which a capital asset is able to operate at a full level of performance." 49 CFR § 625.5.

Transit asset management is a strategic approach to improving and maintaining the condition of transit capital assets. The TAM rule aims to reduce the Nation's state of good repair backlog of deferred maintenance and replacement needs by requiring recipients to create TAM plans that will help them systematically address their maintenance needs, which will in turn improve service. Implementing a TAM plan will require transit agencies to collect and use asset condition data, set targets, and develop informed strategies to prioritize investments to meet their state of good repair goals.

TAM plans must include an asset inventory, condition assessments of inventoried assets, and a prioritized list of investments to improve the state of good repair of their capital assets. Recipients also must set SGR performance targets to monitor improvements in the condition of their assets. Implementing a TAM plan will require transit agencies to use data to make informed investment priorities to meet their state of good repair goals. Optimally, a transit agency's asset management planning process will work hand-in-hand with the agency's SMS for the mutual benefit of both, all under the leadership of the Accountable Executive. The following are three specific elements of the connection between safety and transit asset management:

1. **A condition assessment should direct and inform a transit agency's SMS**

The result of a condition assessment required under the TAM rule may oblige a transit agency to perform risk assessment and quality assurance--in accordance with the second and third pillars of SMS--for facilities, equipment, rolling stock, and infrastructure in poor condition. Although an asset that is in poor condition might not pose any specific safety risk to the transit system, that asset still might be prioritized for repair, rehabilitation, or replacement if the asset is negatively affecting system performance, reliability, or quality of service. Even for an asset that is in optimal condition, a transit agency may have reason to perform a risk assessment in light of its operating environment or other agency objectives (for example, resiliency for assets in flood zones).

2. **A transit agency's SMS will inform its TAM Plan and investment prioritization**

The results of safety risk management and safety assurance under a transit agency's SMS will provide valuable input to the agency's TAM Plan, and, in some instances, motivate the agency to revise its investment priorities accordingly. Ultimately, a transit agency makes its own decisions about trade-offs and investment priorities, based on the analytical processes, decision support tools and policies under its TAM Plan, and the agency's written policy for safety—the first pillar of an effective SMS—but the constant, deliberate feedback between the TAM Plan and the SMS will bring greater accountability and transparency to the agency's decision-making on the annual allocation of its financial resources.

3. **An agency's Accountable Executive should have a decision-making role in the agency's TAM Plan and investment prioritization**

The Accountable Executive who is ultimately responsible for risk management and safety assurance under a transit agency's SMS should be the same person who is responsible for approving the agency's capital plan and who makes decisions about investment prioritization. At minimum, however, the Accountable Executive should have a focal role in the transit agency's decision-making about the trade-offs amongst reinvestment in existing facilities, equipment, rolling stock, and infrastructure, versus investment in any new capital assets for purposes of improved performance of an expansion of service. Logically, the Accountable Executive for a transit agency's SMS would be either the General Manager or CEO. Across the industry, however, there are a variety of organizational structures for transit agencies, and in many agencies, the decisional authority for capital and operating expenditures lies with a Board of Directors. Whatever the structure of an organization, the Accountable Executive should engage with other agency executives in a candid, continuous dialogue about the connection between safety and transit asset management.

Positive changes in safety performance across public transportation will depend largely on a common understanding between transit asset management and safety, dedicated implementation of both a TAM Plan and Public Transportation Agency Safety Plan, and a targeted safety oversight and monitoring program. The performance measures and targets for both safety and transit asset management will enable transit agencies and

FTA to quantify our progress in enhancing safety and improving the condition of our facilities, equipment, rolling stock, and infrastructure through continuous performance management.

Relationship between Safety Performance Management and Planning

The safety performance targets set by transit providers, along with other performance targets set pursuant to other statutes, are an essential component of the planning process. The planning provisions at 49 U.S.C. 5303 and 5304 require States and MPOs to establish performance targets for transit that are based on the national measures for state of good repair and safety established by FTA and to coordinate the selection of those performance targets, to the maximum extent practicable, with performance targets set by transit providers to ensure consistency. 5303(h)(2)(B)(ii), 5304(d)(2)(B)(ii).

Furthermore, the Long Range Statewide Transportation Plan should and the Metropolitan Transportation Plan shall include: (1) a description of the performance measures and targets; and (2) a report evaluating the condition of the transit system(s) with respect to the State and MPO performance measures and targets, including the progress achieved in meeting performance targets compared with system performance recorded in previous years. 49 U.S.C. 5303(i)(2)(B) and (C), 5304(f)(7). Transportation improvement programs (TIPs) and statewide transportation improvement programs (STIPs) must include, to the maximum extent practicable, a discussion of the anticipated effects of the TIP/STIP toward achieving the performance targets in the Statewide and Metropolitan Transportation Plans by linking investment priorities to those performance targets. 49 U.S.C. 5303(j)(2)(D), 5304(g)(4).

The integrated planning process mandated by MAP-21 and the FAST Act should result in States and MPOs being able to identify investment and management strategies to improve or preserve the condition of transit capital assets in order to achieve and maintain a state of good repair.

FTA strongly encourages transit providers, States, and MPOs to set meaningful progressive targets, based on creative and strategic leveraging of all available financial resources. Although the law does not provide FTA with the authority to reward transit providers for meeting a performance target, or impose penalties for missing a

performance target, FTA believes that the process of setting targets and measuring progress reflects the increased expectations for improving transit safety.

The RTTAC meets quarterly on the fifth Wednesday of the month. Following is a tentative look-ahead to the proposed RTTAC agendas for 2018. It includes three standing items requested by the Chair and Vice Chair for:

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

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

August 29, 2018

- Regulatory Compliance Standing Item
  - ARB SB375 GHG Emissions Reduction Targets Update
- Performance Standing Item
  - 2020 RTP/SCS Base Year System Performance
- Technology and Mobility Innovations Standing Item
  - Monrovia Lyft and Limebike Partnerships*
  - SCAG ITS Architecture Update (Receive and File)
  - OC Flex Pilot
- 2020 RTP/SCS Trends and Challenges
- 2018 Election Legislative Update
- FY2017-18 Caltrans 5304 Program Completed Work (Receive and File)
- HQTC/Major Transit Stop Methodology

October 31, 2018

- Regulatory Compliance Standing Item
    - Private Sector Providers of Transportation Services
- Performance Standing Item
    - Performance Benchmarking Initial Findings
- Technology and Mobility Innovations Standing Item
    - Impact of Emerging Technologies Methodology for Public Transportation
    - LA Metro TAP Program
    - MTC Clipper Program*
    - Cubic
- 2020 RTP/SCS Scenario Planning Development
- HQTC/A Future Corridor Development

January 30, 2019

- Regulatory Compliance Standing Item
    - Transit Asset Management (SCAG work effort)
    - Regional Housing Needs Assessment/Growth Forecast
- Performance Standing Item
    - 2020 RTP/SCS Goals and Performance Measures (Impact of Map 21 Final Rules)
- Technology and Mobility Innovations Standing Item
    - Montebello Bus Lines On Board Video Detection System*
    - LA Metro Pilots/Office of Extraordinary Innovations*

May 29, 2018

- Regulatory Compliance Standing Item
    - Transit Safety Final Rule
- Performance Standing Item
    - UCLA Neighborhood Change
- Technology and Mobility Innovations Standing Item
    - Emerging Technologies and the 2020 RTP/SCS Framework
- 2016 RTP/SCS Implementation Progress
- 2020 RTP/SCS Transit Element Outline
- Private Sector Outreach

**Speakers not yet contacted*

NEXTGEN Bus Study

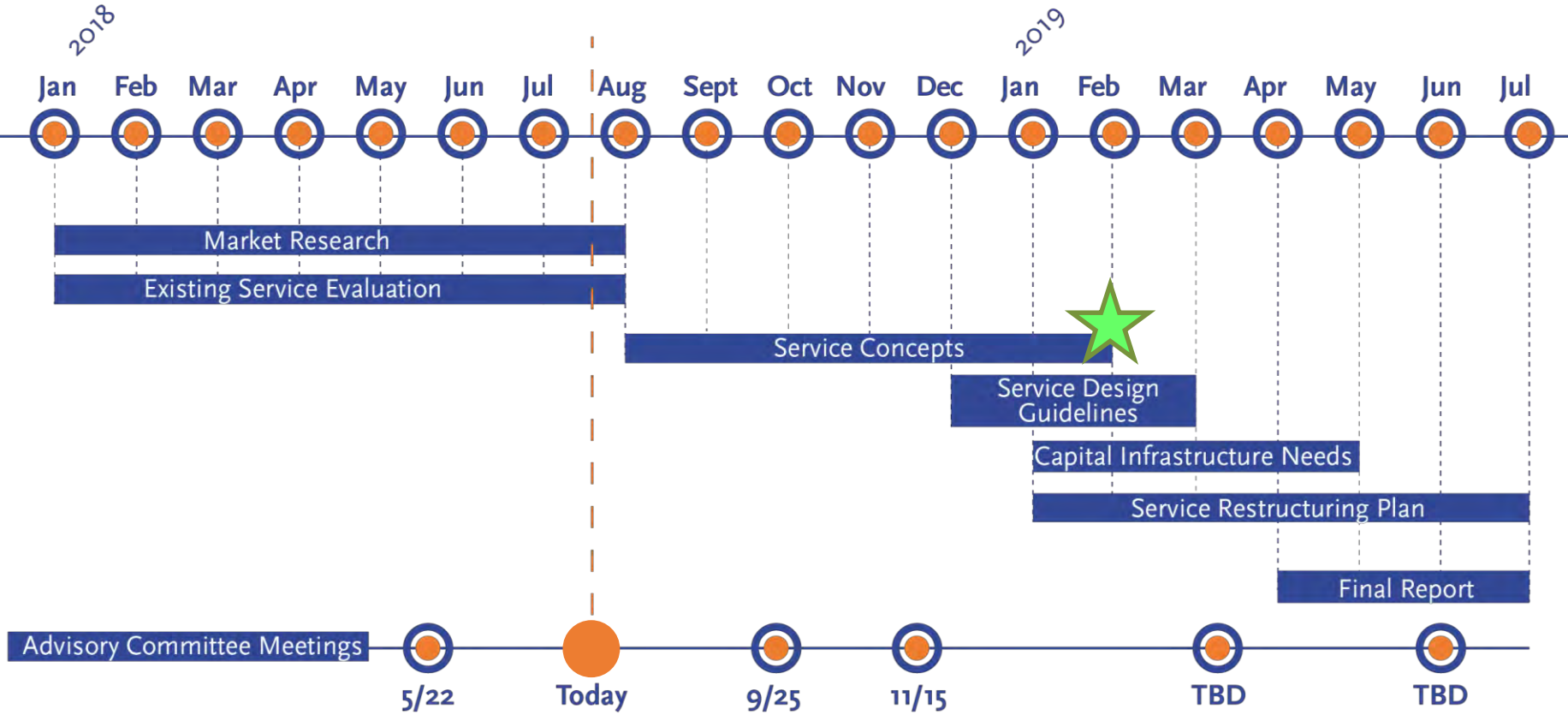
Transit Competitiveness and Market Potential

SCAG Update

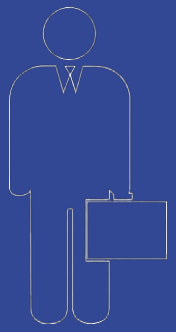
8.29.18

Metro

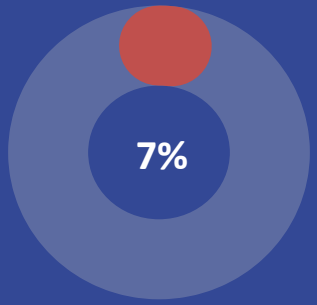
Schedule

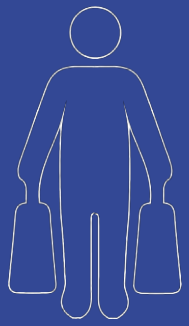

2018
2019
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Market Research
Existing Service Evaluation
Service Concepts
Service Design Guidelines
Capital Infrastructure Needs
Service Restructuring Plan
Final Report
Advisory Committee Meetings
5/22
Today
9/25
11/15
TBD
TBD

Four Types of Customers

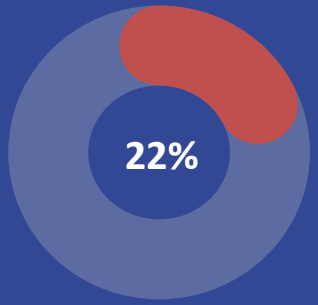


Frequent

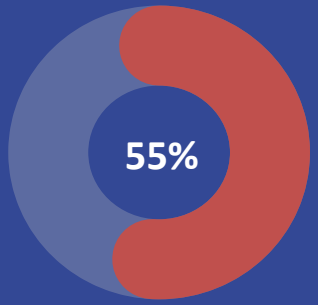


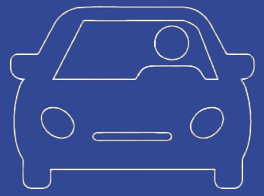


Occasional

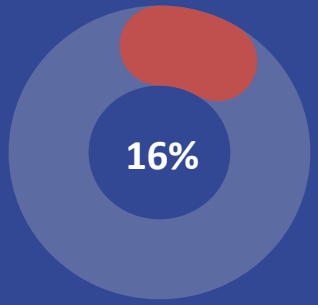


Infrequent





Non-Rider



As a % of all LA County residents

Transit Riders Frequency of Travel

Based on four months of TAP data


Frequent


Occasional


Infrequent

Usage Frequency	Count of Tap Cards	Count of Boardings
>150 Transactions	152,532 5%	43,680,893 52%
50 – 150 Transactions	248,851 9%	22,027,882 26%
10 – 50 Transactions	552,374 20%	12,585,194 15%
<10 Transactions	1,905,501 66%	5,614,072 7%
Total	2,859,258 100%	83,908,041 100%

43

Source: TAP data - Metro and Municipal Operators (July through October, 2017)

Our frequent rider base is getting smaller and they have more travel options

If 1 in 4 non riders used transit two times per month, we would more than recoup the lost ridership

But how do we

entice riders to ride more,

bring back former riders, and

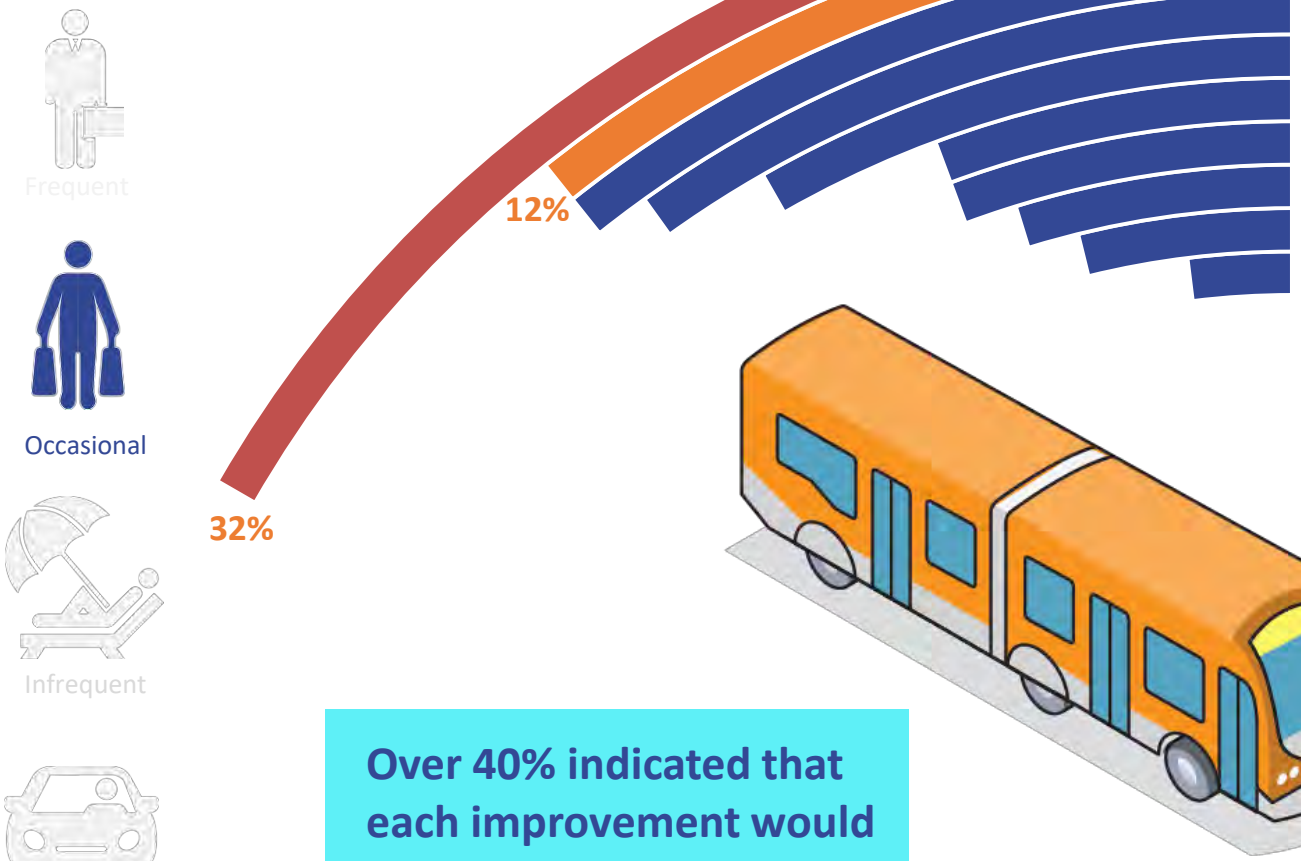
attract new riders?

Outreach to Date

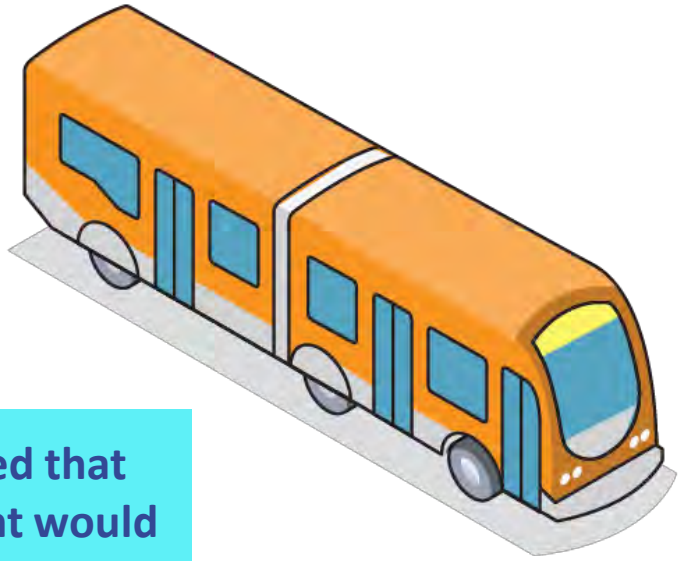
113,000+	Distribution of Multi-lingual Take Ones
350,000	Database Contacts
30+	CBO, Faith-Based & Community Events/Presentations
25+	Metro Service Council Presentations
18+	Community Pop-Up Events
10	Rap Sessions with Bus Divisions
3	External Working Group Meetings
3	Metro Customer Care Focus Group Sessions
2	Da Vinci High School Student Workshops
2	Telephone Town Halls
2	Metro TAC Meetings
2	Metro Internal Working Group Meetings

Current Riders

Primary Improvement Desired



- More frequent service
- More reliable service
- Lower fares
- More security
- More late-night service
- Cleaner buses or stops
- Better walking access
- More weekend service
- Better information
- Improved amenities



Over 40% indicated that each improvement would lead them to ride more

48

Source: Metro Customer Survey, 2017

Current Riders

Frequent

Occasional

Infrequent

Never

What Does Frequent Mean?

What Does Reliable Mean?

1. **Buses are on time**
2. **Accurate information on real-time arrival**
3. **Reduced transfer wait time (for Former and Infrequent Riders)**

Primary Improvement Desired

Source: Metro Customer Survey, 2017

Non-Riders

Main Reason for Not Riding

Takes Too Long / Too Slow

Never

40%

Former

54%

Infrequent

57%

It's slow because…

Too much traffic
Too many transfers

Source: Metro Customer Survey, 2017

Non-Riders

Main Reason for Not Riding

Don't know enough about Metro buses to ride

Never

Former

Infrequent

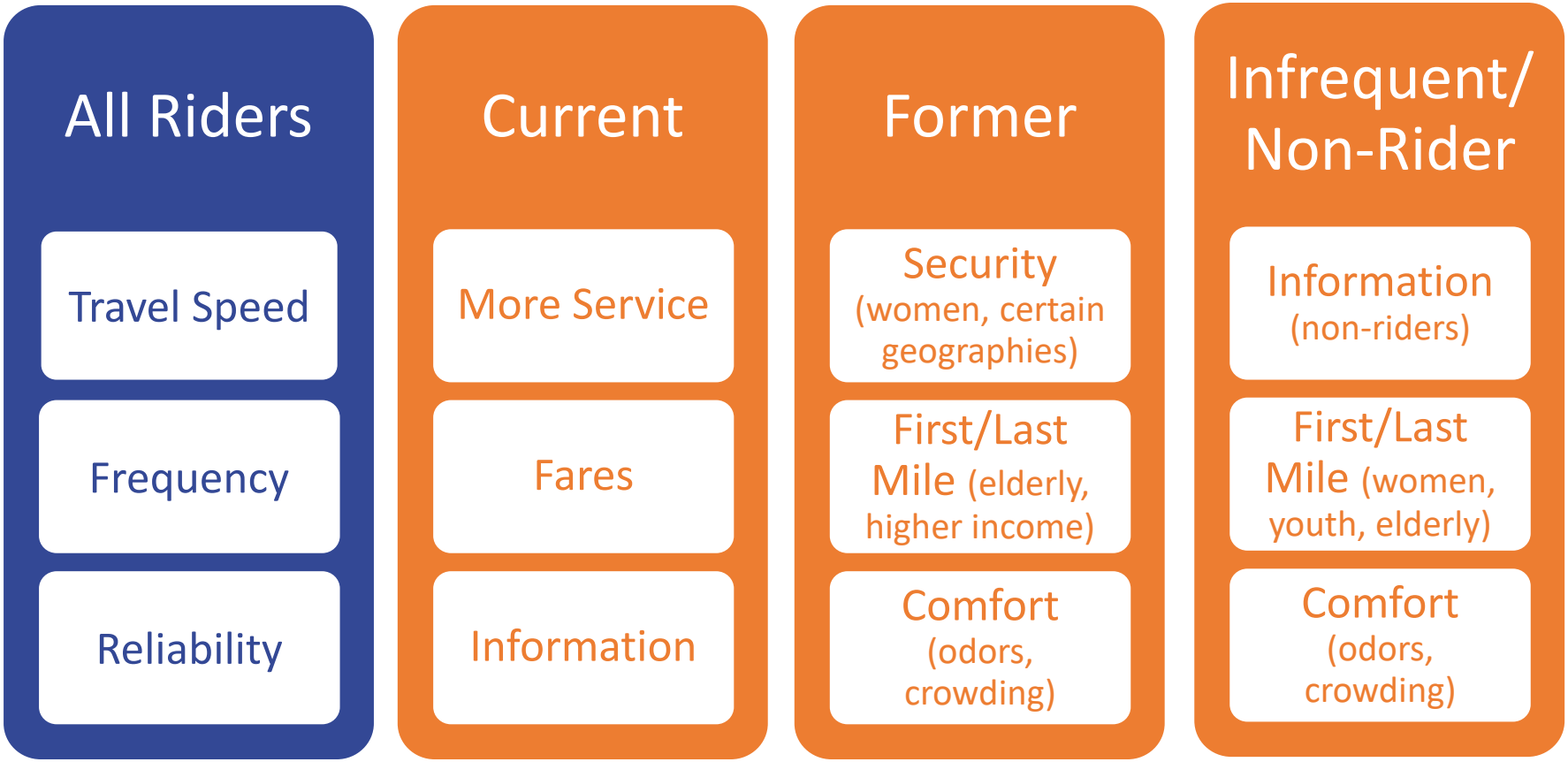
Don't know because…

Unclear where buses connect

Unclear what corridors have bus lines

Source: Metro Customer Survey, 2017

Service Parameters



With 7 million hours of service,
We can't be fast, frequent, reliable
all day, every day, everywhere…

Therefore, we need to develop service concepts that involve different trade-offs for different markets

Trade-Offs

- Speed
- Frequency
- Peak Hour
- Full buses in high demand areas
- Focus on current frequent riders

Vs.

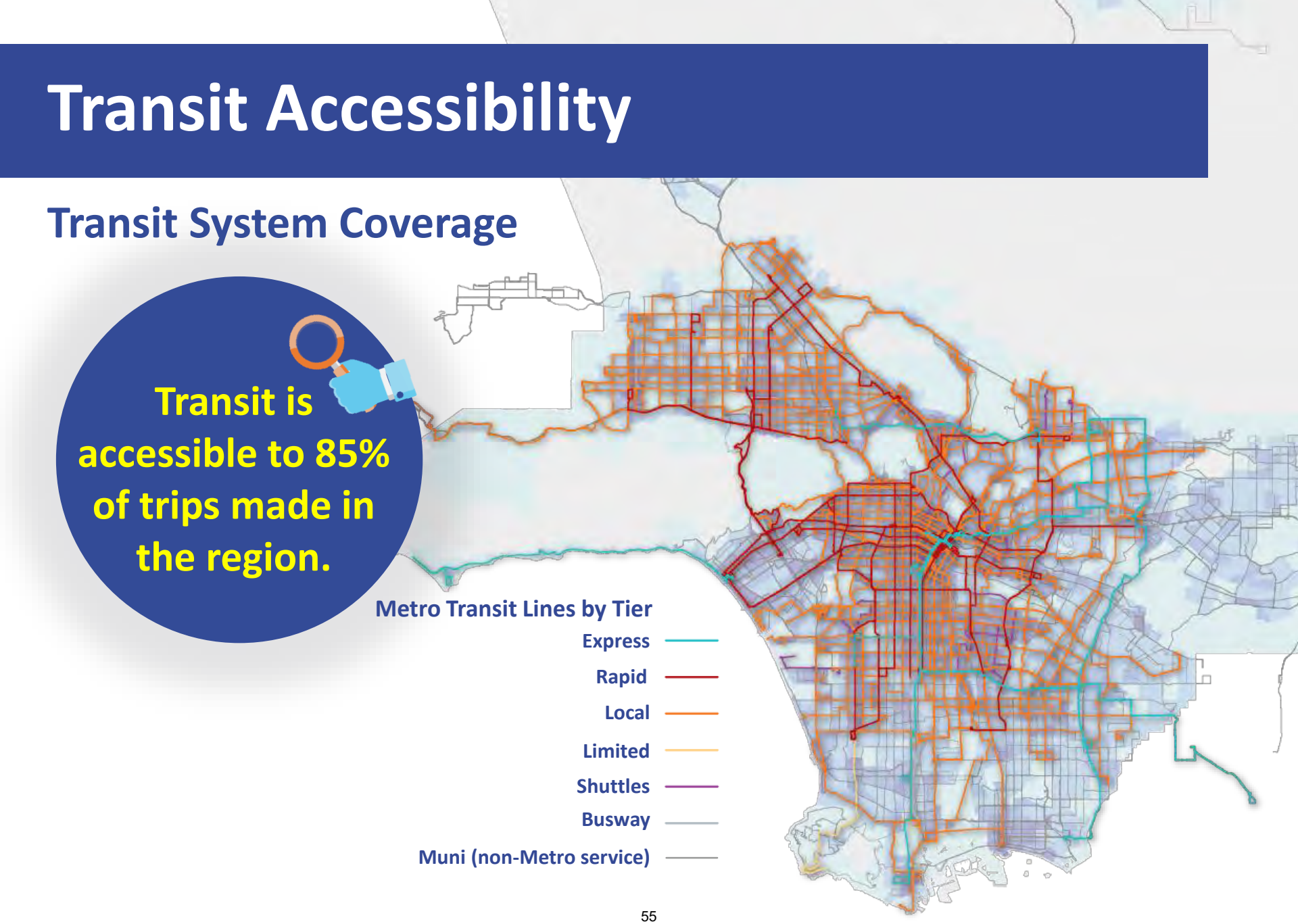
- Geographic Coverage
- Hours of Operation
- Off Peak
- Few people on board in low demand areas
- Pursue occasional and new riders

54

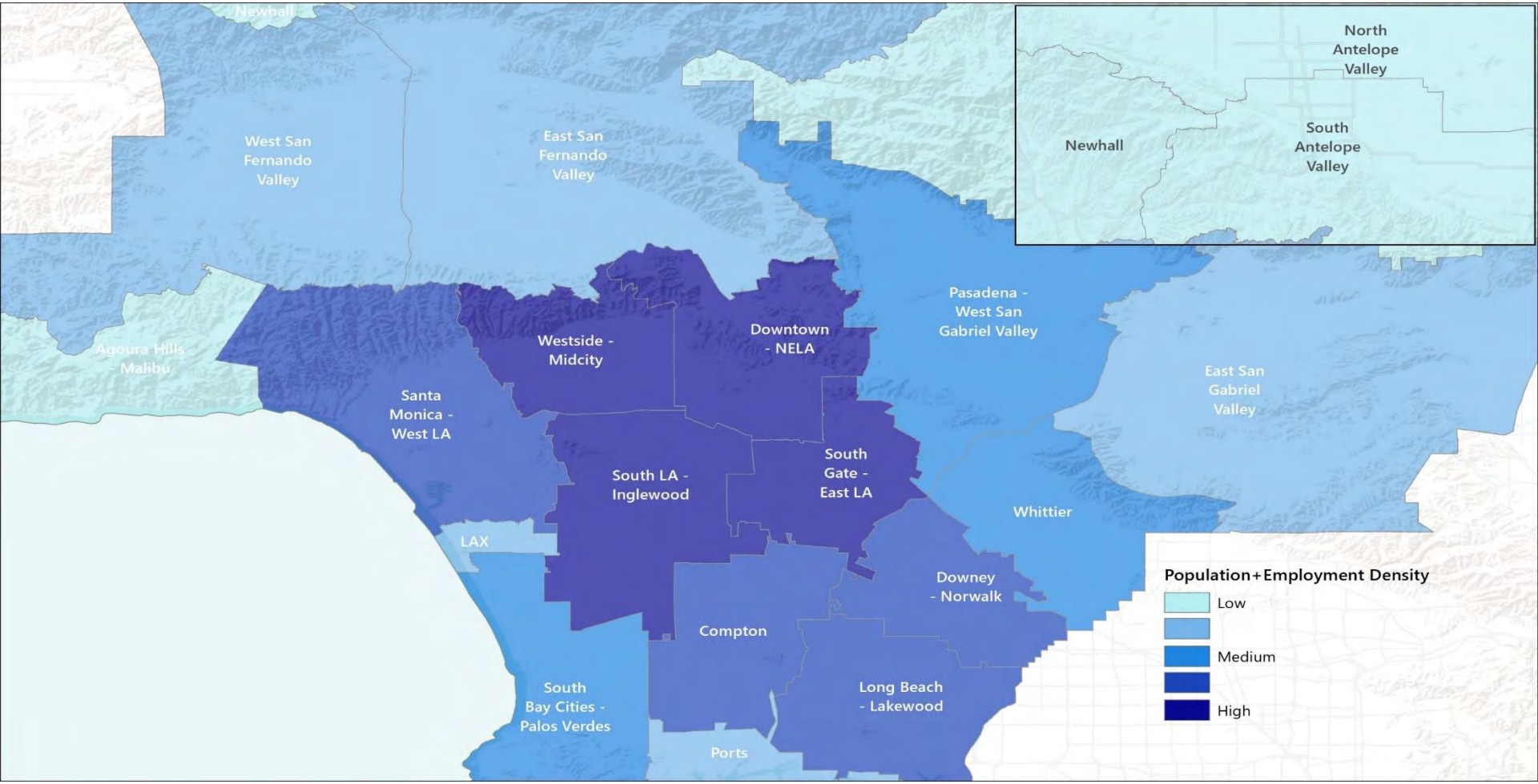
Transit Accessibility

Transit System Coverage

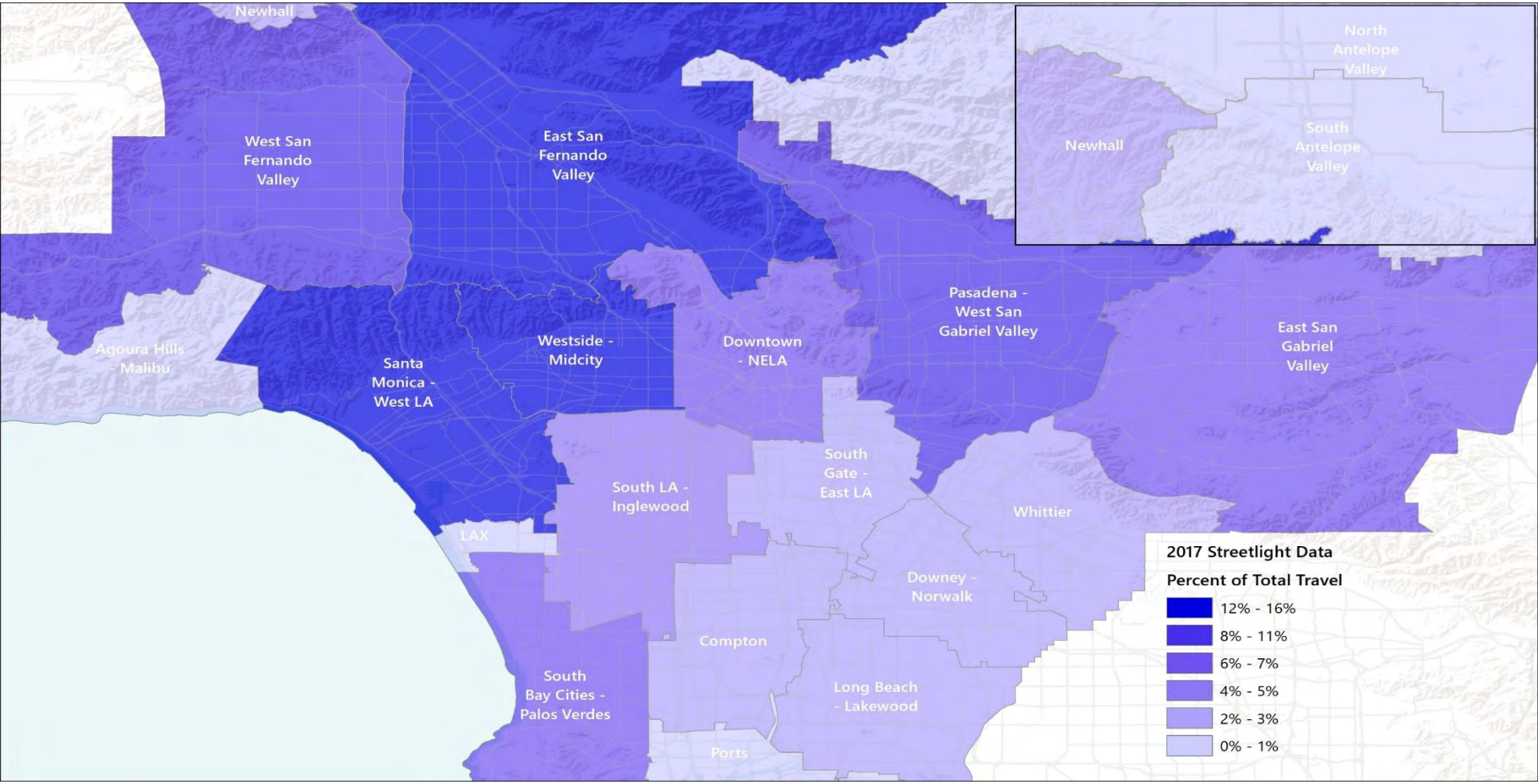
Transit is accessible to 85% of trips made in the region.



Population and Employment Density

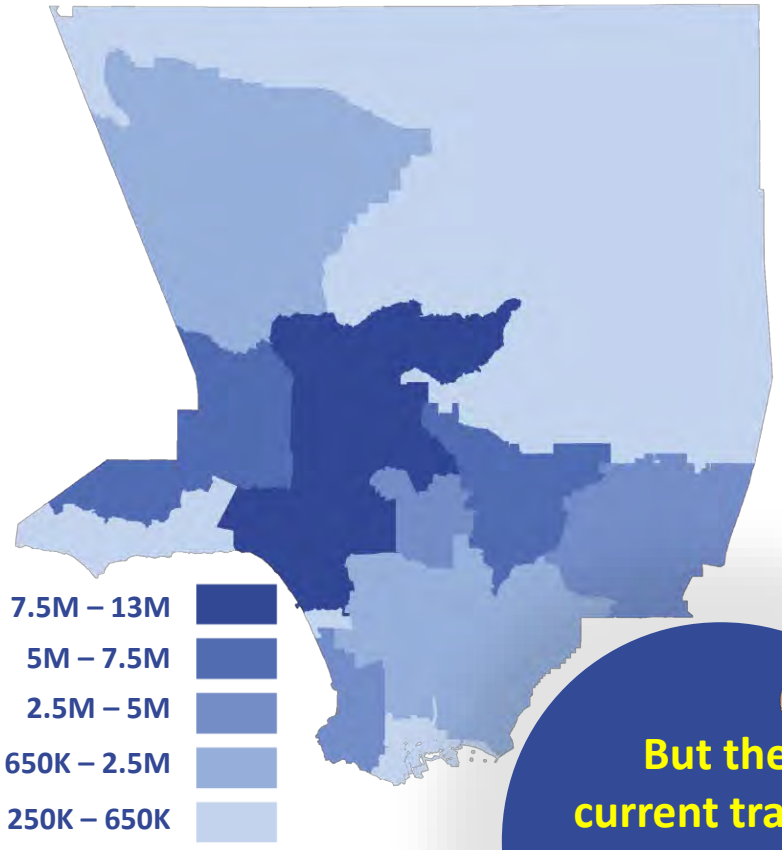


Travel Intensity

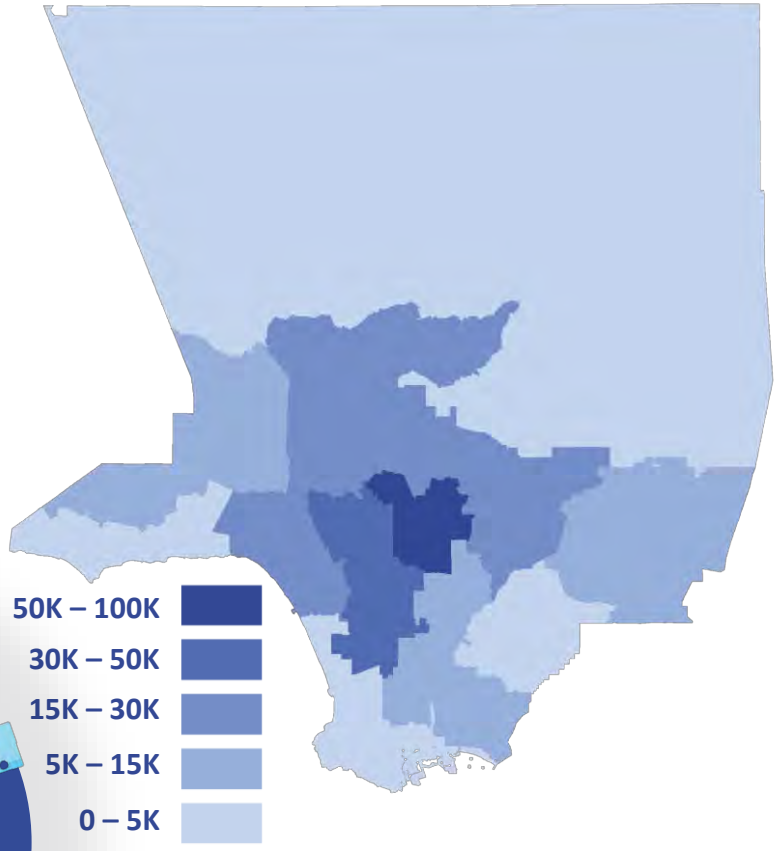


Trip Origins Total vs Transit Trips

All Trip Origins (cell phone data)



Transit Origins (TAP data)



But the current transit service is not always competitive

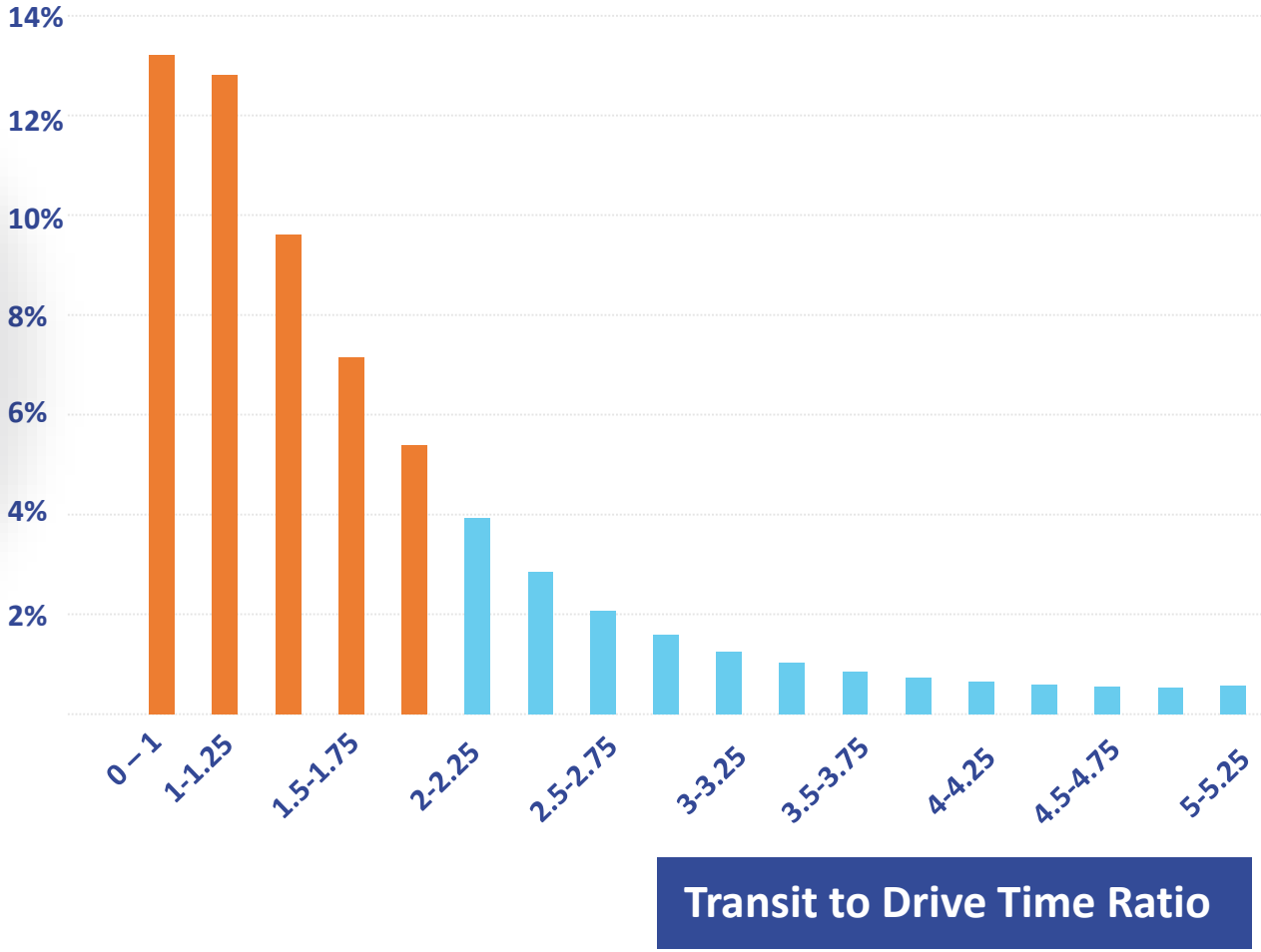
ta - Metro and Municipal Operators & LBS Data (July through October, 2017)

Competitiveness of Relative Travel Times

Travel Time Comparison with Auto

Transit Market Share

Transit is most competitive when no more than 2x slower than auto



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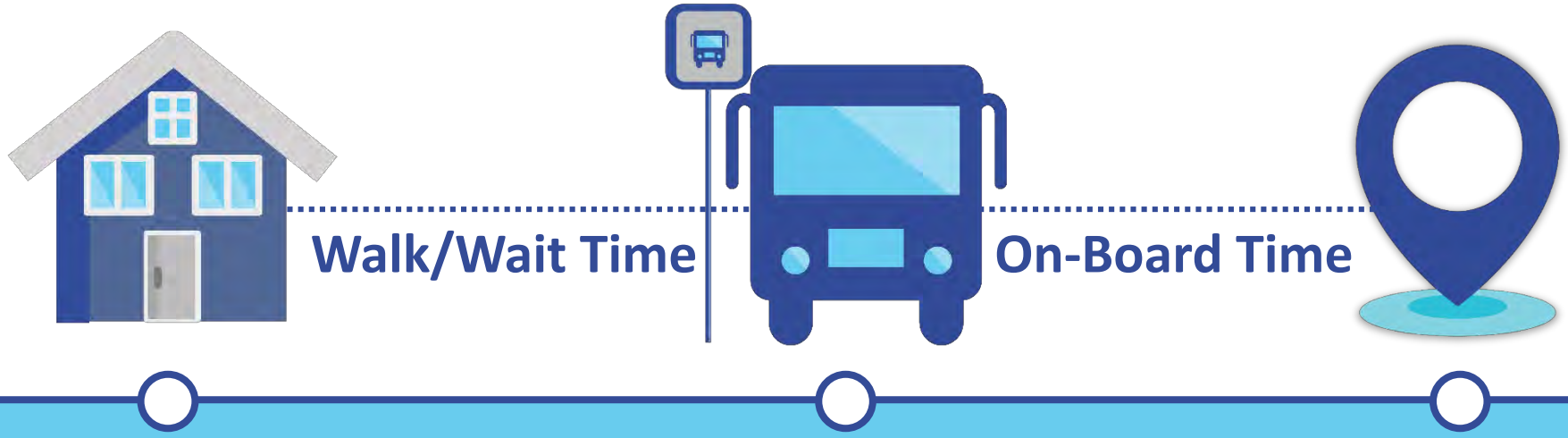
The Transit Journey

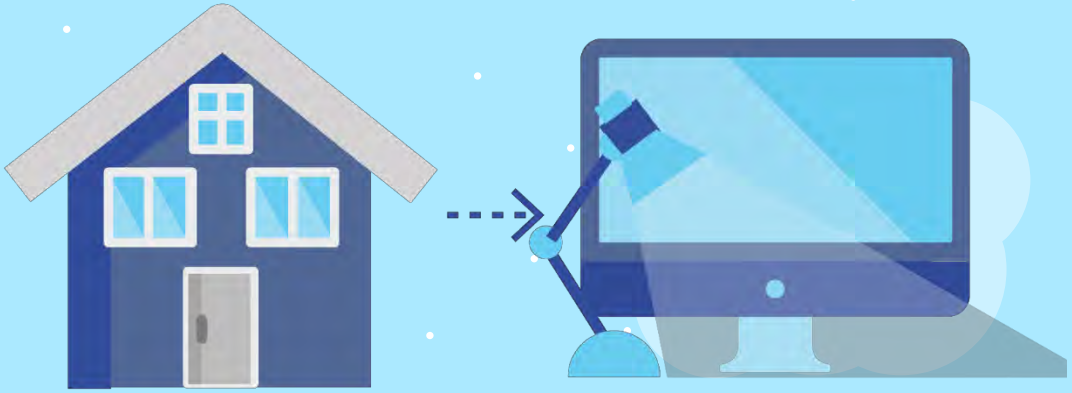


The **walk/wait** and **on-board** time are the two factors that make up total transit travel time.

Understanding Trip Purposes

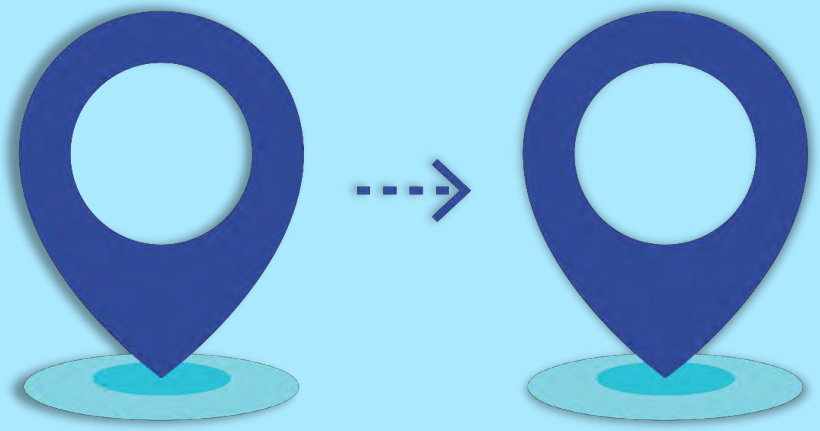
Commute Trips

Travel from home to a regular destination like work/school, etc.



Other Trips

Travel from a changing origin to a changing destination



61

When is Travel Speed important?

Long Distance Trips: 10 to 12.5 Miles

Travel Speed is the key factor for longer trips.

30% of time
getting to/from transit

e.g. 10 mins

70% of time
on-board transit

e.g. 25 mins

62

When is Frequency important?

Short Distance Trips: 0 to 2.5 Miles

Frequency is the key factor for shorter trips.

50% of time
getting to/from transit

e.g. 10 mins

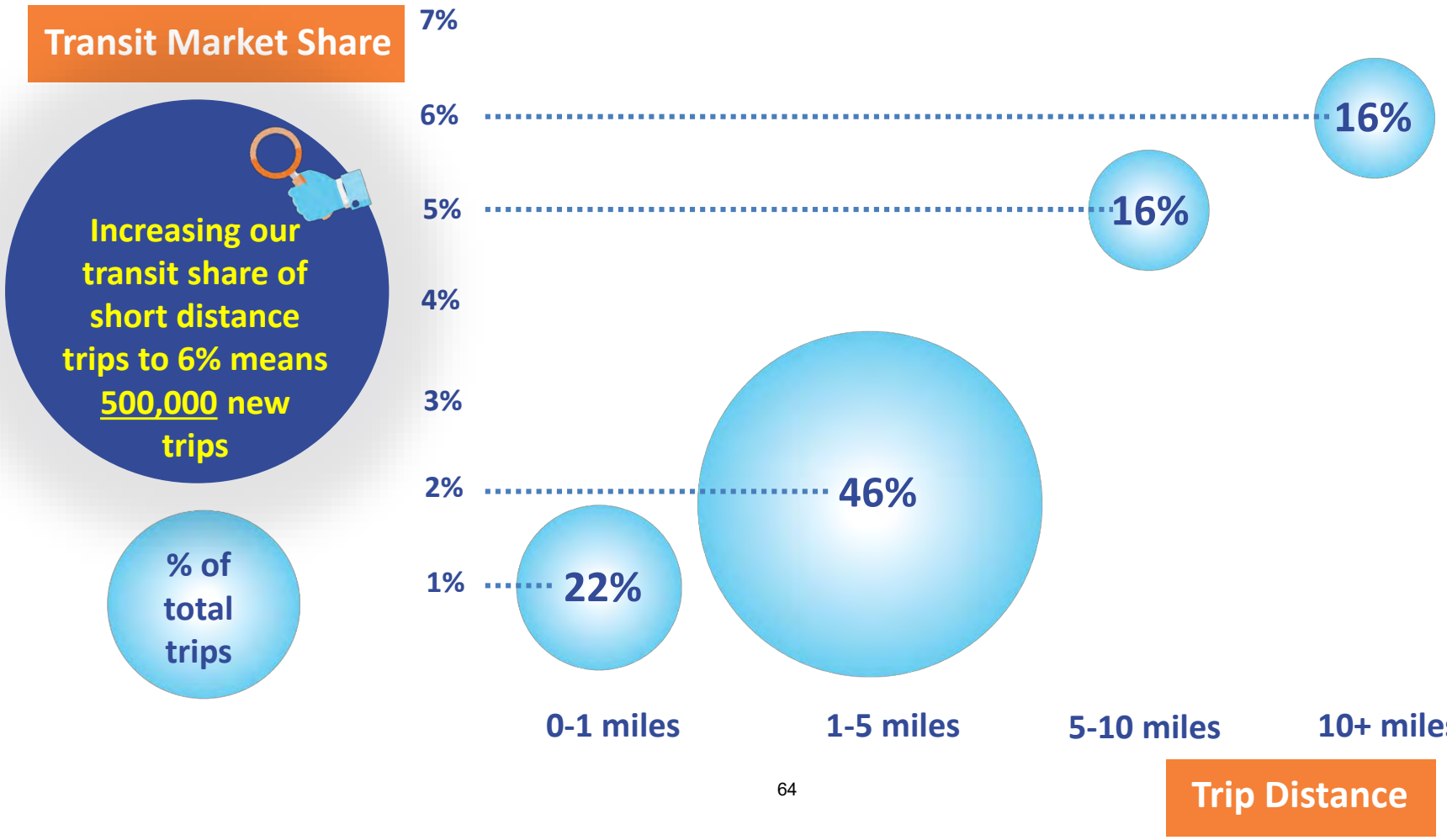
50% of time
on-board transit

e.g. 10 mins

63

Competitiveness and Market Potential

Transit Market Share by Distance & Percent of Total Trips



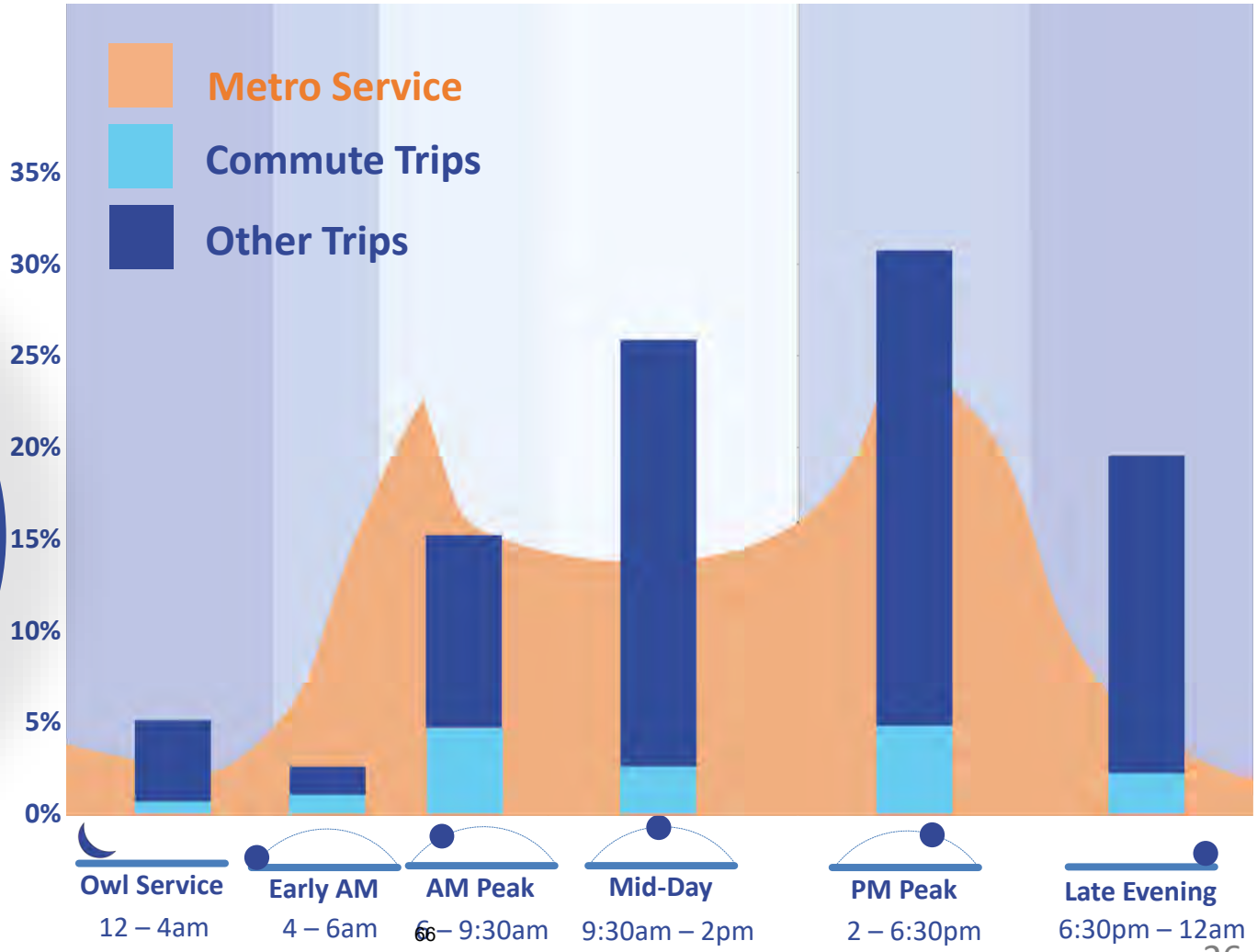
So how do we attract more short distance non-commute trips?

More Frequent Service for Non-Commute Trips

Travel and Operations by Time of Day

Share of all trips and service by time of day

Current service does not match midday and evening travel demand.



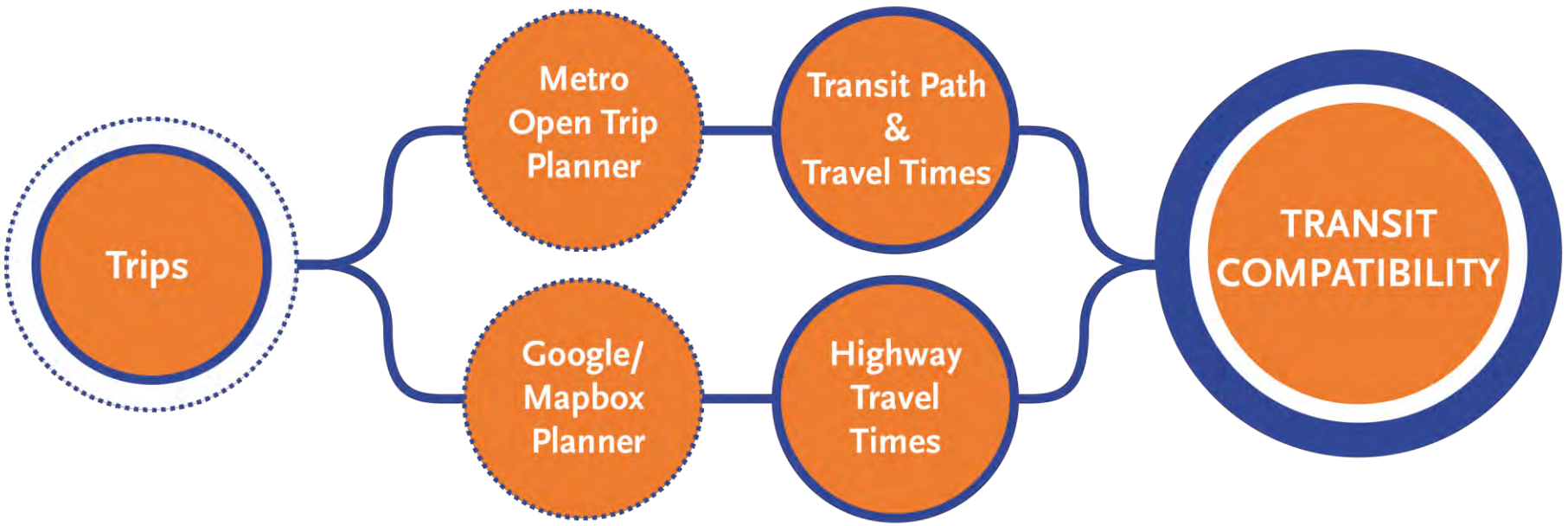
Note: Bar chart shows data by time period while area plot shows hourly data

Market Priorities

	Short Distance *Frequency*	Long Distance *Speed*
Commute Trips *Peak Hour*	**8% of all trips** **5% transit market share**	**We are successful here and should continue to focus on this travel market.**
Other Trips *All Day*	**We are not competing well in our biggest potential market and need to rethink our service to better capture short trips.**	**24% of all trips** **4% transit market share**

Competitiveness of Transit

Run transit and All trips through planning tools



Transit Competitiveness

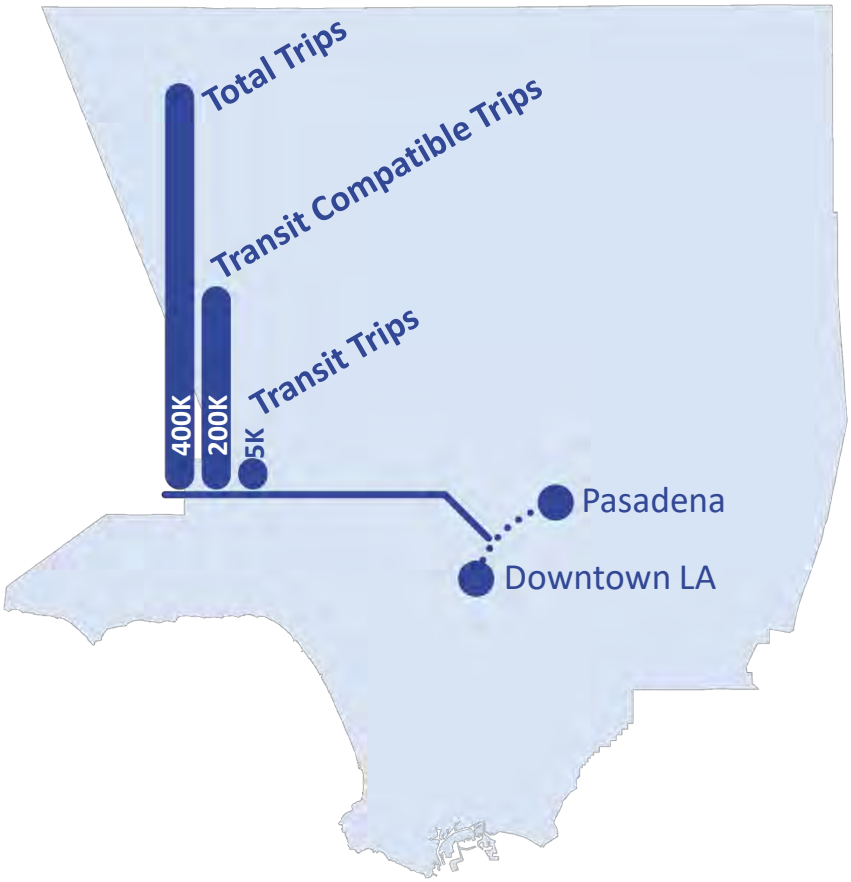
Where should we invest in service?

- Small travel market
- Transit compatibility is low
- Among compatible trips, transit share is reasonably high

Should we invest to improve transit speed & frequency to increase compatible trips?

Transit Competitiveness

Where should we invest in customer experience?



- Large travel market
- Transit compatibility is high
- Among compatible trips, transit share is low

Should we invest to improve service quality & amenities to capture larger share of compatible trips?

Thank You

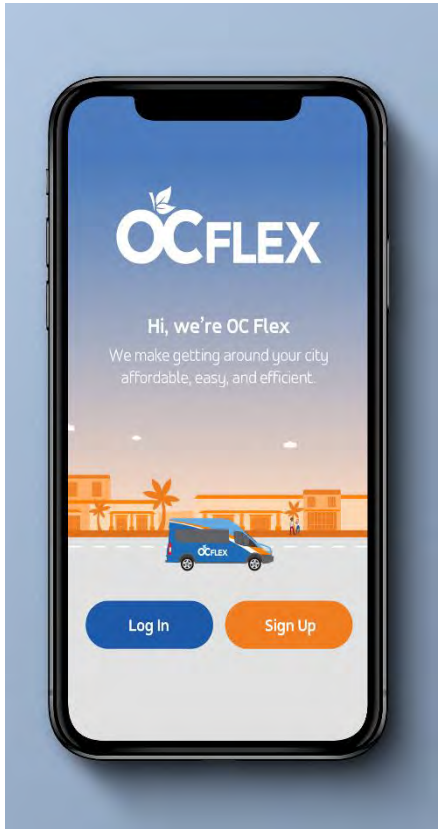
Metro

Metro.net/nextgen

Micro-Transit Pilot Project

Project Background

- On-demand micro-transit service to be offered as a one-year pilot in select areas
- Operated under contract (Keolis)
- New vehicle type
- Test new rider markets
- Consistent with the OC Bus 360° Program to identify opportunities to improve productivity by matching resources to demand



Service Goals

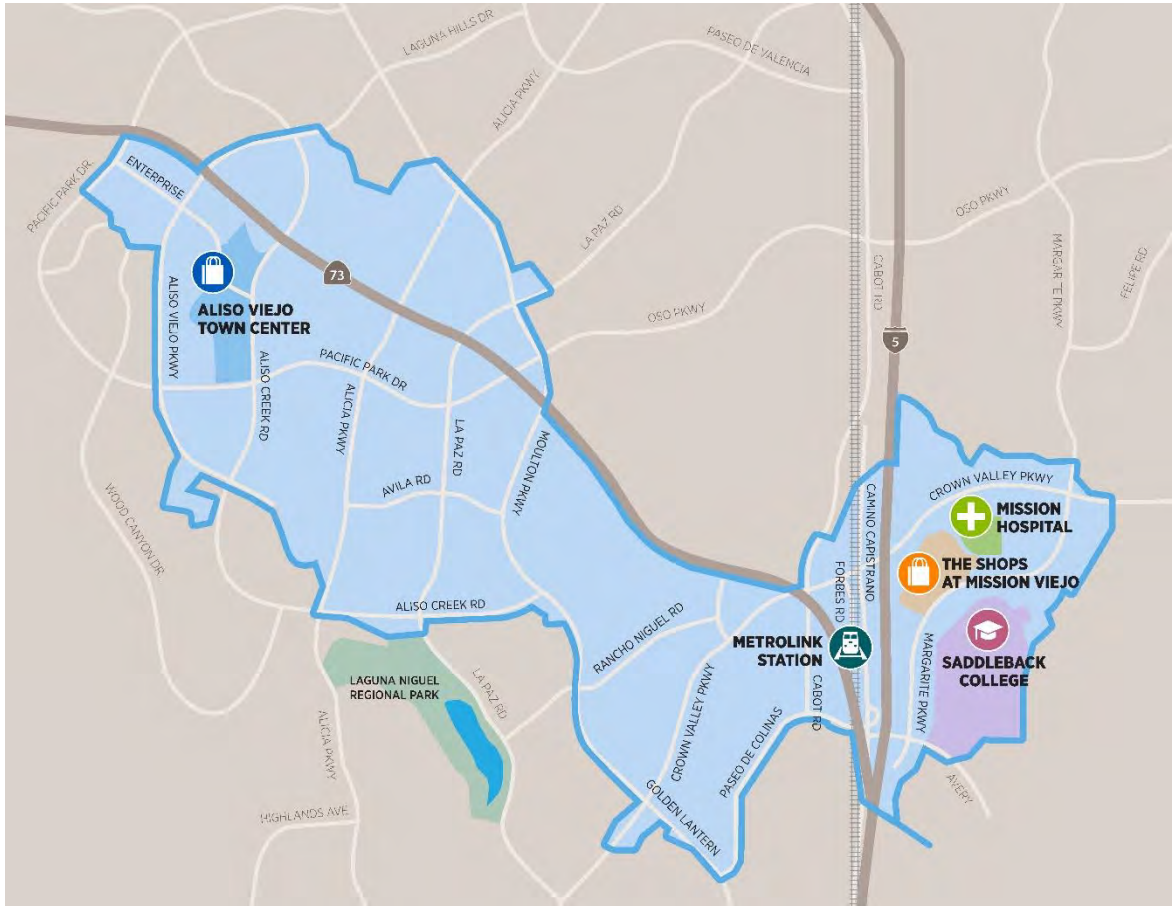
- **Provide public transit mobility in lower-demand areas**
  - Meet coverage and equity goals
- **Reduce total operating & capital costs**
  - Compared to previous fixed-route and paratransit services
- **Reduce Vehicle Miles Travelled (VMT)**
  - Service should group rides
- **Extend reach of OC Bus and Metrolink services**
  - Provide connections to/from other areas
- **Meet customer needs**
  - Service should be at least as good as existing experience

On-Demand Service

- **Available in two areas**
  - Parts of Huntington Beach and Westminster
  - Parts of Aliso Viejo, Laguna Niguel, and Mission Viejo
- **Operating Schedule**
  - Monday – Thursday: 6am – 9pm (11pm on Fri)
  - Saturdays: 9am – 11pm
  - Sundays: 9am – 9pm
- **Allow customers to request rides to/from anywhere inside the zone**
  - Will serve key destinations within zones (hubs)
- **Offer first/last mile connections for riders entering or leaving zones and provide connections to regional bus and rail network**

Service Zones

HUNTINGTON BEACH - WESTMINSTER



ALISO VIEJO – LAGUNA NIGUEL – MISSION VIEJO

Vehicles

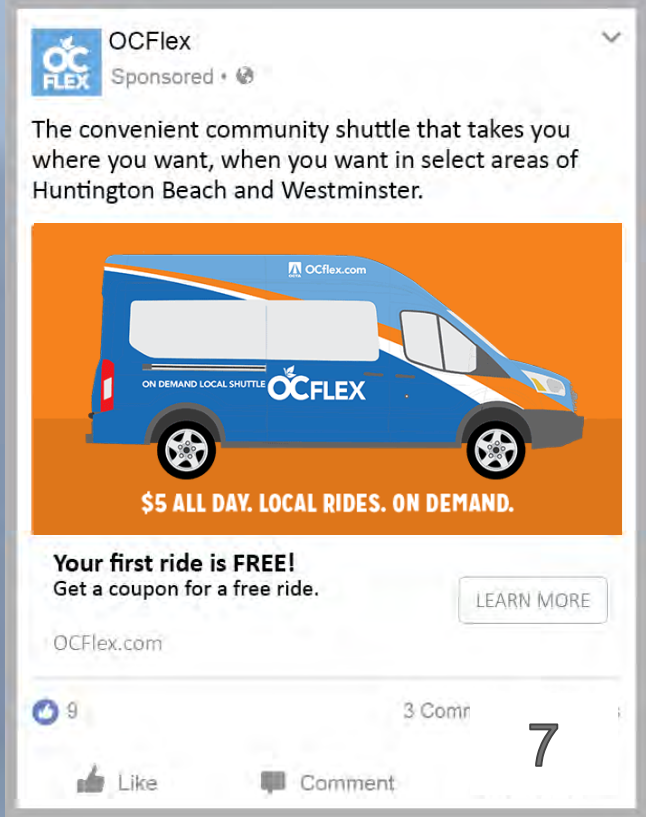
- Will be small multi-passenger van (*think Super Shuttle*) with a seating capacity of eight
- Wheelchair-accessible (side lift)
- Features a unique style under the same “OC” brand

Fares

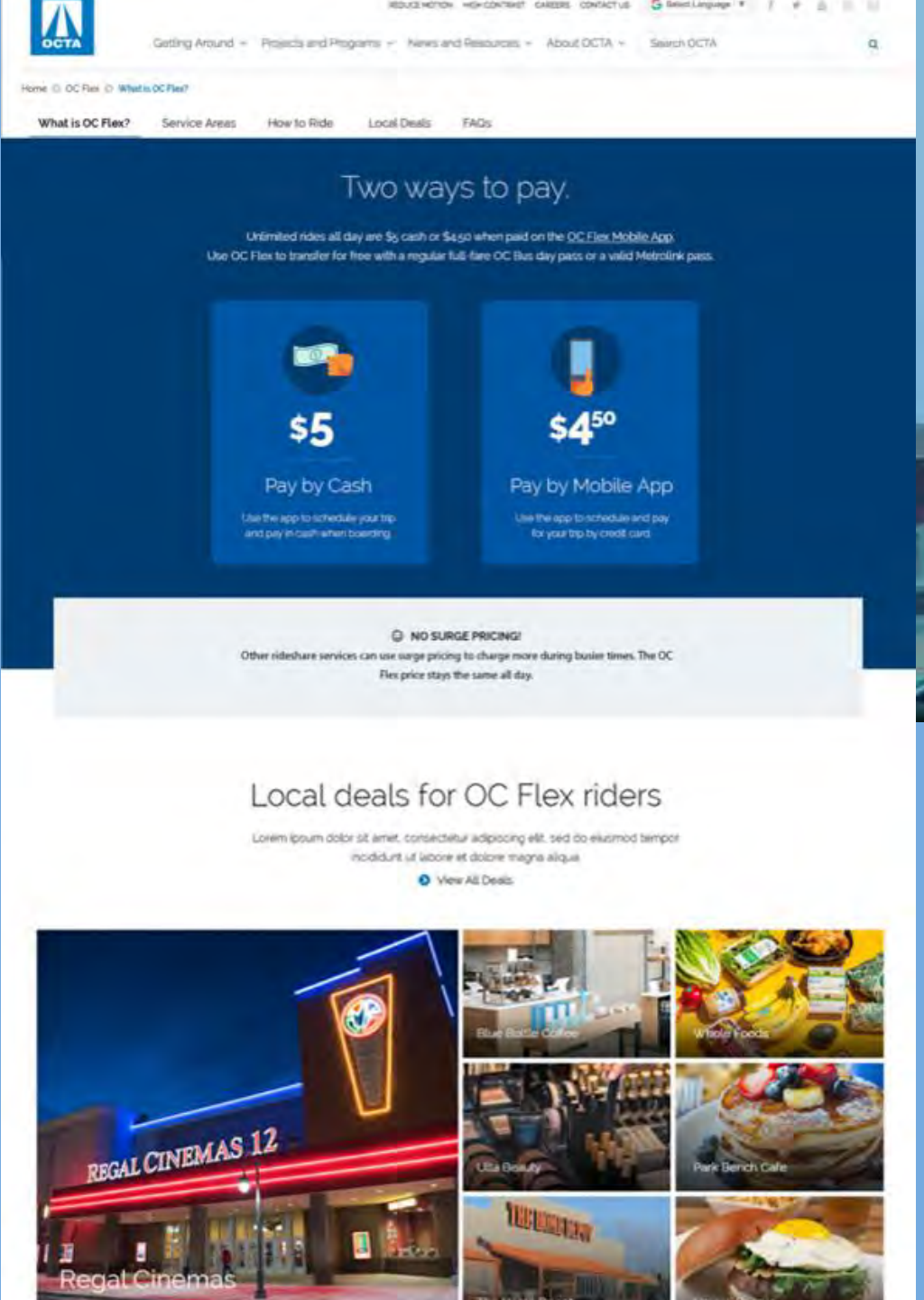
- $5.00 fare for onboard cash paying customers (day pass)
- $4.50 fare for pre-paid fare media (i.e., mobile app)
- Consistent with the cost of a day pass for fixed-route service and OCTA policy for allowing up to three children under 5 years of age to ride for free with a fare-paying passenger
- Allow free transfers to/from an OC Bus stop or Metrolink Station with a valid full fare OC Bus day pass, Metrolink ticket, or Amtrak ticket

Marketing Strategies/Tactics

- Community Focus Groups
- Branding – vehicle design, App, etc.
- Advertising – online and traditional
- Pricing incentives



Fare pricing pending Board approval


OCTA
Getting Around
Projects and Programs
News and Resources
About OCTA
Search OCTA
Home
OC Flex
What is OC Flex?
What is OC Flex?
Service Areas
How to Ride
Local Deals
FAQs
Two ways to pay.
Unlimited rides all day are $5 cash or $4.50 when paid on the OC Flex Mobile App.
Use OC Flex to transfer for free with a regular full-fare OC Bus day pass or a valid Metrolink pass.
$5
Pay by Cash
Use the app to schedule your trip and pay in cash when boarding.
$4.50
Pay by Mobile App
Use the app to schedule and pay for your trip by credit card.
NO SURGE PRICING!
Other rideshare services can use surge pricing to charge more during busier times. The OC Flex price stays the same all day.
Local deals for OC Flex riders
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua
View All Deals
REGAL CINEMAS 12
Regal Cinemas
Blue Bottle Coffee
Whole Foods
Ulta Beauty
Park Bench Cafe


Say hello to OCFLEX
BLVD OF CARS
BLVD OF CARS


NEW!
ON DEMAND.
UNLIMITED LOCAL RIDES.
$5 PER DAY.
OCFLEX
RideOCFlex.com


Westways
Falling for Lassen
From lakes and forests to mud pots and mountain peaks, this California national park has it all
Say hello to OCFLEX
PLUS: CULTURAL SURPRISES IN SINGAPORE | TIPS FOR FLYING WITH KIDS
QUICKESCAPE: CODY, WYOMING | CITYSMART: JUNEAU, ALASKA | DAYTRIP: SAWTELLE JAPANTOWN

Marketing Strategies/Tactics

- Partnerships and Destination Deals
  - Cities, senior centers, community organizations, schools
  - 400+ merchants in both zones

Key Metrics

- **Ridership**
  - 6.0 or more boardings per hour
- **Subsidy per Trip**
  - $9.00 or less subsidy per boarding
- **Shared Rides**
  - 25% or more shared rides
- **Connecting Transit Trips**
  - 25% or more trips connecting to/from bus or rail
- **Customer satisfaction**
  - 85% or more of riders surveyed are satisfied or very satisfied

Next Steps

- Wrap vehicles with OC FLEX branding
- Launch marketing and outreach campaign
- Conduct kick-off events (October 2018)
- Collect customer feedback and ridership data
- Analyze performance after six months and one year

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No: 4.3
August 29, 2018

To: Regional Transit Technical Advisory Committee (RTTAC)

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

Subject: FY 2015-16 Transit System Performance Assessment

OVERVIEW:
SCAG has been incorporating the principles of performance based planning into its long range plans since the 1998 RTP. Subsequent to MAP -21 and the FAST ACT, MPOs will be required to incorporate a series of federally mandated safety and asset management measures into their processes. The FY 2015-16 Transit System Performance Assessment is an attempt to provide an existing conditions analysis for locally selected measures not included in the MAP-21 framework.

DISCUSSION
The purpose of the FY 2015-16 Transit System Performance Assessment was to provide an incremental step towards producing a System Performance Report for public transportation, or transit, for the 2020 Regional Transportation Plan /Sustainable Communities Strategy (RTP/SCS), and to begin incorporating an annual review of system performance geared towards planning for operations and maintenance into SCAG's transit modal planning practices.

The 2015-16 assessment serves as a component in the production of the transit element of the 2020 RTP/SCS. The effort also provides an initial performance base line analysis for the early implementation of the 2016 RTP/SCS, analyzing the four years between the plan's 2011-12 base year and the 2015-16 base year of the 2020 RTP/SCS.

This report also provides an overview of the system's performance in those areas not specifically mandated by the FTA in the MAP 21 and FAST Act rulemakings. Specifically, this effort is focused on productivity, cost effectiveness, cost efficiency, and identifying performance trends. Subsequent to this effort, analysis of the region's transit asset management efforts will be conducted, and also incorporated into the 2020 RTP/SCS transit appendix. The safety mandate will not affect the 2020 RTP/SCS.

A list of key performance metrics, approved by the RTTAC and High Speed Rail and Transit Subcommittee in 2012, are listed in a table below. Additionally, per capita unlinked passenger trips were selected by the Transportation and Communications Committee as a key measure in 2001. The initial iteration of the report focused on a series of cost efficiency, cost effectiveness, service delivery, mobility, maintenance, and productivity measures, similar to MTC's *MTC Statistical Summary of Bay Area Transit Operators*.

Key Performance Metrics Employed in FY2015-16	
Performance Concept	**Performance Metrics**
Cost Efficiency	Operating cost per revenue vehicle hour
	Farebox Recovery
Cost Effectiveness	Operating cost per passenger trip
	Operating cost per passenger mile
Service Effectiveness/ Productivity	Passengers per vehicle revenue hour
	Passengers per vehicle revenue mile
Maintenance	Fleet Average Vehicle Age
Mobility/Travel Time	Average Vehicle Speed

This effort includes several new features. Specialized and local providers in Los Angeles County are now reporting independently, instead of as a group. Additionally, this effort also includes more focus on modal differences, and an appendix discussing NTD data. The focus on individual agencies from previous efforts has been eliminated.

Specialized and Local Reporters in Los Angeles County		
City of Arcadia Transit (Arcadia Transit)	City of Covina	City of Monterey Park
City of Agoura Hills	City of Cudahy (COC)	Palos Verdes Peninsula Transit Authority
City of Alhambra (ALH)	City of Downey	City of Pico Rivera
City of Avalon	City of Duarte	City of Rosemead
City of Azusa	City of El Monte Transportation Division	City of Santa Fe Springs (SFS)
City of Baldwin Park, Baldwin Park Transit	City of Glendora	City of South Gate
City of Bell(Bell)	City of Huntington Park (HPCA)	City of South Pasadena
City of Bell Gardens(BG)	City of Inglewood	City of West Covina
City of Bellflower(BLF)	Los Angeles County Dept. of Public Works (LACDPW)	City of West Hollywood (WEHO)
City of Beverly Hills	City of Lawndale	City of Whittier
City of Burbank	City of Lynwood (COL)	Claremont Dial-a-Ride (CLDAR)
City of Calabasas (COC)	City of Manhattan Beach Dial A Ride(CMB DAR)	City of Glendale
City of Carson	City of Maywood (COM)	City of Pasadena (ARTS)
City of Cerritos	City of Monrovia	Pomona Valley Transportation Authority (PVTA)
Compton Renaissance Transit Service (CRT)		

NEXT STEPS: Staff have emailed out the draft assessment report, and will accept comments through October 1, 2018. The findings of the final report will be incorporated into the transit appendix of the 2020 RTP.

Attachment A: Power Point Presentation

2015-16 Assessment of System Performance

Regional Transportation Plan/ Sustainable Communities Strategy Base Year Existing Conditions

Regional Transit Technical Advisory Committee (RTTAC)

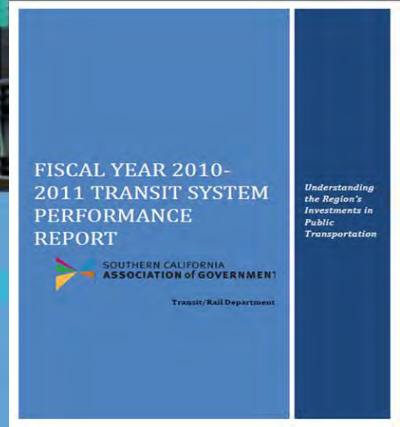
Matt Gleason
Senior Regional Planner
August 29, 2018

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

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

Background:
Transit Performance Measurement Efforts

- 2012 RTP
  - Key Performance Indicator Exercise Peer Regions
  - Performance Benchmarking Exercise
- FY2010-11 System Performance Report
- FY2011-12 System Performance Report
- 2016 RTP
  - Peer Regions Performance Benchmarking Exercise
- Falling Transit Ridership



2020 RTP Transit Element

Process

FY2015-16 Transit Existing Conditions Analysis

System Performance	Performance Benchmarking	Implementation Monitoring	Network Development

Needs Assessment

Ridership	Technology	Emerging Trends	Demographic Analysis

Plan

Asset Management Target Setting	Planned Investments	Performance Forecasting

2020 RTP/SCS – Transit Element

2020 RTP Transit Element
Existing Conditions Analysis

FY2015-16 Assessment of Transit Performance

- Draft for analysis today
- Regional level analysis of how the system is performing

Peer Regions Performance Benchmarking Exercise

- Analysis has begun
- Initial findings will be presented in October

2020 RTP Transit Element Existing Conditions Analysis

2016 RTP Implementation Progress

- Tracking performance and project delivery
- Part of ongoing implementation monitoring activities
- Focus on both “project pipeline” and also local plans

Asset Inventory

- Findings will be presented at the fall 2019 meeting

Format of the FY15-16 Transit System Performance Assessment

Introduction and Context
- Governance
- Background, earlier efforts, discussion of changes to NTD data

Provision and Consumption
- Trends in Boardings, service provided, passenger miles and per capita consumption

Financials
- Analysis of trends in capital and operating expenditures
- Comparison of directly operated versus purchased transportation
- By sub-modes

Mode Shares
- Share of service provided and consumed by mode
- Role of demand response

Geographic Distribution
- Trip length
- Analysis by UZA
- County shares of trips

Key Performance Metrics
- 10 year trend in the key metrics that were identified by the RTTAC in 2012 for focus in SCAG's performance measurement efforts

Appendices
- Governance
- Performance Management
- NTD Data

Measures and Metrics

Measures - Key Focus Areas

- Service levels
- Ridership
  - Per Capita
  - Factors that affect ridership including vehicular availability
  - Trip Length
- Total expenditures
  - Operating
  - Capital

Performance Metrics Used in this Report

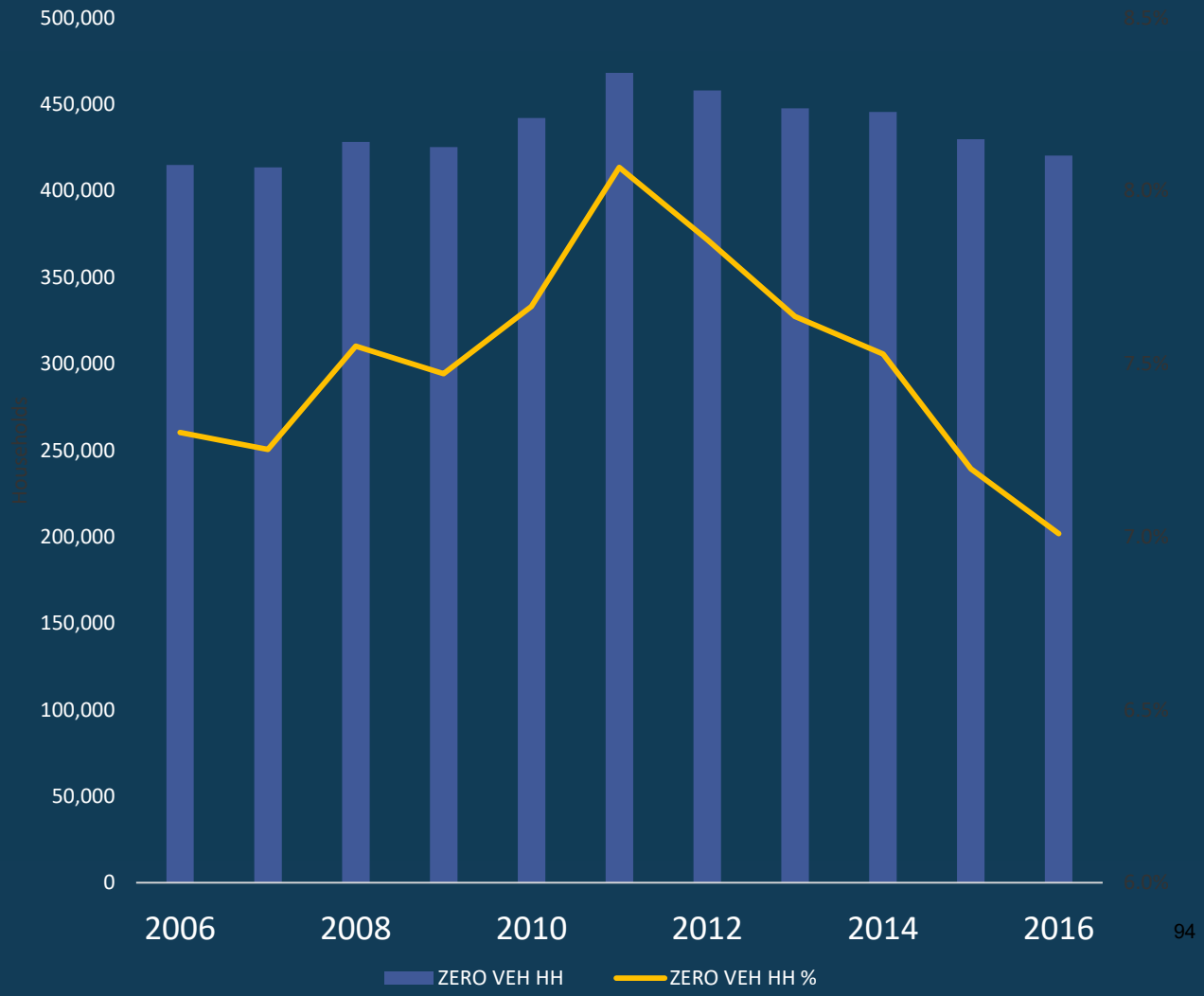
Performance Concept	Performance Metrics
Economics/Cost Efficiency	Operating Cost per Vehicle Revenue Hour
Economics/Cost Effectiveness	Firebox Recovery
	Operating Cost per Passenger Trip
	Operating Cost per Passenger Mile
Service Effectiveness/ Productivity	Passengers per Vehicle Revenue Hour
	Passengers per Vehicle Revenue Mile
Maintenance	Fleet Average Vehicle Age
Mobility/Travel Time	Average Vehicle Speed

All data used in this presentation are from NTD, and were released in late 2017, unless otherwise noted. All data are for FY 2015-16, unless otherwise noted. All financial figure are expressed in 2016 dollars, and all geographies are the SCAG Region, unless otherwise noted

Context

Vehicular Availability

Zero Vehicle Households, SCAG Region 2006-2016, American Community Survey



Vehicles Available By Household, 2016 American Community Survey

	No Vehicles Available	Vehicle Deficit
2000	10.20%	30.10%
2010	7.70%	26.10%
2015	7.10%	25.90%
Decline in share	3.10%	4.20%

Context
Mode Share

Mode Share, All Trip Purposes, 2017 National Household Travel Survey

Modal Category	Los Angeles-Long Beach-Anaheim, CA	Riverside-San Bernardino-Ontario, CA
Bicycle	1.0%	0.5%
Motor Vehicle	82.7%	90.4%
Other	1.4%	0.7%
Transit	2.2%	1.0%
Walk	12.7%	7.4%

Journey to Work by County, 2016 American Community Survey

	Imperial County	Los Angeles County	Orange County	Riverside County	San Bernardino County	Ventura County
Workers 16 years and Over	60,013	4,769,841	1,555,629	976,755	877,712	410,448
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van						
Drove Alone	81.8%	73.9%	78.4%	78.5%	78.3%	77.5%
Carpooled	7.8%	9.6%	9.7%	12.0%	11.7%	12.7%
Public Transportation	0.2%	6.0%	2.2%	1.0%	1.6%	1.3%
Walked:	3.1%	2.8%	1.7%	1.5%	1.4%	1.7%
Taxicab, motorcycle, bicycle, or other means:	1.6%	1.5%	1.1%	1.5%	0.9%	1.0%
Worked at home:	4.7%	5.4%	6.1%	5.3%	5.8%	5.2%

Service Provided and Consumed

FY2015-16 Overview

Service Provided

Service Hours:
20,450,060

Directional Route Miles:
18,987

Vehicle Revenue Miles:
267,090,533

Service Consumed - Trips

Total Passenger Trips:
655,017,452

Per Capita Transit Trips:
34.88

Service Consumed - Miles

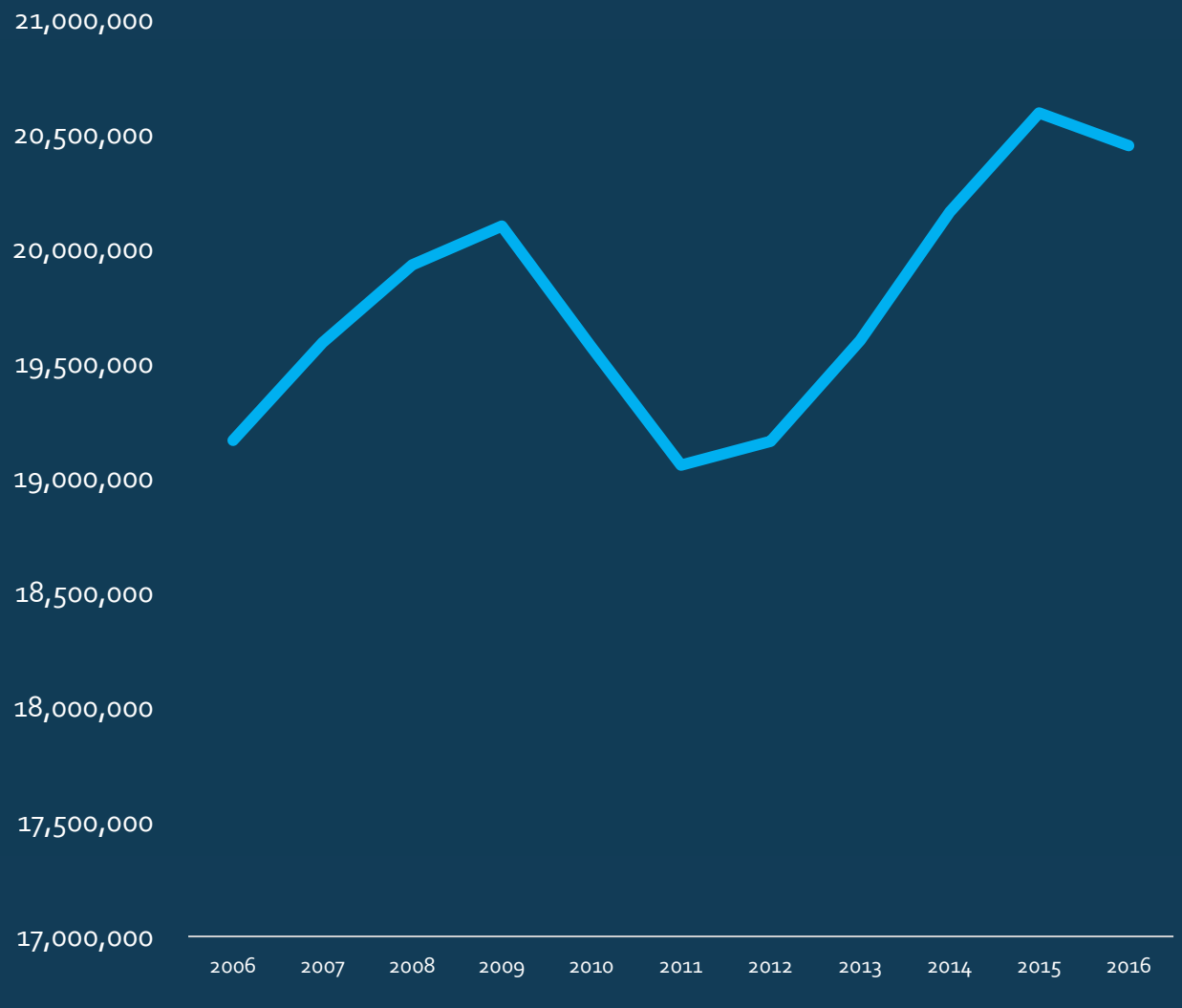
Total Passenger Miles:
3,357,046,607

Per Capita Passenger Miles: 179

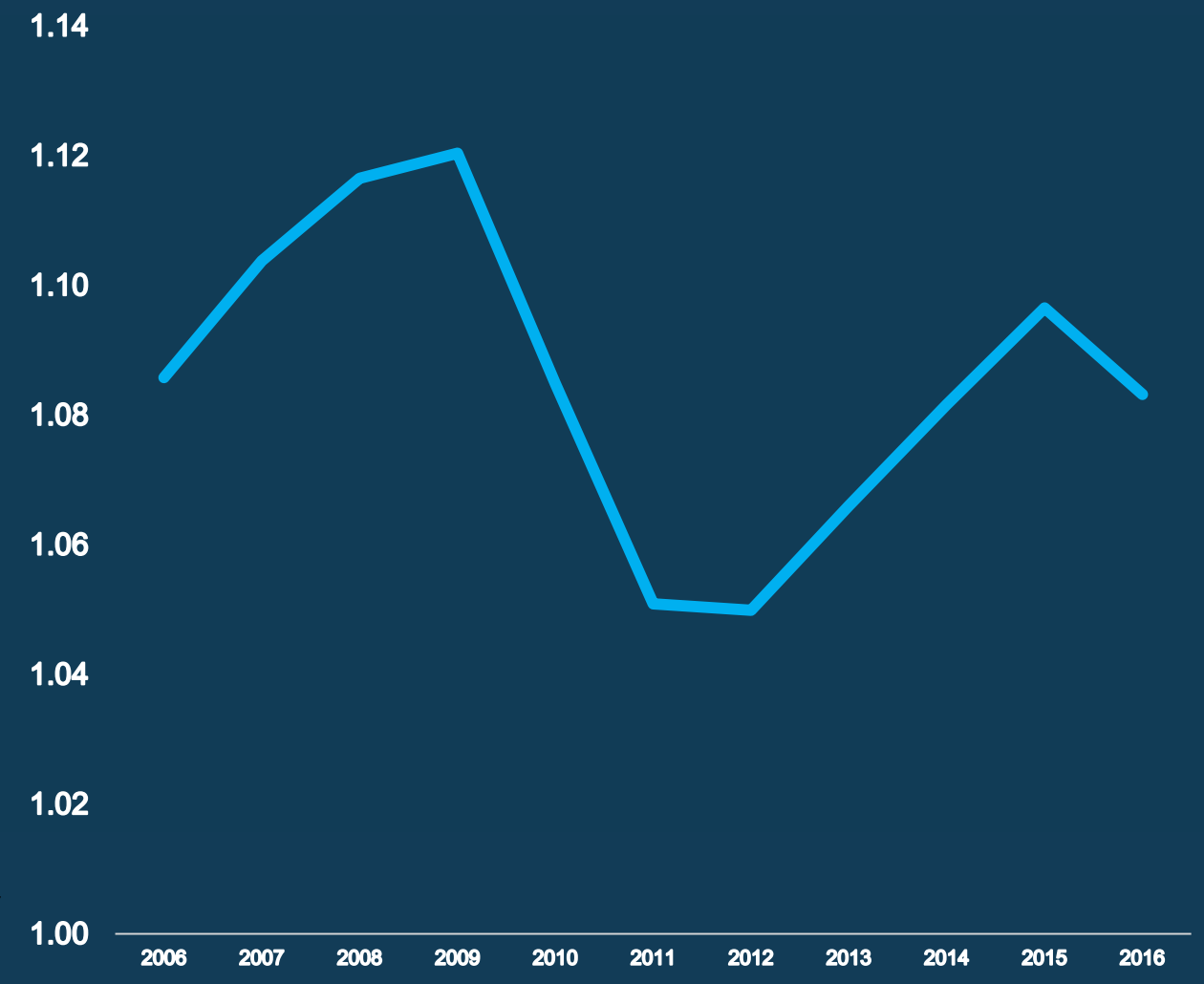
Service Provided

Total and Per Capita

Total Revenue Hours, 2006-2016, 2017 NTD

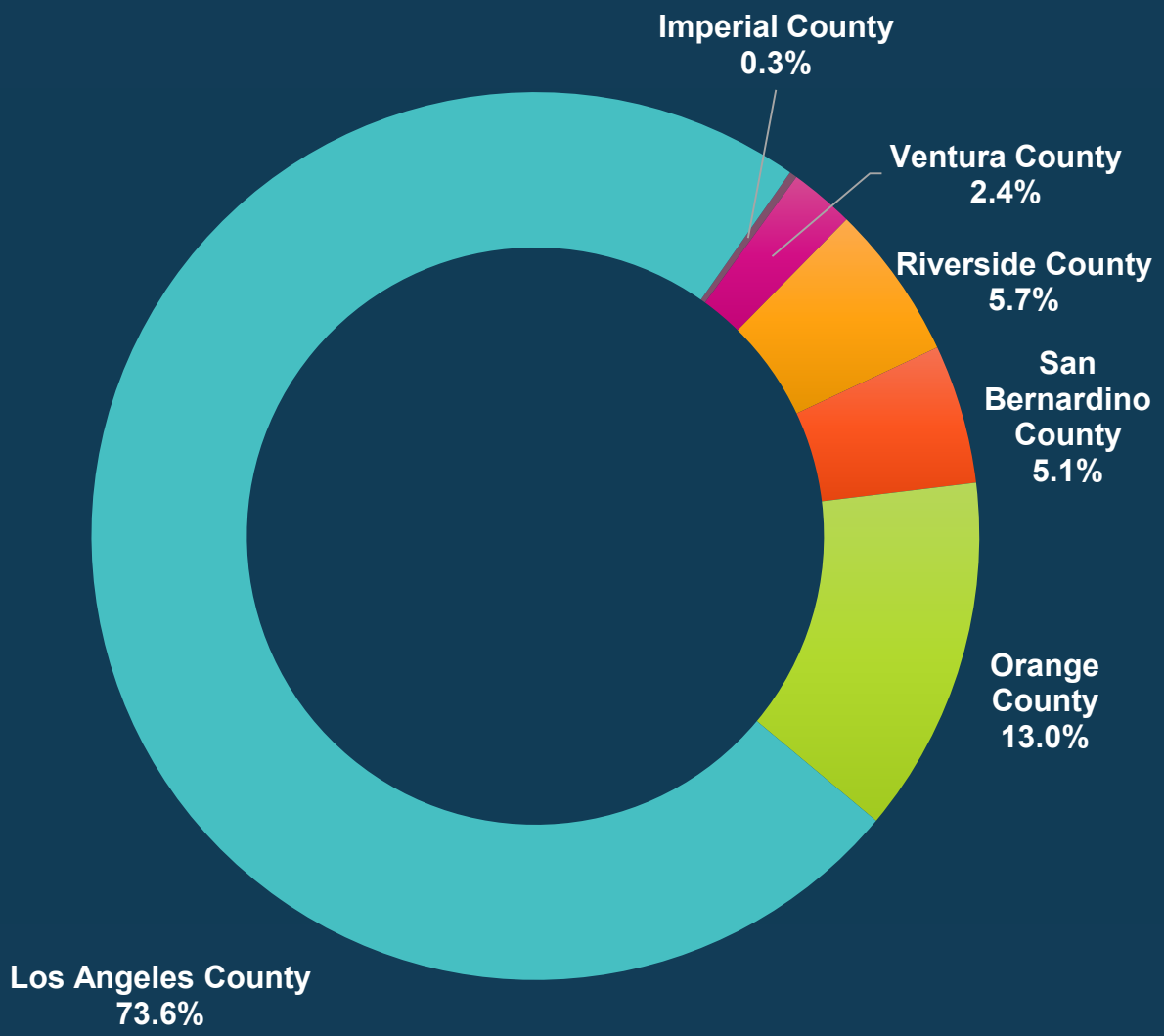


Regional Per Capita Service Hours, 2006-2016, 2017 NTD



Geographic Distribution of Service

County Share of Service Hours

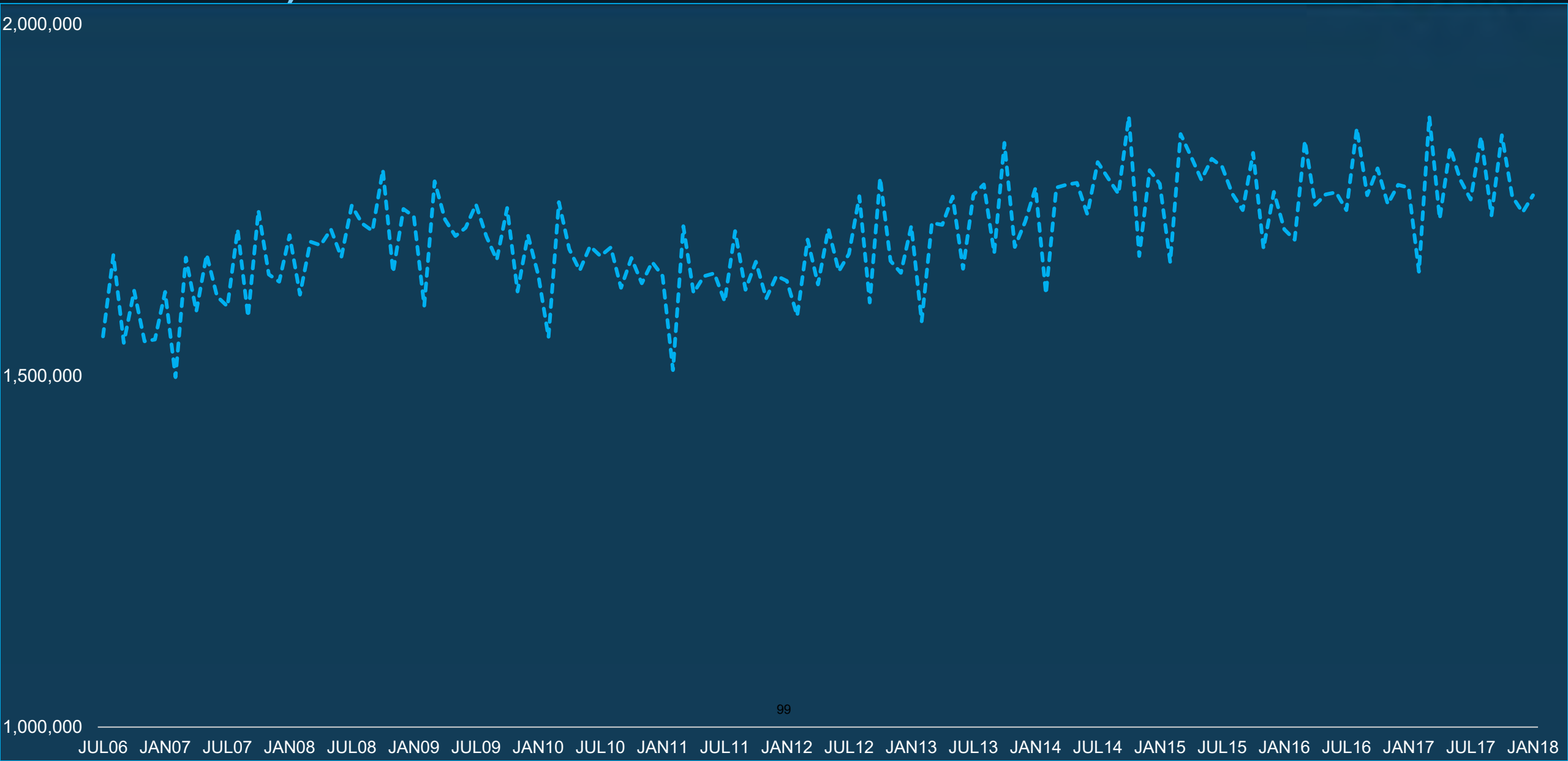


Service Hours By County

	2006	2011	2016
Imperial County	-	44,752	57,988
Los Angeles County	14,558,969	14,387,678	15,060,451
Orange County	2,449,283	2,427,970	2,657,739
Riverside County	852,027	908,261	1,156,602
San Bernardino County	968,378	926,009	1,035,701
Ventura County	335,548	361,200	481,579
Grand Total	19,164,205	19,055,870	20,450,060

	2006	2011	2016
Imperial County	0.0%	0.2%	0.3%
Los Angeles County	76.0%	75.5%	73.6%
Orange County	12.8%	12.7%	13.0%
Riverside County	4.4%	4.8%	5.7%
San Bernardino County	5.1%	4.9%	5.1%
Ventura County	1.8%	1.9%	2.4%

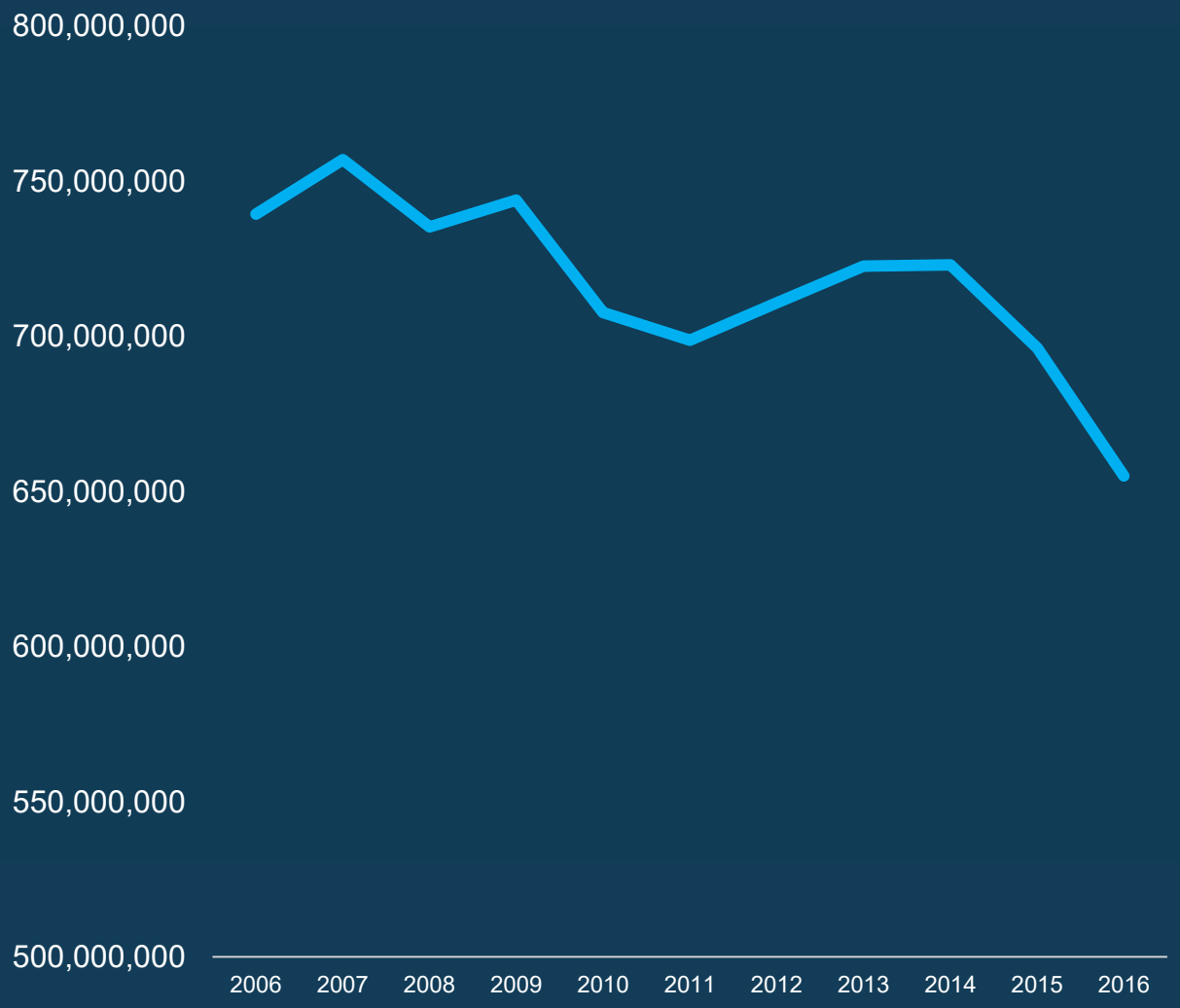
Aggregated Monthly Hours Raw Reporting through June 2016, 2018 NTD



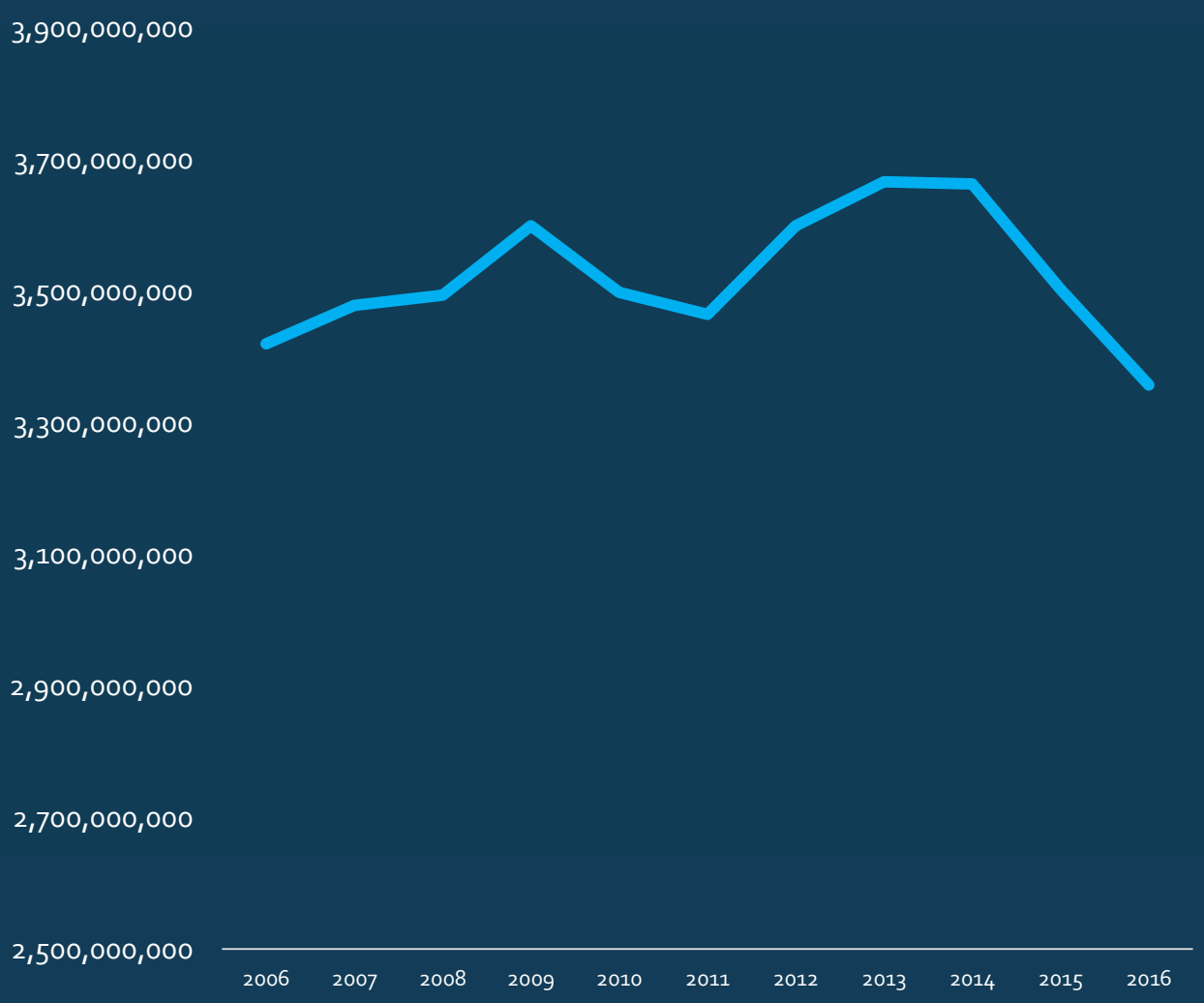
Service Consumed

Total

Total Unlinked Passenger Trips 2006-2016



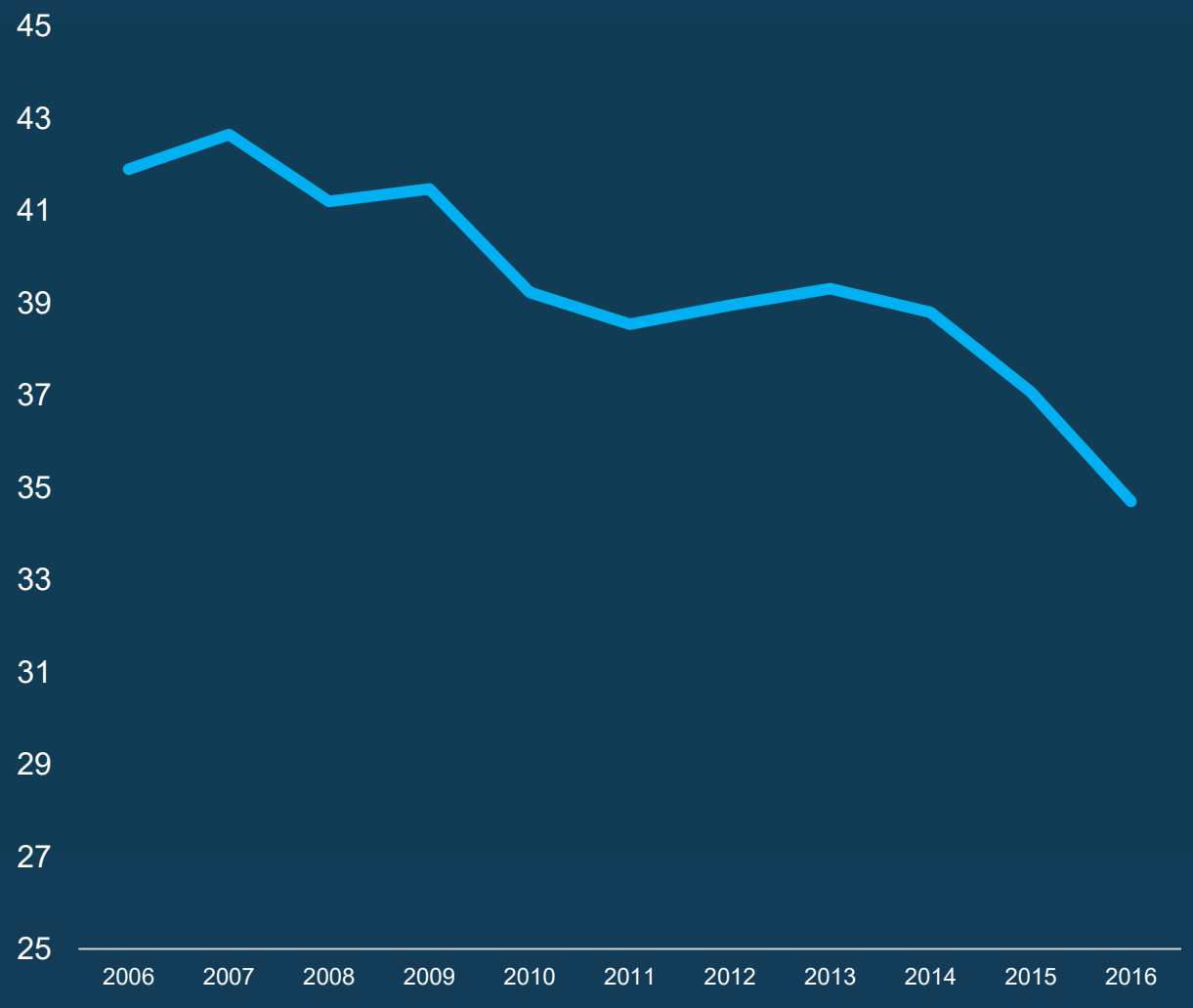
Total Passenger Miles Travelled 2006-2016



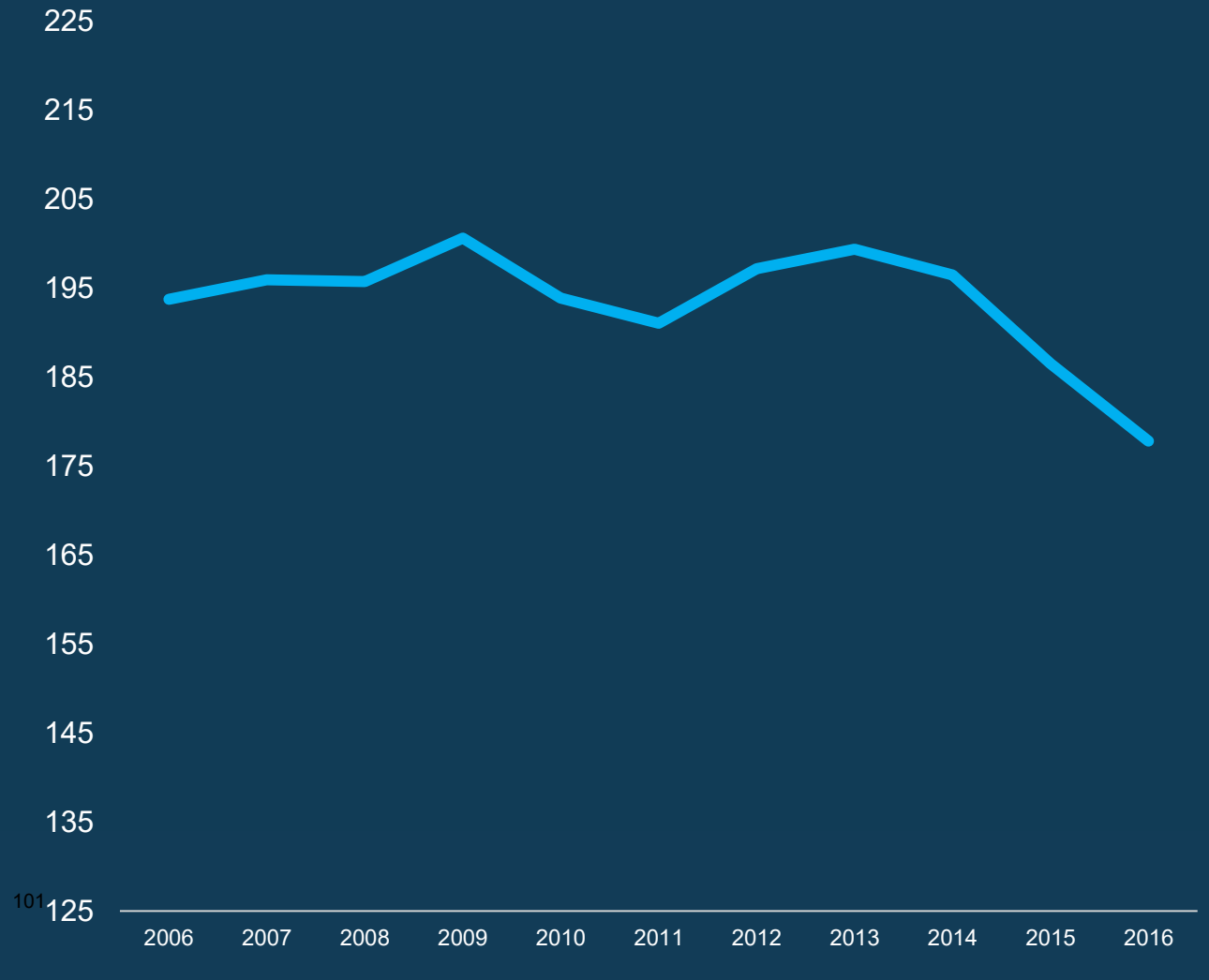
Service Consumed

Per Capita

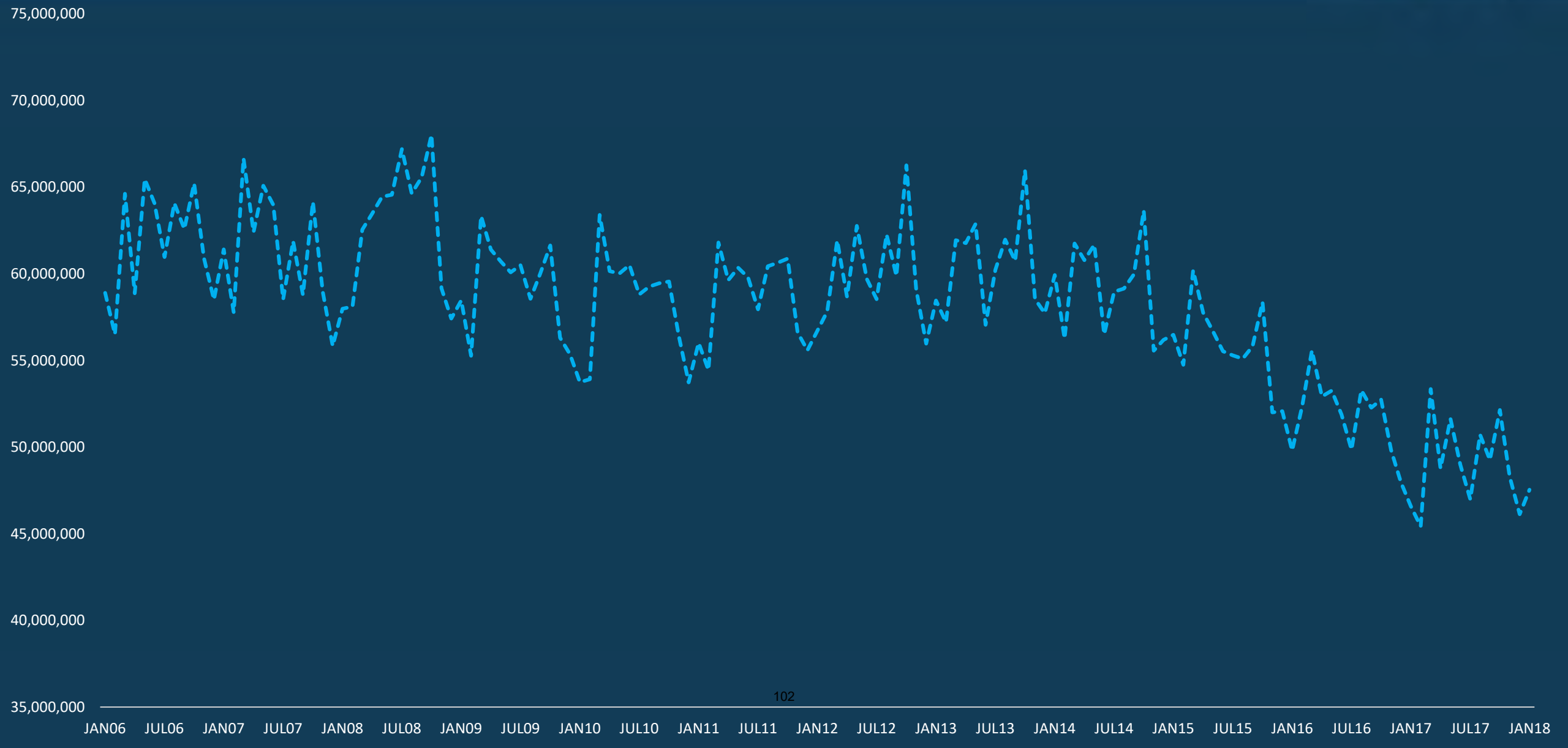
Per Capita Trips, 2006-2014



Per Capita Passenger Miles Travelled 2006-2014



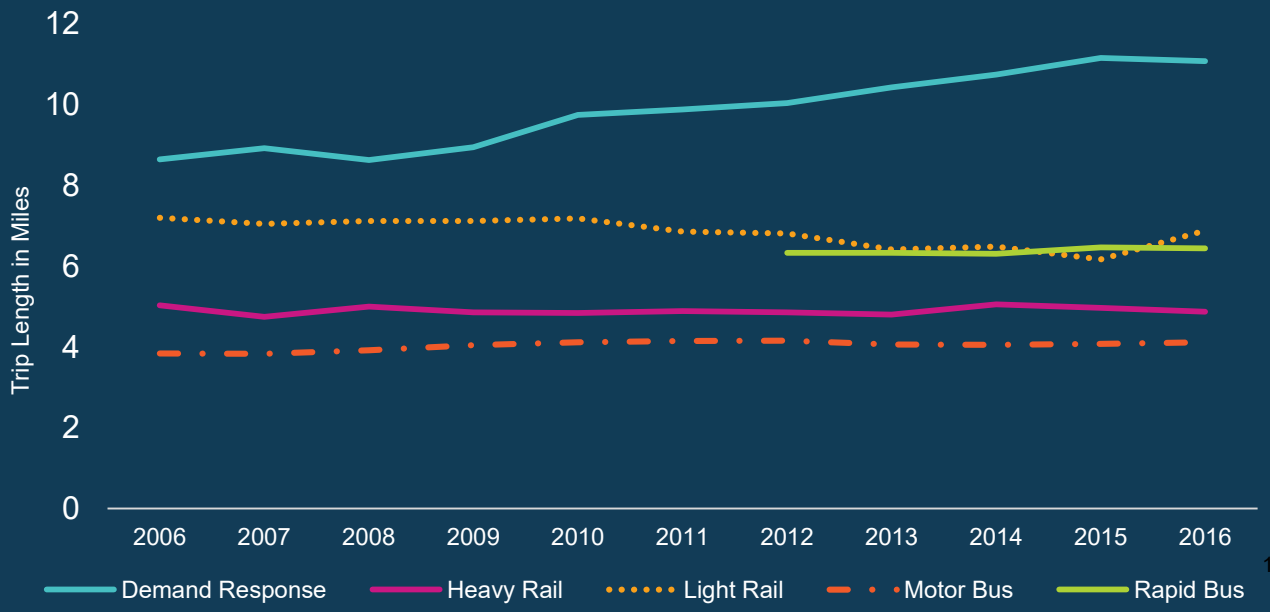
Aggregated Monthly Trip Raw Reporting through June 2016, 2018 NTD



Average Trip Length

Change in Average trip length, 2005-06 through 2015-16

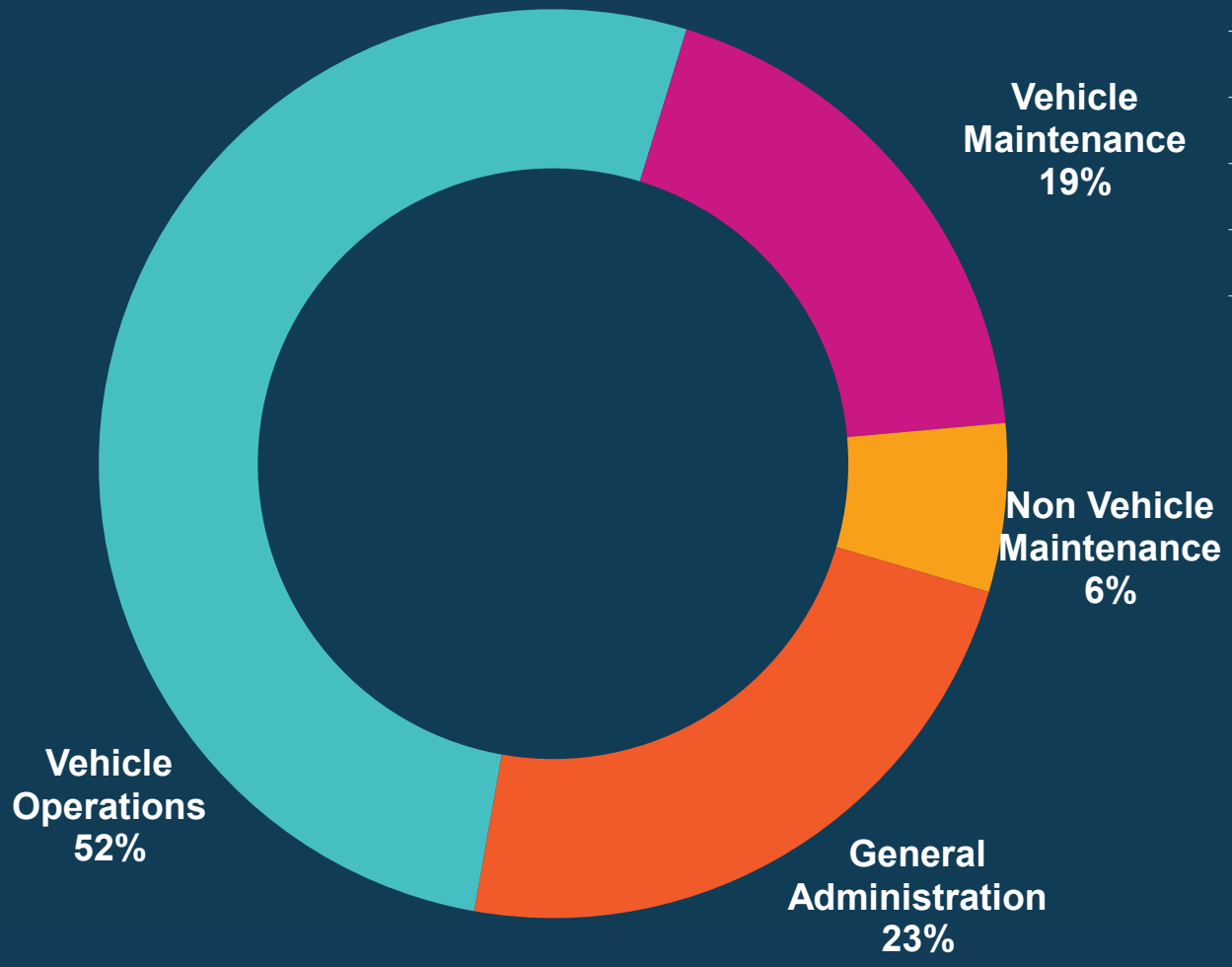
Demand Response	28.11%
Heavy Rail	-3.12%
Light Rail	-4.30%
Motor Bus	7.27%
Commuter Rail	-9.60%
Total	12.67%



Average trip length compared to percentage of residents living in counties other than Los Angeles County

Operating Expenditures

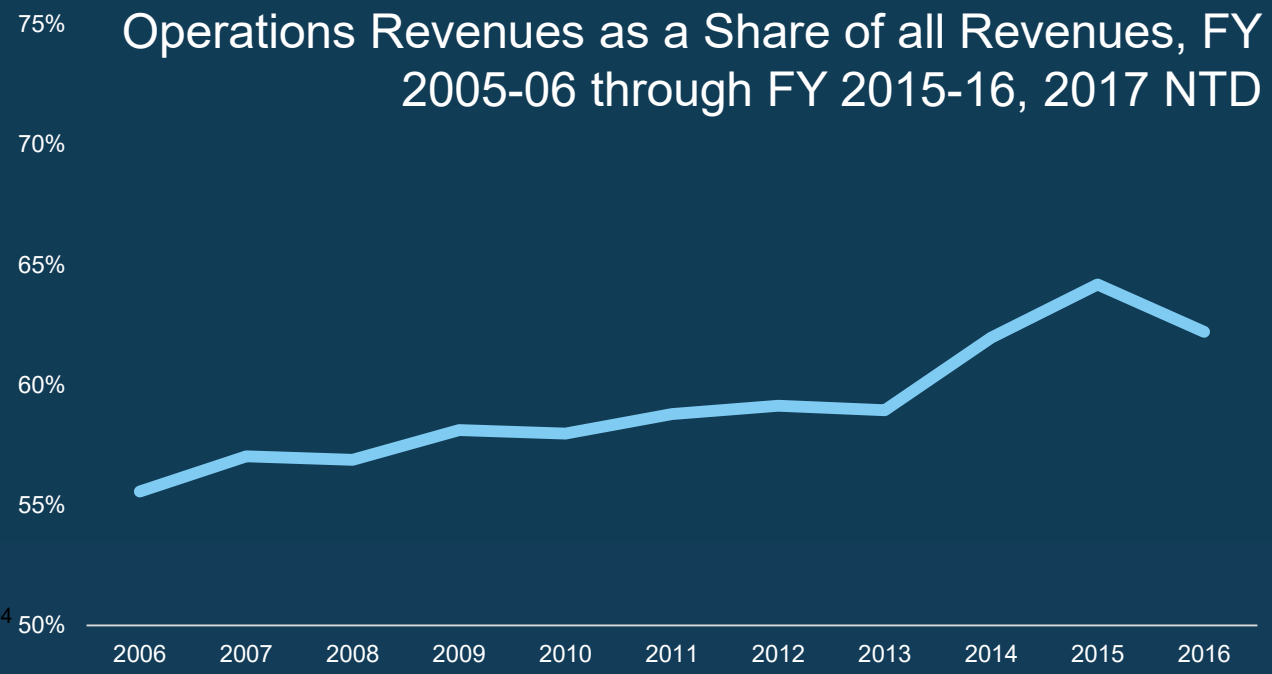
Operating Expenditures by Function



SCAG Region FY 2015-16: Operating Costs And Revenues

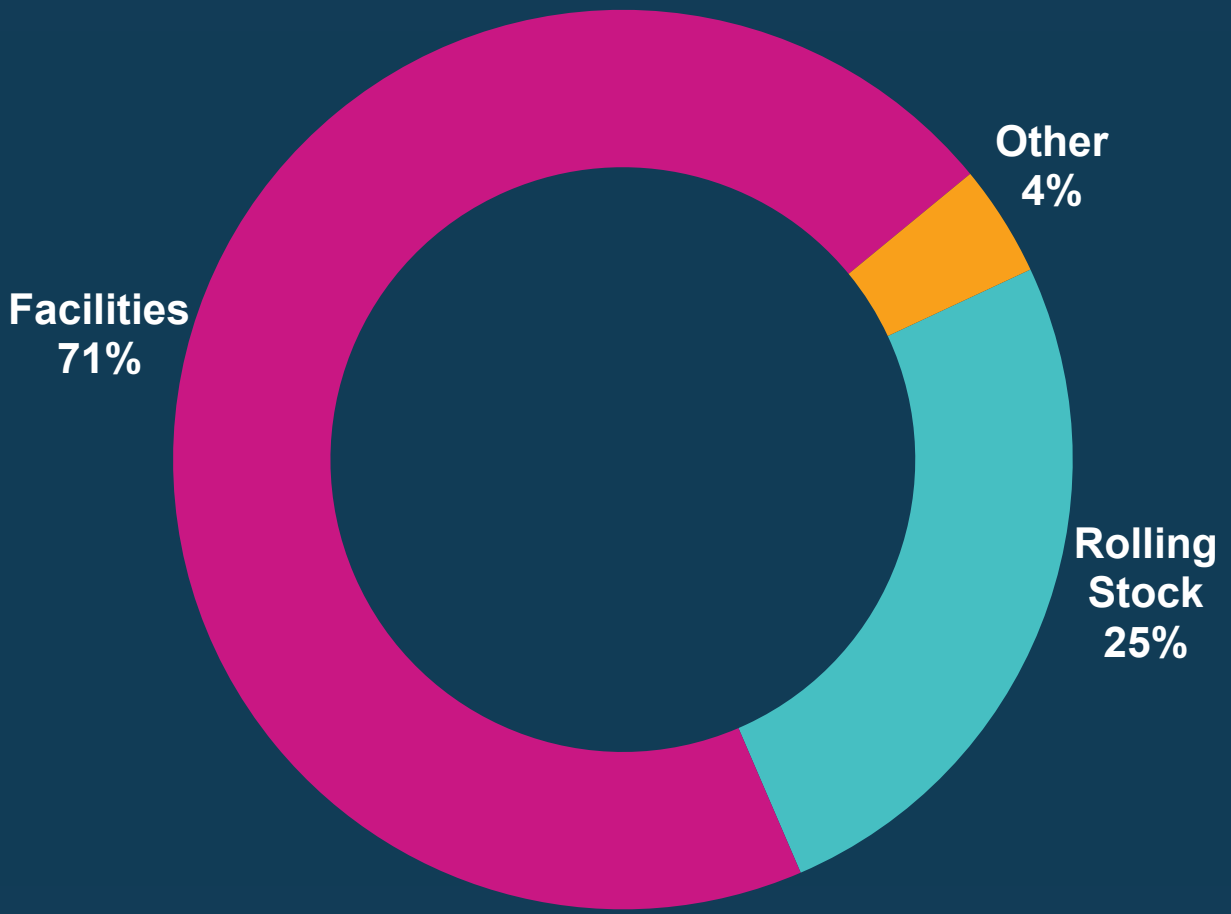
Total Operating Expenditures	$2,911,826,837
Vehicle Operations	$1,477,846,106
Vehicle Maintenance	$535,329,695
Non Vehicle Maintenance	$170,154,475
General Administration	$660,375,361
Fare Box Revenues	$634,081,956

Operations Revenues as a Share of all Revenues, FY 2005-06 through FY 2015-16, 2017 NTD



Capital Expenditures

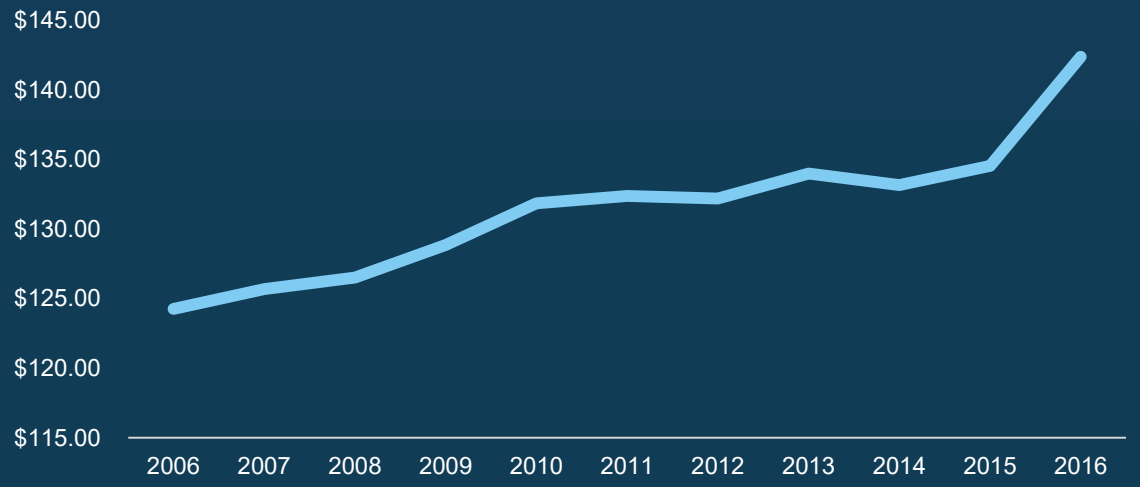
Capital Expenditures By Type

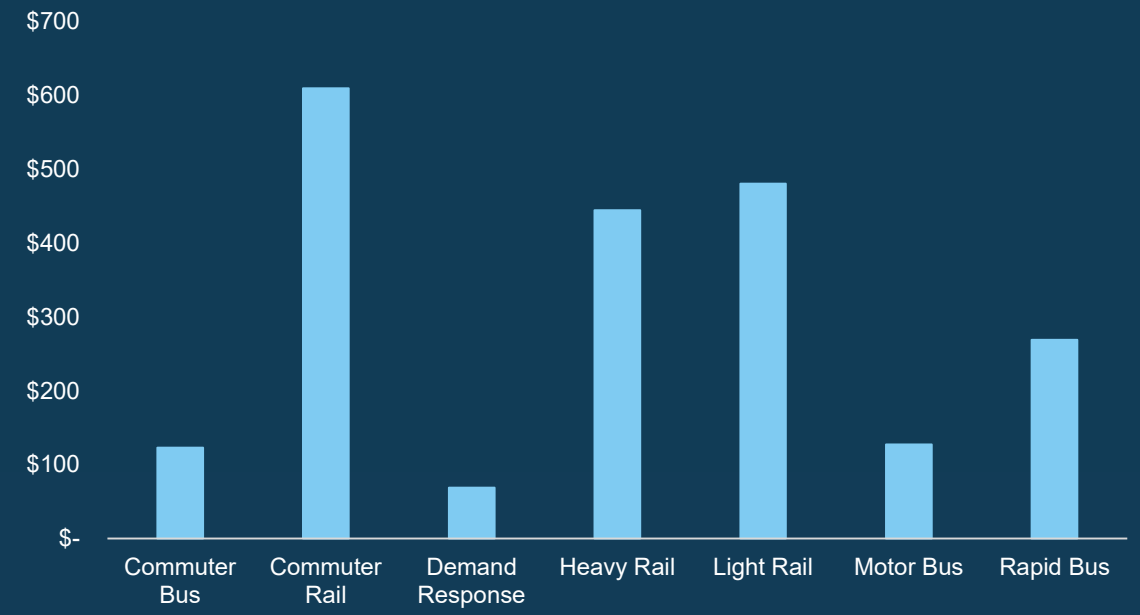


Capital Fund Sources, 2006-2016

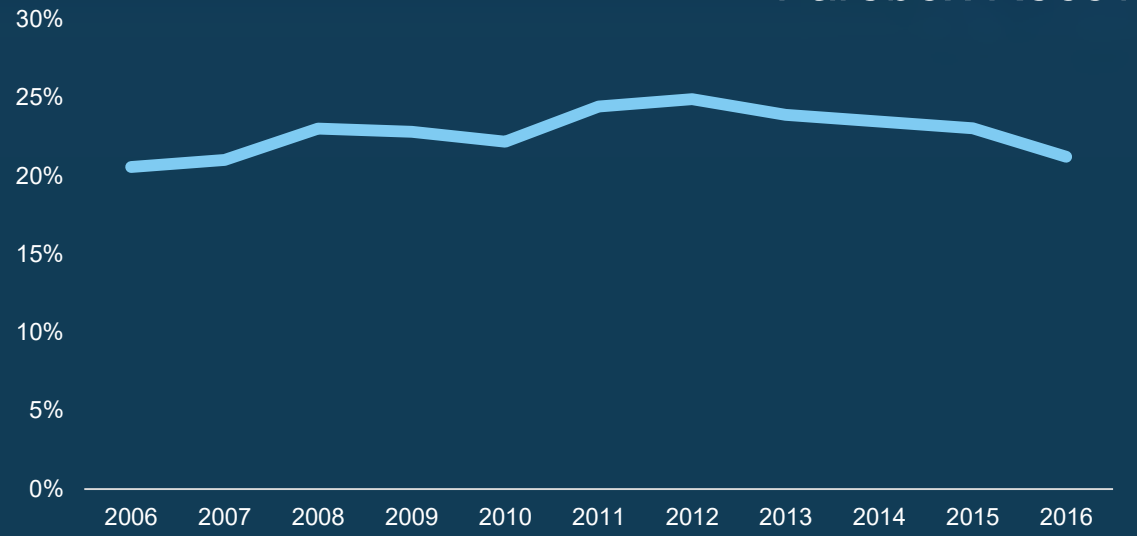
Operating Cost per Revenue Hour and Farebox Recovery

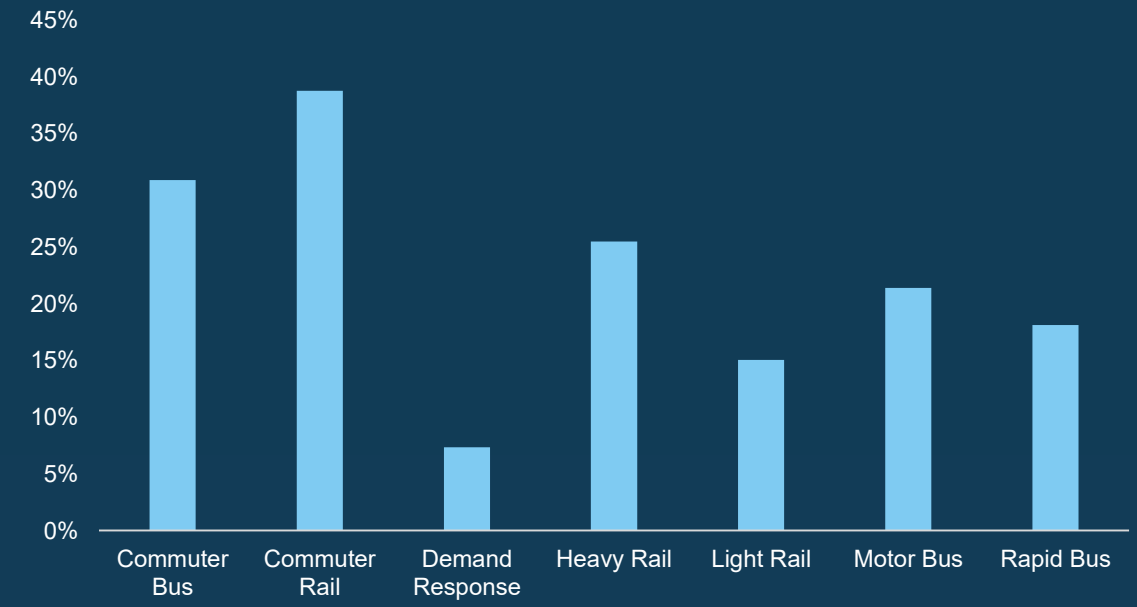
Cost per Hour





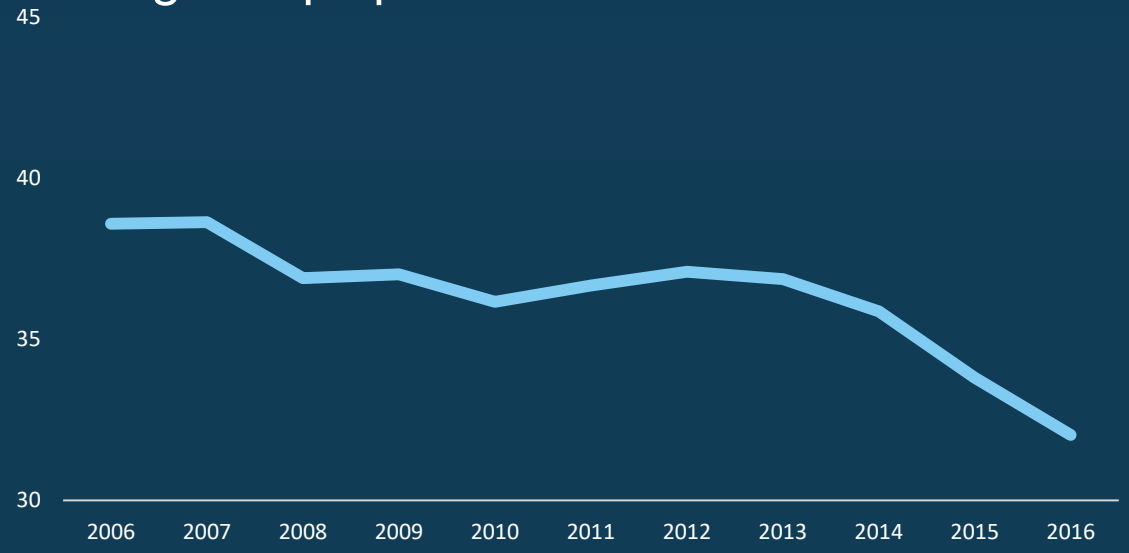
Farebox Recovery

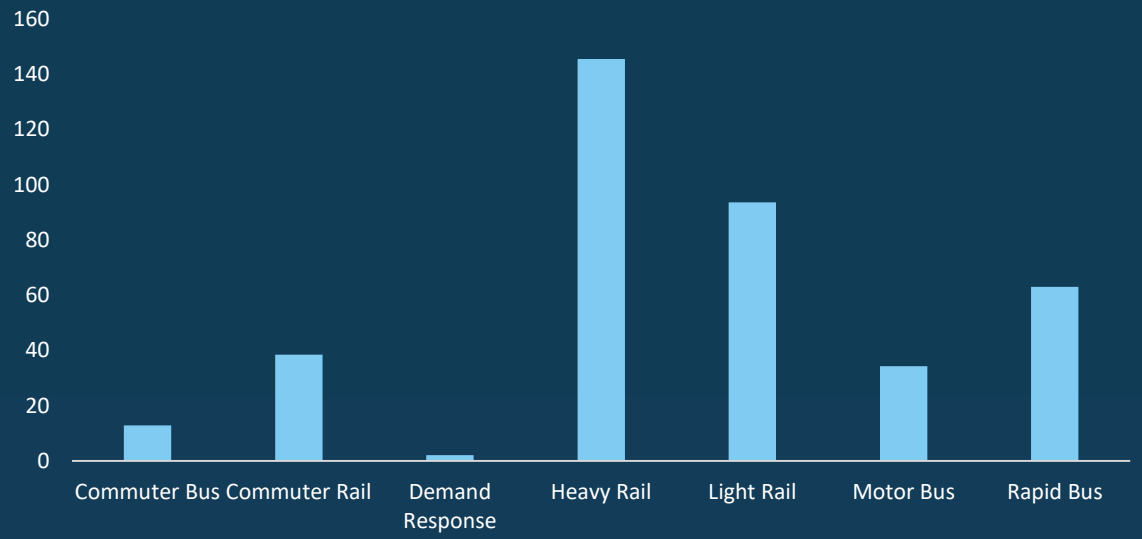




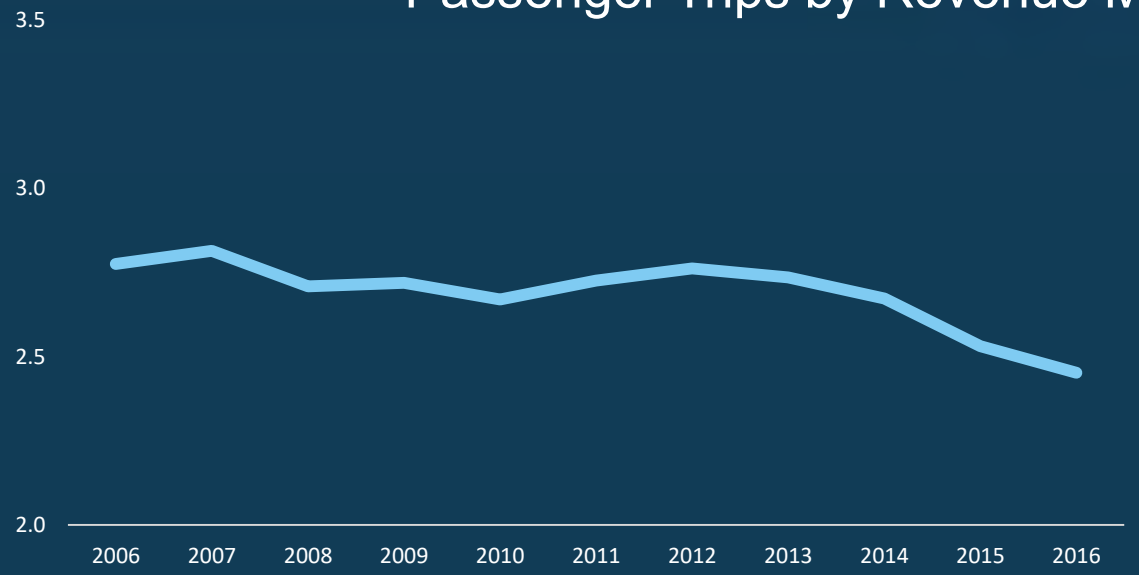
Productivity

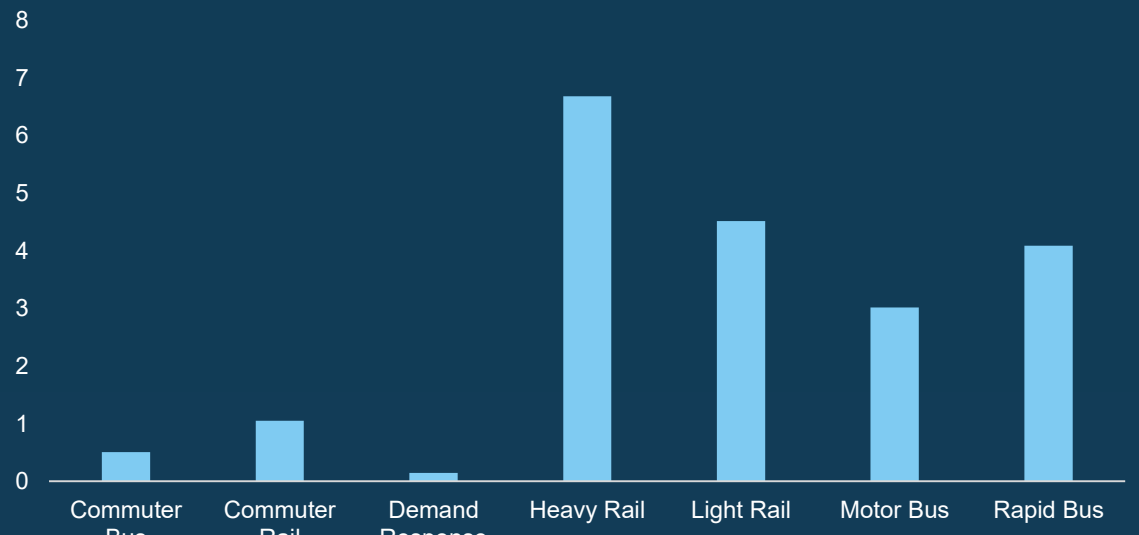
Passenger Trips per Revenue Hour





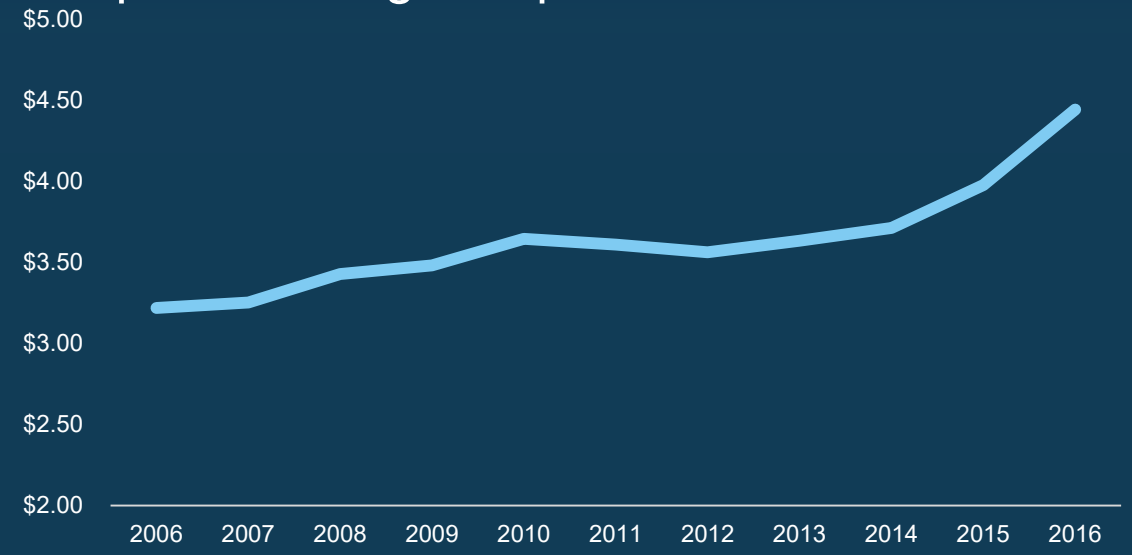
Passenger Trips by Revenue Mile

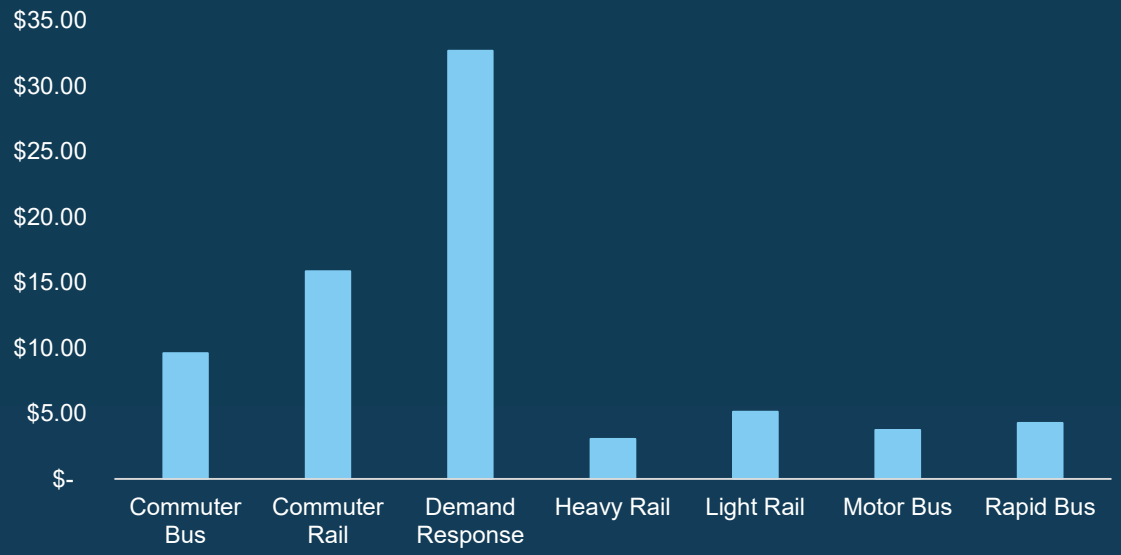




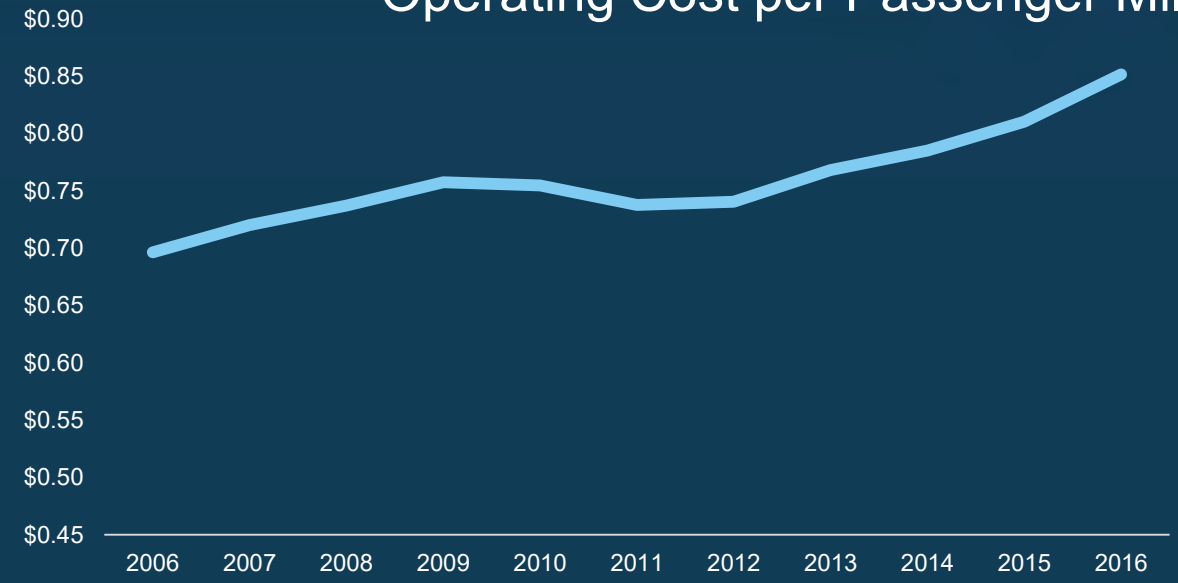
Cost per Trip and Mile

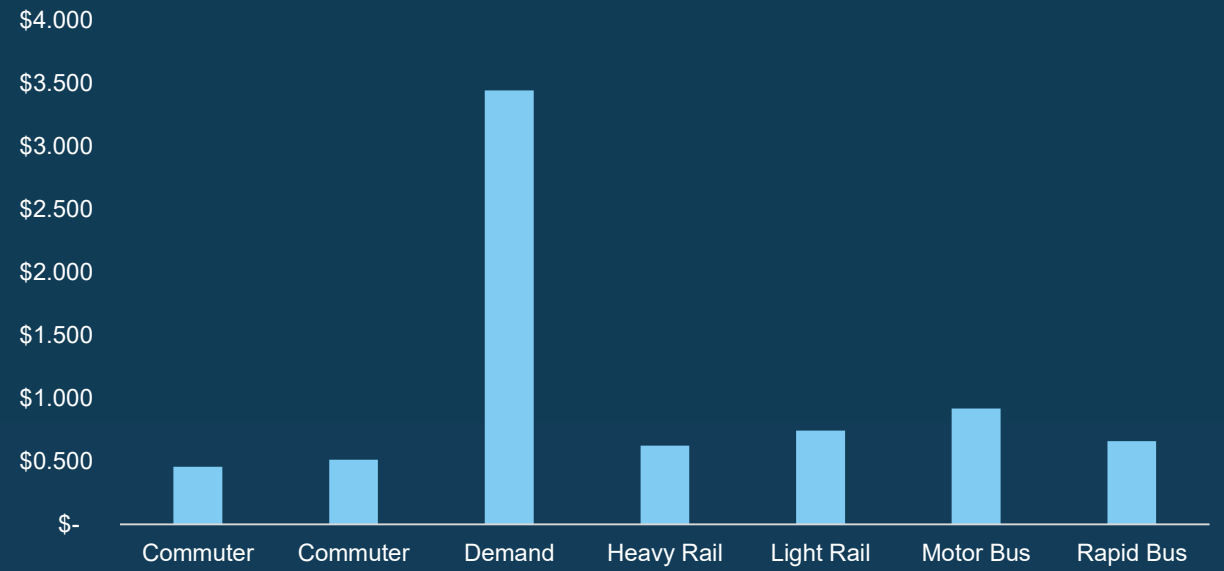
Cost per Passenger Trip





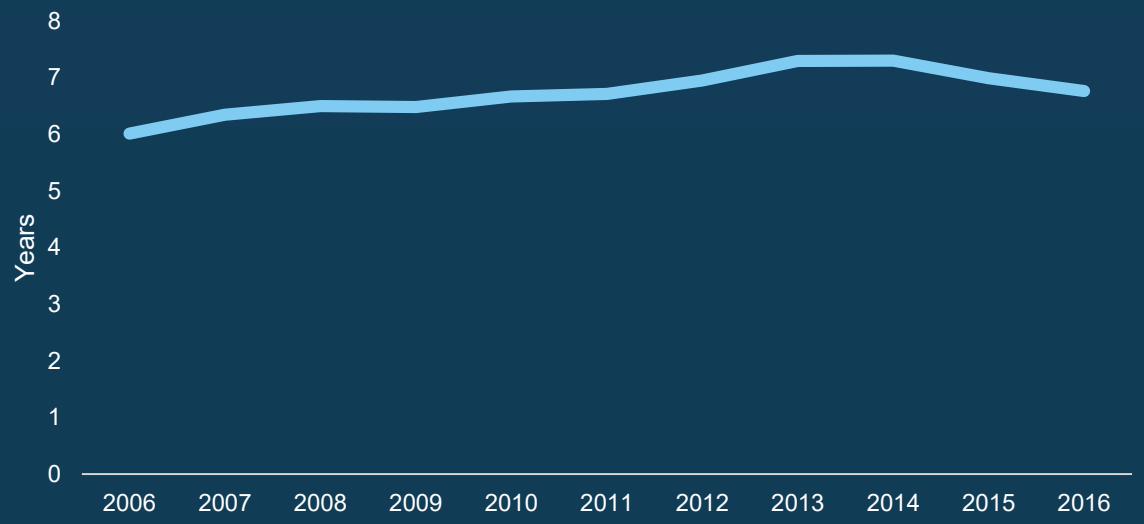
Operating Cost per Passenger Mile

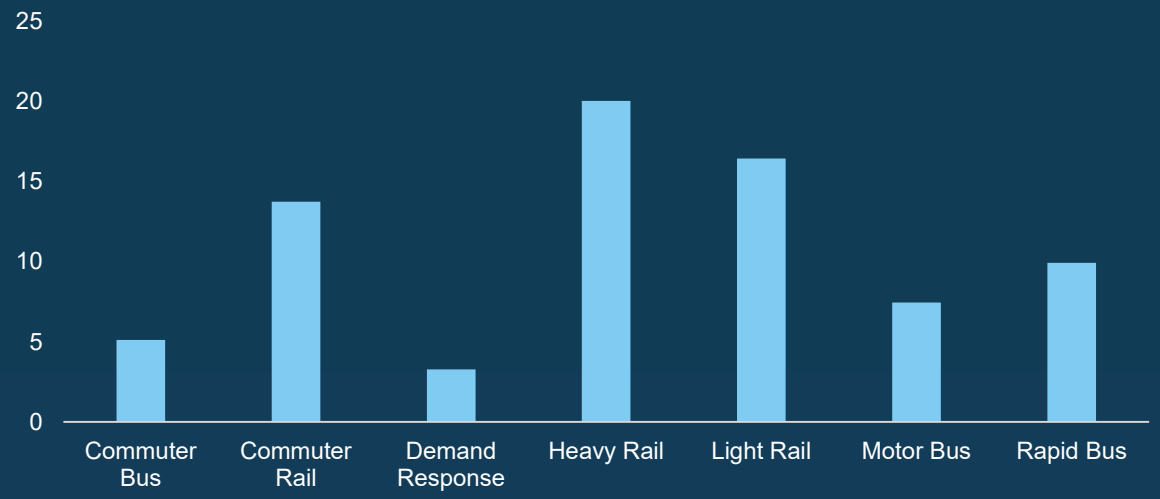




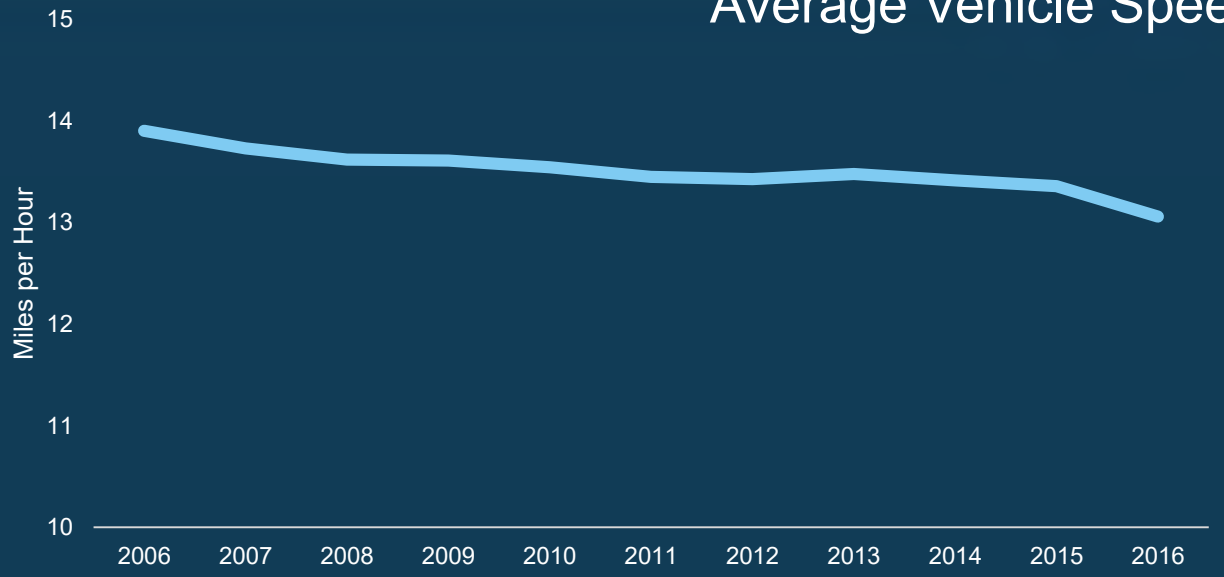
Fleet Average Vehicle Age and Vehicle Speed

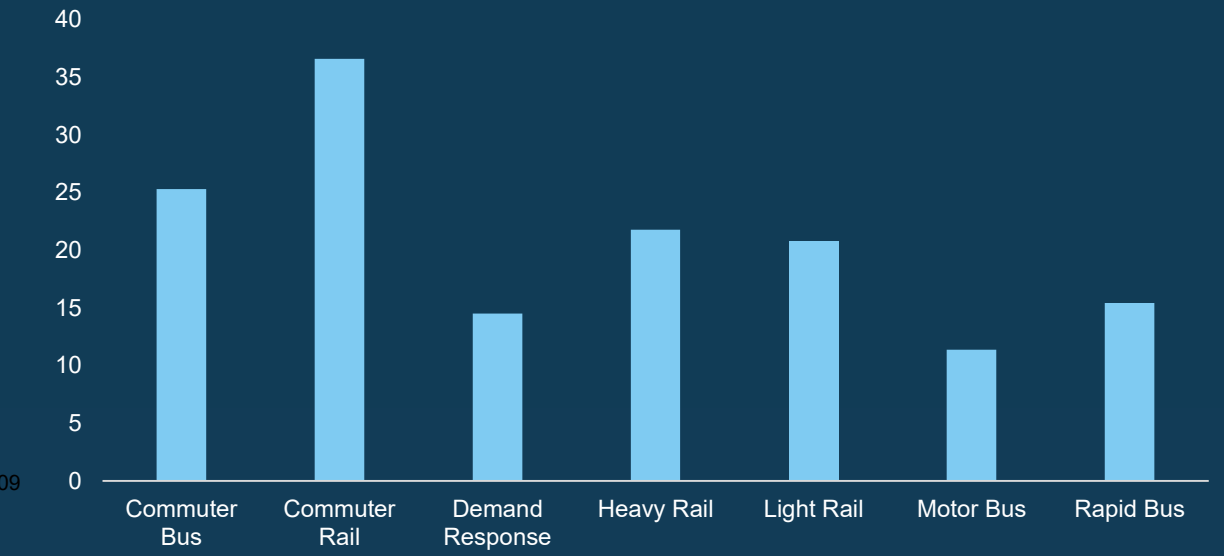
Fleet average age





Average Vehicle Speed





Comment Period

- Please send us any comments
- Comments period closes October 1, 2018
- Comment process will assist with foundation for 2016 RTP/SCS transit performance existing conditions analysis

- Thank you
  - Questions ? -- gleason@scag.ca.gov

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No. 5.1
August 29, 2018

To: Regional Transit Technical Advisory Committee (RTTAC)

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

Subject: FAST Act Requirements on Private Sector Providers of Transportation

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

DISCUSSION:
As part of the Draft 2020 RTP/SCS development, SCAG staff will be seeking input from RTTAC members on collecting and inventorying private sector providers of transportation and their facilities (e.g., Greyhound, Bolt, Megabus, etc.; and county transportation commission vanpool programs) as well as how to report and quantify the extent and benefits of employer-based commuting programs (e.g., VMT reduction).

SCAG staff also intends to convene, as part of its ongoing Regional Planning Working Groups, a series of approximately three meetings involving private providers of transportation and other groups called out specifically in the Metropolitan Transportation Planning regulations, as follows:

1. Private providers of transportation, including:
    a. Intercity bus operators (Greyhound, Megabus, etc.),
    b. A sample group of employee transportation coordinators (ETCs) tiered by number of employees,
    c. Vanpool fleet providers,
    d. TNC/private mobility services representatives,
2. Representatives of users of public transportation
3. Representatives of public transportation employees
4. Representatives of the disabled

Goals and Objectives

This series of working group meetings, tentatively titled "Public and Private Transportation Coordination Working Group," would seek to achieve the following:

- Bring private transportation providers and employee transportation coordinators (ETCs) in to the metropolitan transportation planning process.
- Involve and solicit feedback from public transit and rail employees, representatives and users, including disabled users.
- Improve transportation connectivity and coordination between public and private providers, including their services and facilities.
- Share mutually beneficial data and facility/project information.
- Incorporate private transportation providers into SCAG's Congestion Management Process.

Incentives and Benefits

There are many benefits to involving private transportation providers and ETCs to the metropolitan transportation planning process. Benefits to the private providers include:

- Gaining access to local government and public transit decision-makers.
- Identifying gaps in transit/transportation services.
- Learning about new transit facilities and services to provide for connectivity and business growth.
- Understanding and identifying first/last mile opportunities.
- Forming public/private partnerships and learning about opportunities to expand services and business growth.
- Understanding public transportation providers' perspectives, potentially offering ways to provide more efficient and effective services to travelers and the community.

NEXT STEPS:
SCAG staff will incorporate input and information from RTTAC on the private transportation provider effort and update the RTTAC periodically on its progress. SCAG staff is anticipating that the working group will convene at least three times during the 2020 RTP/SCS preparation and adoption process. The first meeting is tentatively scheduled to be held on Thursday, October 18th.

REPORT

Southern California Association of Governments
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017
Agenda Item No: 5.2
August 29, 2018

To: Regional Transit Technical Advisory Committee (RTTAC)

From: Philip Law, Transit/Rail Manager, 213-236-1841, law@scag.ca.gov

Subject: FTA Triennial Reviews, Section 5307 and Public Participation

DISCUSSION:
The Federal Transit Administration (FTA) allows Section 5307 recipients to rely on SCAG's adopted public participation requirements for the Federal Transportation Improvement Program (FTIP) in lieu of the process required in the development of the Program of Projects (POP), if the recipient has coordinated with SCAG and ensured that the public is aware that the FTIP development process is being used to satisfy the POP public participation requirements.

To comply with the latter requirement:

- SCAG maintains an adopted Public Participation Plan (PPP).
- SCAG incorporates in the FTIP document(s) explicit statements reflecting that public notice of public involvement activities and time established for public review and comment on the FTIP will satisfy the POP requirements of the Section 5307 Program.

As part of the Section 5307 Triennial Review process, FTA asks recipients that rely on SCAG's FTIP public participation process to review SCAG's adopted PPP to ensure that it describes explicit procedures, strategies, and desired outcomes identified in a compliance checklist.

To assist operators undergoing review, SCAG staff has completed the compliance checklist and provided it as an attachment to this report. The compliance checklist is taken from page 18-6 of FTA's FY2018 Comprehensive Review Guide (https://www.transit.dot.gov/fy18-comprehensive-review-guide). The references provided in the checklist are to SCAG's current adopted 2014 PPP. Please note that SCAG is in the process of updating the PPP and intends to seek Regional Council approval on September 6, 2018. Once the Regional Council adopts the new 2018 PPP, staff will provide an updated compliance checklist to the RTTAC.

ATTACHMENT:
Compliance Checklist

DETERMINING COMPLIANCE

For recipients that rely on the MPO's Public Participation Process (PPP): Obtain and review the MPO's adopted public participation plan to ensure it describes explicit procedures, strategies, and desired outcomes for:

Note: All page references are to the adopted *SCAG 2014 Public Participation Plan* at http://www.scag.ca.gov/Documents/PPP2014_Adopted-FINAL.pdf.

Element	Addressed in Plan (page #)
Providing adequate public notice of public participation activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed metropolitan transportation plan and the TIP	Section IX. Appendix A, p. 25, bullet 2.A. pp. 31-32, bullets D & F
Providing timely notice and reasonable access to information about transportation issues and processes	Section III. Public Participation Plan Goals, p. 3, "Engagement" Section IV. Public Participation Plan Process for Achieving Goals, p. 7, "Engagement" Section IX. Appendix A, pp. 30-31 bullets A, B & C
Employing visualization techniques to describe metropolitan transportation plans and TIPs	Section IV. Public Participation Plan Process for Achieving Goals, p. 8, "Information Resources & Visualization Tools"
Making public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web	Section IV. Public Participation Plan Process for Achieving Goals, p. 6, "Technology Initiative" pp. 7-9, "Engagement"
Holding any public meetings at convenient and accessible locations and times	Section III. Public Participation Plan Goals, pp. 3-4 "Engagement" Section IV. Public Participation Plan Process for Achieving Goals, p. 8, "Education" Section IX. Appendix A p. 34, bullet D
Demonstrating explicit consideration and response to public input received during the development of the metropolitan transportation plan and the TIP	Section III. Public Participation Plan Goals, pp. 3-4 Section IX. Appendix A, p. 25, bullet 2.B. p. 34, bullet E
Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services	Section III. Public Participation Plan Goals, pp. 3-4 Section V. Interested Parties, p. 10 Section VI. Public Participation Plan Requirements, p. 18, last paragraph
Providing an additional opportunity for public comment, if the final metropolitan transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues that interested parties could not reasonably have foreseen from the public involvement efforts	Section IX. Appendix A, p. 26, bullet 2.B.V. (top of page)
Coordinating with the statewide transportation planning public involvement and consultation processes under subpart B of this part	Section VI. Public Participation Plan Requirements, pp. 11-15,
Periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process	Section III. Public Participation Plan Goals, p. 4, "Evaluation" Section IV. Public Participation Plan Process for Achieving Goals, pp. 8-9 "Why does SCAG measure/evaluate…" etc.

NOTE: Follow-up with the recipient if unable to locate the above items in the PPP.