



Board Report

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Agenda Number: 36.

**OPERATIONS, SAFETY AND CUSTOMER EXPERIENCE COMMITTEE
EXECUTIVE MANAGEMENT COMMITTEE
OCTOBER 18, 2018**

SUBJECT: NEXTGEN UPDATE: TRANSIT COMPETITIVENESS AND MARKET POTENTIAL

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE an update on NextGen transit competitiveness and market potential information.

ISSUE

On June 28, 2018, the Board of Directors approved Motion 38.1 in relation to Item 38: NextGen Bus Study Service Parameters. The Motion directed the NextGen Bus Study to endorse travel speed, service frequency, and system reliability as the highest priority service parameters to guide the work of the project. With these service parameters defined, this report responds with detailed findings on where these service parameters fit as Metro seeks to prioritize service concepts in the next phase of the project.

BACKGROUND

The goal of the NextGen Bus Study is to design a new bus network that is more relevant, reflective of, and attractive to the residents of LA County. Since 2014, Metro has seen a decline in bus ridership around 20%. This is consistent with many transit agencies across the nation. There are a number of potential explanations for the ridership decline, so it is important to fully understand these issues, particularly as it relates to the diverse needs of LA County.

While Metro's bus network carries over 70% of combined Metro bus and rail ridership, the bus network has not seen major changes in over 25 years. Today, there are more people, more places to go, and more ways to get there. As a result, Metro's bus network has fallen out of alignment with the way people need to travel today.

DISCUSSION

The NextGen Bus Study seeks to improve the bus network for current, former and potential customers. While it is critical to examine the data, it is important to engage with the community and

understand their preferences. As a result, the project has completed a robust campaign of outreach to date.

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

The NextGen Bus Study has determined that there are four types of riders.

- 7% Frequent (ride 3-4 times per week)
- 22% Occasional (ride 2-3 times per month)
- 55% Infrequent (ride 1-2 times per year)
- 16% Non-Rider

While the number of frequent riders only accounts for 7% of all LA County residents, frequent riders represent 80% of all Metro bus boardings. However, the frequent rider base has been declining, as there are a number of publicized factors for this, including affordable car loans, more reliable cars, ease of getting a driver's license, rideshare expansion, and displacement. This means that every frequent rider lost accounts for 2-3 times loss in ridership. The question becomes whether it is prudent to continue prioritizing a shrinking ridership base or explore emerging markets which may have different travel preferences.

According to the Metro Customer Survey conducted in 2017, 31% of current riders stated that their main reason for riding for convenience. Some other positive attributes included not wanting to drive in traffic, good for the environment, and cheaper than parking. Primary improvements desired among current riders were more frequent and reliable service. When compared with Non-Riders, their main reason for not riding is because the bus is too slow from traffic and too many transfers. However, both current riders and non-riders agree that the most important service parameters Metro should focus on are being fast, frequent and reliable. This is consistent with the service parameters outlined in Motion 40.1.

With existing levels of service, Metro cannot be fast, frequent and reliable along every corridor, all day and everyday. Therefore, policy choices must be made to prioritize where and when it makes sense to implement these parameters.

While many people perceive the Metro bus network to not go where people want to travel, the Metro system in fact covers 85% of all trips in LA County. In many cases, however, these trips are not time competitive with other options. The study examined transit speed competitiveness by using a combination of TAP data and cell phone, location-based data to learn where and when people wanted to travel for both transit and non-transit trips. These trips were then calculated through trip planners to compare travel times and establish which markets are compatible for transit. The analysis revealed that transit can be competitive with other trips so long as it does not take more than twice as long as driving.

A transit journey generally consists of two components, the walk/wait time at the bus stop, then the on-board time as the bus is traveling. These two factors make up total transit travel time. For short trips, the walk/wait time is more critical to riders, as studies show the perception of wait time can be 2-3 times the actual time. For longer trips, the on-board time becomes more critical, as riders spend the majority of time traveling on the bus as opposed to waiting at a bus stop. This reveals that to be competitive for short trips, frequency is critical for minimizing the walk/wait time. To be competitive for long trips, travel speed is critical for minimizing the on-board time. Travel speed can be improved by a number of strategies, including dedicated bus lanes, transit signal priority, and bus stop consolidation.

Today, Metro captures the greatest market share on long distance riders traveling over 10 miles. However, the overall market for long distance trips, whether transit or non-transit, represents only 16% of total trips taken in LA County. The largest amount of total trips are within a shorter distance of 1-5 miles, representing 46% of total trips taken in LA County. If Metro can match its transit share of this 1-5 mile segment with the long distance segment, bus ridership would increase by 500,000 trips.

In order to address the large, short distance trip market, Metro must understand when, where and why these trips generally occur. Short trips serve a variety of purposes, including workers traveling to a local business, single mothers running errands with children, and people traveling for dining or entertainment. These trips all share a similar attribute that the travel occurs primarily during the midday and evening period. This is in contrast to the long distance, commute trips which tend to be during the morning and evening rush hour, focused on major employment centers. As a result, while Metro service currently serves the morning and evening commute trips well, there are missed opportunities for midday and late evening travel when many short distance, non-commute trips are being made.

In summary, there are two areas where Metro should focus on to better meet the needs of LA County travel. First, Metro should build on its success of long distance, commute trips by improving on-board travel times. Second, Metro should enter the short distance, non-commute market where nearly 50% of total LA County trips are made by improving frequencies to reduce wait time at bus stops. These areas for improvement will be selected based on a data driven analysis and extensive public outreach.

DETERMINATION OF SAFETY IMPACT

The recommended action of improving on-board travel times and service frequencies will enhance Metro's ability to provide service that is safe and reliable.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports the following Metro Strategic Plan Goals: Provide high-quality mobility options that enable people to spend less time traveling. Deliver outstanding trip experiences for all users of the transportation system. Enhance communities and lives through mobility and access to opportunity. Provide responsive, accountable, and trustworthy governance within the Metro organization. This project will improve safety, service, and reliability in an effort to provide a world-class transportation system that enhances quality of life for all who live, work, and play within LA County.

ALTERNATIVES CONSIDERED

The fulfillment of this project could be accomplished through maintaining the existing bus network. For this project, staff does not recommend this approach. Staff asserts that there are distinct advantages to Metro in better responding to meet the needs of where, when and why people travel in LA County today. As a result, Metro expects bus ridership to improve both in quantity and quality.

NEXT STEPS

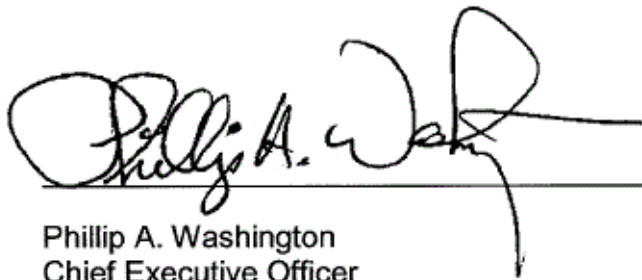
Staff will continue working with the NextGen Working Group to prioritize service concepts, then return to the Board in January 2019 with a recommendation on service concepts. If approved, staff will begin translating service concepts into line-by-line improvements for service changes starting in December 2019 and continuing through June 2020.

ATTACHMENTS

Attachment A - NextGen FAQ

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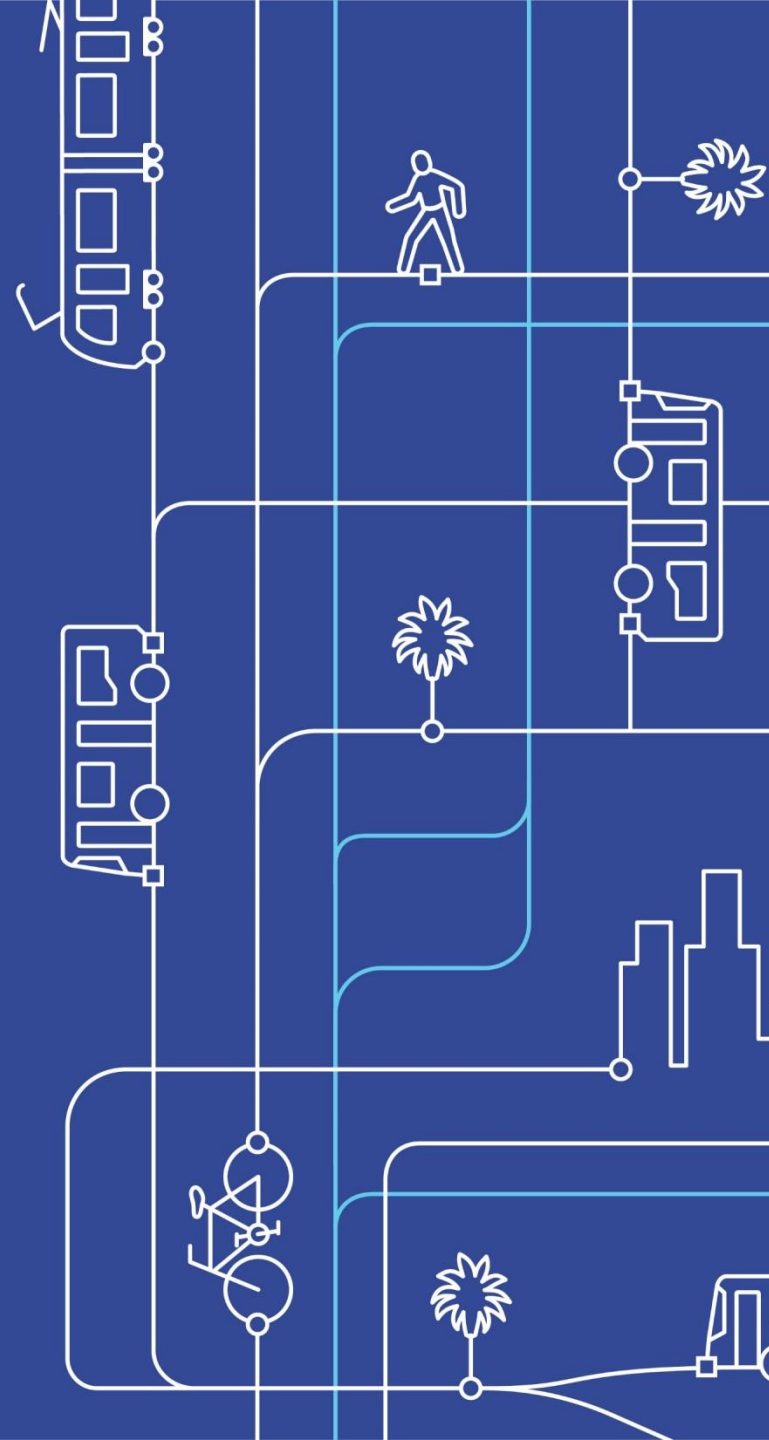


Phillip A. Washington
Chief Executive Officer

NEXTGEN Bus Study

Transit Competitiveness and Market Potential

Operations, Safety, and
Customer Experience Committee
Executive Management Committee
10.18.18



Study Process

SPRING/SUMMER 2018

FALL 2018/WINTER 2019

SPRING/SUMMER 2019

FALL 2019/WINTER 2020

Step 1

Market Demand and Travel Patterns, Existing Service Evaluation

Project awareness and listening to what the market tells us about how we travel, evaluate how existing bus service relates to the needs of the rider.

Step 2

Policy Choices for Service (or Market) Priorities, Service Characteristics, and Network Design

Policies to develop potential bus service priorities to better meet the needs of the rider.

Step 3

Service Design Guidelines and Route/Schedule Changes

Redesign new routes and schedules based on guidelines and parameters reflecting the adopted Policy Choices.

Step 4

Implementation and Marketing

Implement new routes and schedules that reflect the way people travel today. Market the new services to existing, former, and non-riders through education and information sharing tools.



Continuous public engagement →

Telephone Town Hall Meetings



Community Pop-up Events



Community Based Organization Briefings



Service Council/Board Briefings



Community Pop-up Events



Working Group & Stakeholder Briefings



Public Meetings & Webcasts



Service Council/Board Briefings



Metro Board Approval



Telephone Town Hall Meetings



Muni Operators & Local Jurisdictions Collaboration



Formal Public Hearings



Service Council/Board Briefings



Marketing & Messaging



Community Pop-up Events



Public Meetings & Webcasts



Service Council/Board Briefings

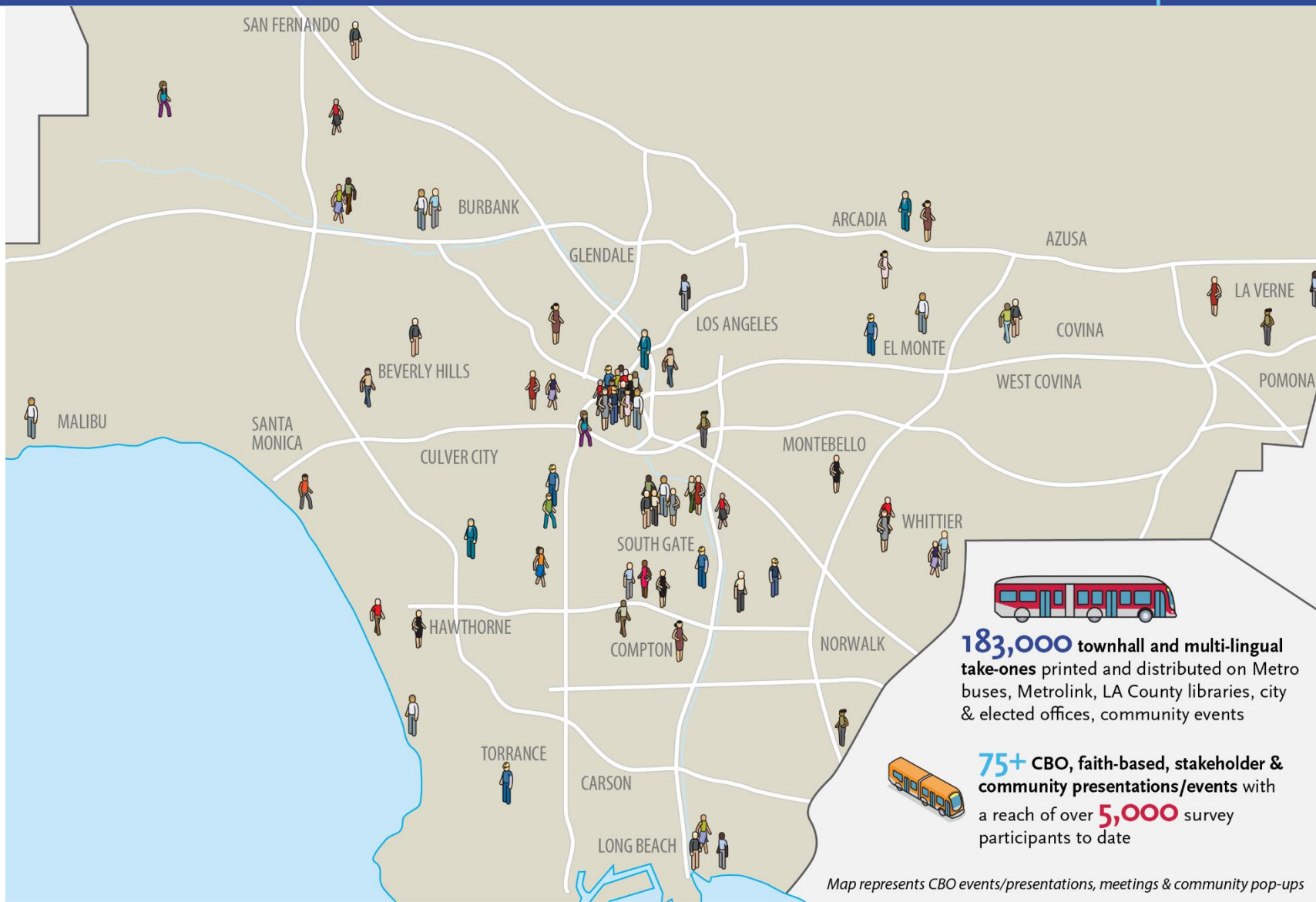


Metro Service Council/Board Approval



Continuous online engagement tools: questionnaire, interactive survey and map →

Stakeholder Engagement



Service Parameters

All Riders

Travel Speed

Frequency

Reliability

Current

More Service

Fares

Information

Former

Security
(women, certain geographies)

First/Last Mile
(elderly, higher income)

Comfort
(odors, crowding)

Infrequent/ Non-Rider

Information
(non-riders)

First/Last Mile
(women, youth, elderly)

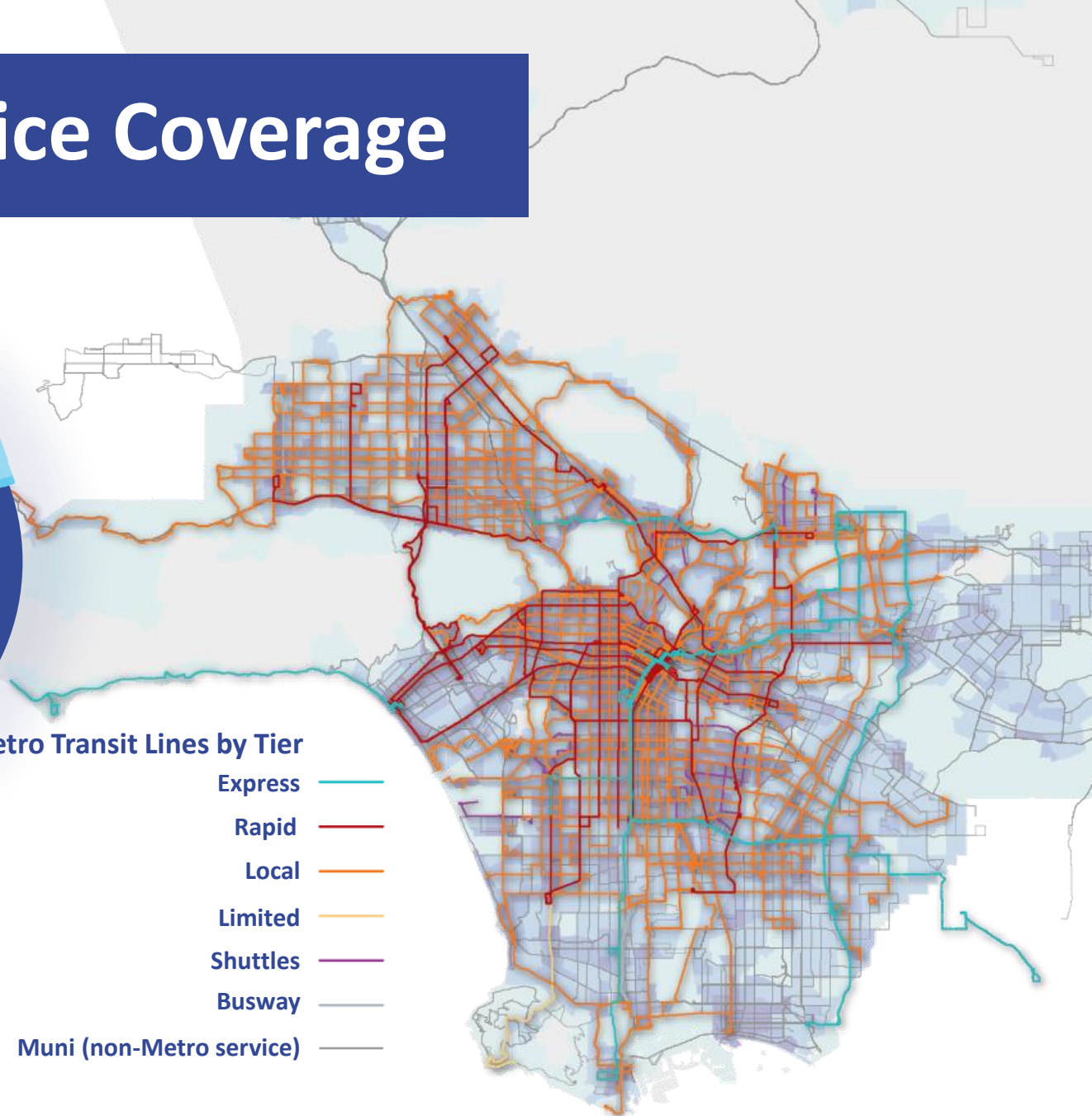
Comfort
(odors, crowding)

Transit Service Coverage

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

Metro Transit Lines by Tier



- Express —
- Rapid —
- Local —
- Limited —
- Shuttles —
- Busway —
- Muni (non-Metro service) —

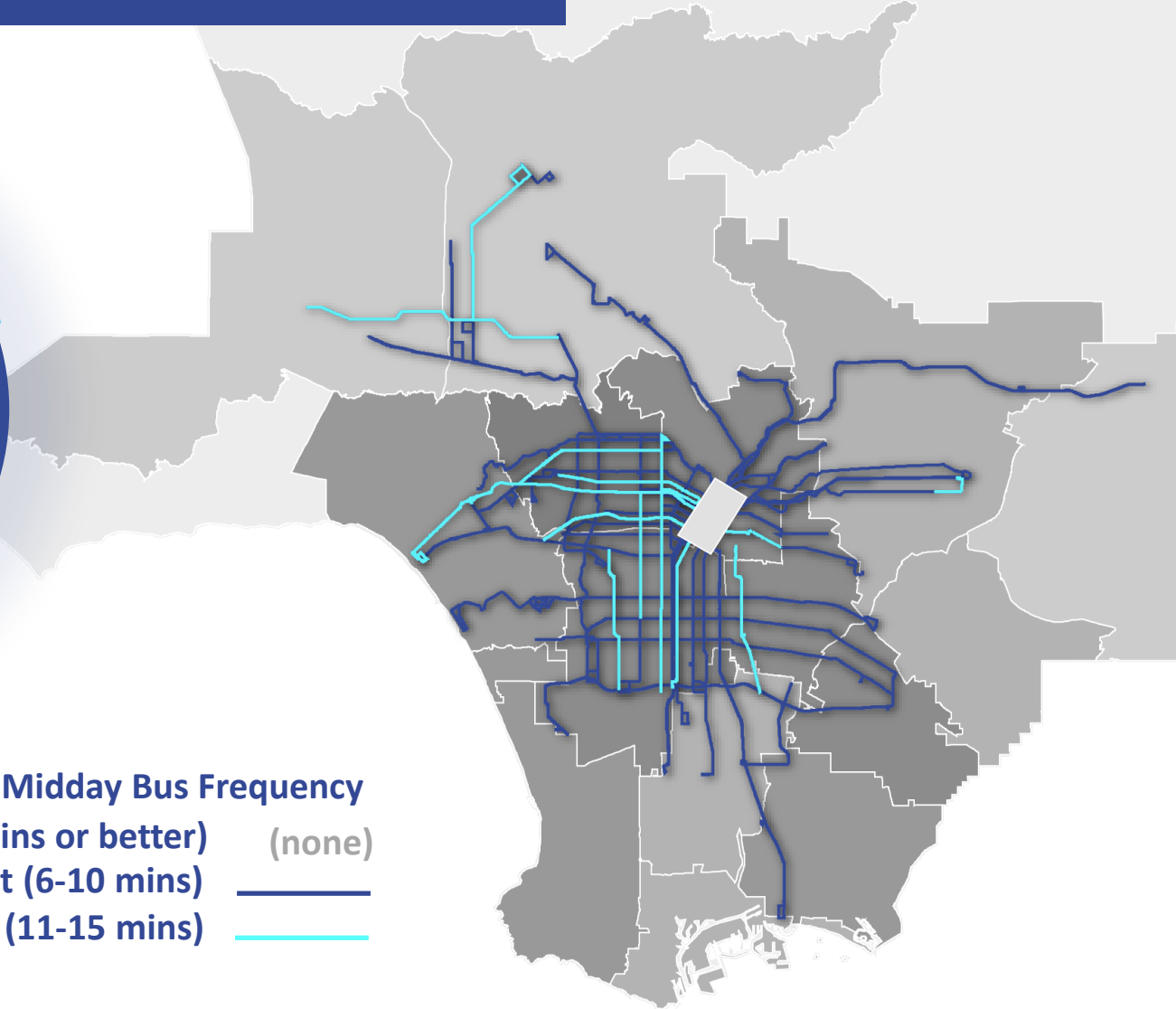


Transit Service Density


**All day
frequent service
is concentrated
in Central LA
County**

Midday Bus Frequency

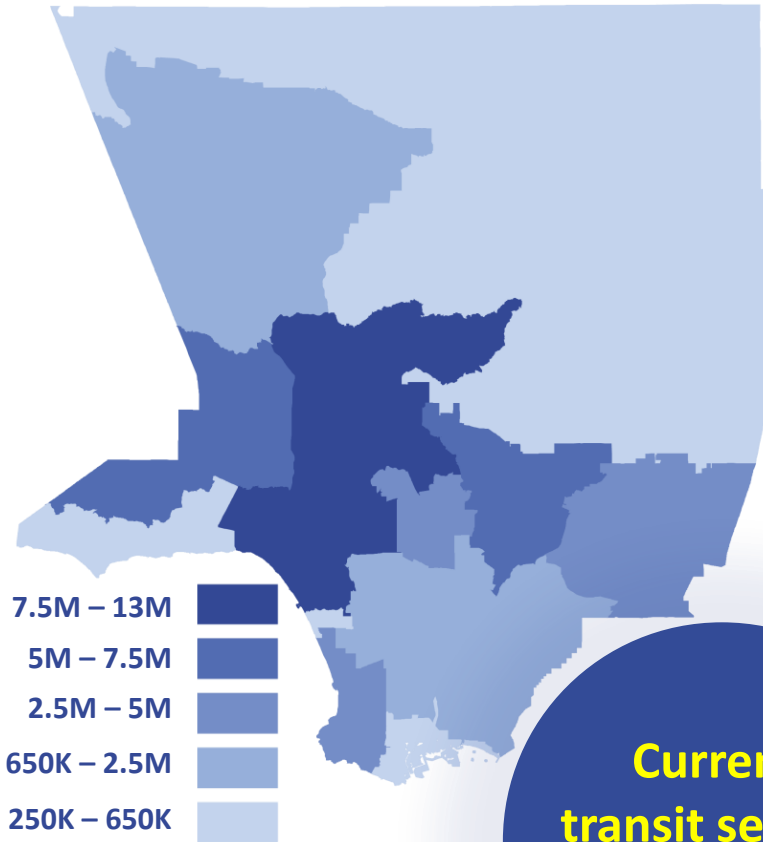
- Super Frequent (5 mins or better) (none)
- Very Frequent (6-10 mins) 
- Frequent (11-15 mins) 



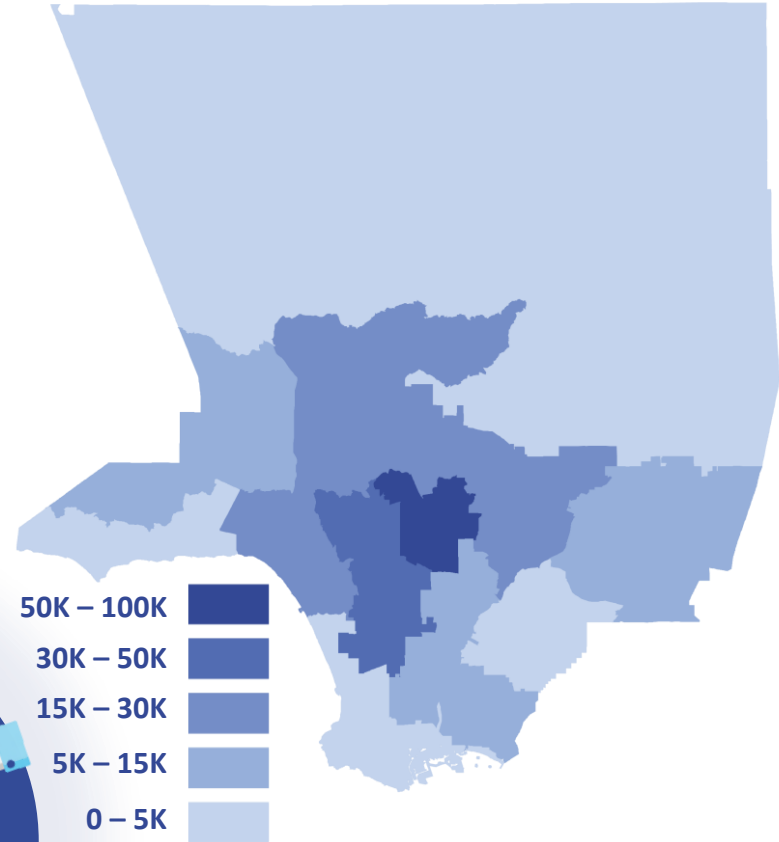
Trip Origins

Total vs Transit Trips

All Trip Origins (cell phone data)



Transit Origins (TAP data)



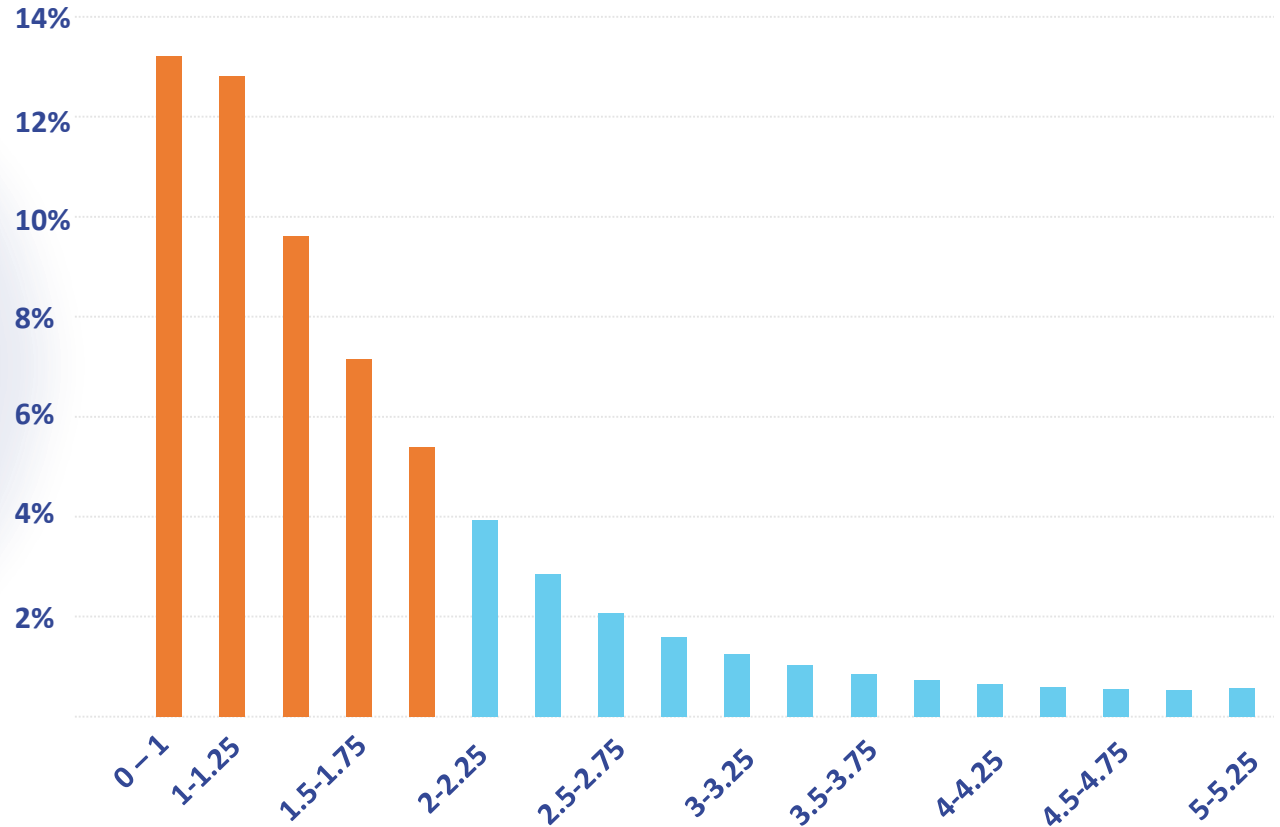
Current transit service is not always competitive

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



Transit to Drive Time Ratio

Understanding Trip Purposes

Commute Trips

Travel from home to a regular destination at an employment center during peak hours



Work Trips

Travel from home to a regular destination nearby anytime during the day or week



Other Trips

Occasional travel from a changing origin to a changing destination



When is Travel Speed important?

For Long Distance Trips: 10 to 12.5 Miles

Travel Speed is the key factor for longer trips.



30% of time getting to/from transit

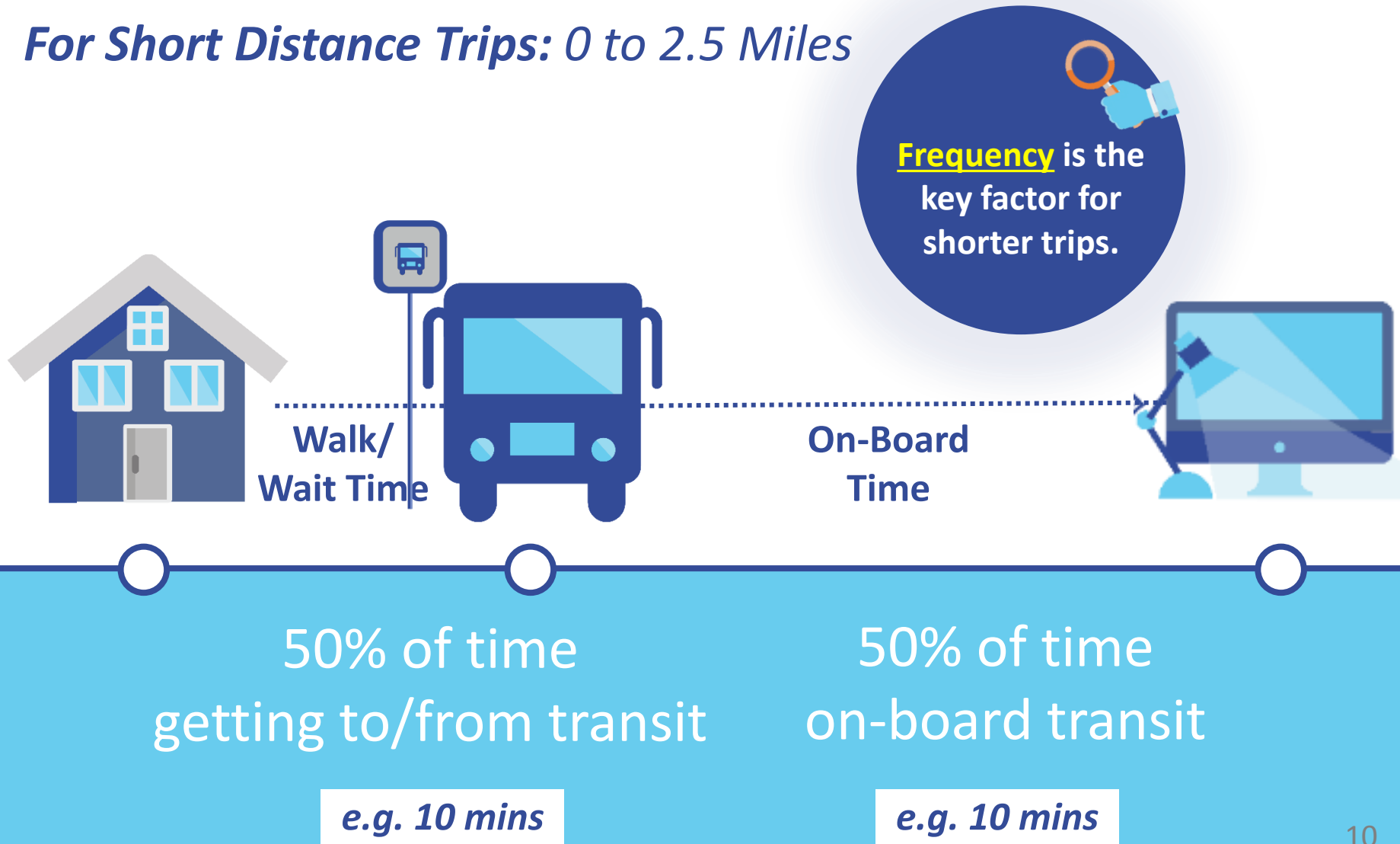
e.g. 10 mins

70% of time on-board transit

e.g. 25 mins

When is Frequency important?

For Short Distance Trips: 0 to 2.5 Miles



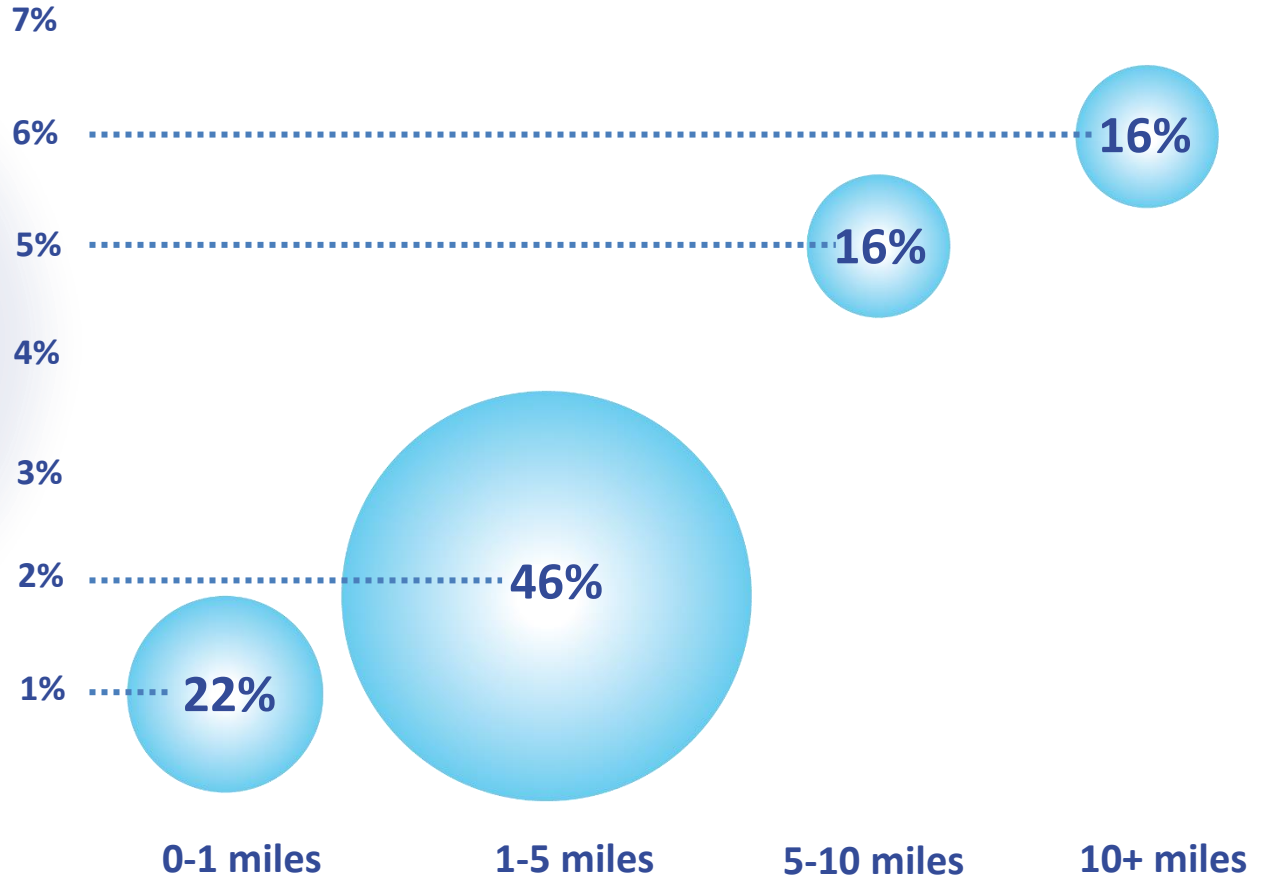
Competitiveness and Market Potential

Transit Market Share by Distance & Percent of Total Trips

Transit Market Share

Increasing our transit share of short distance trips to 6% means 500,000 new trips

% of total trips



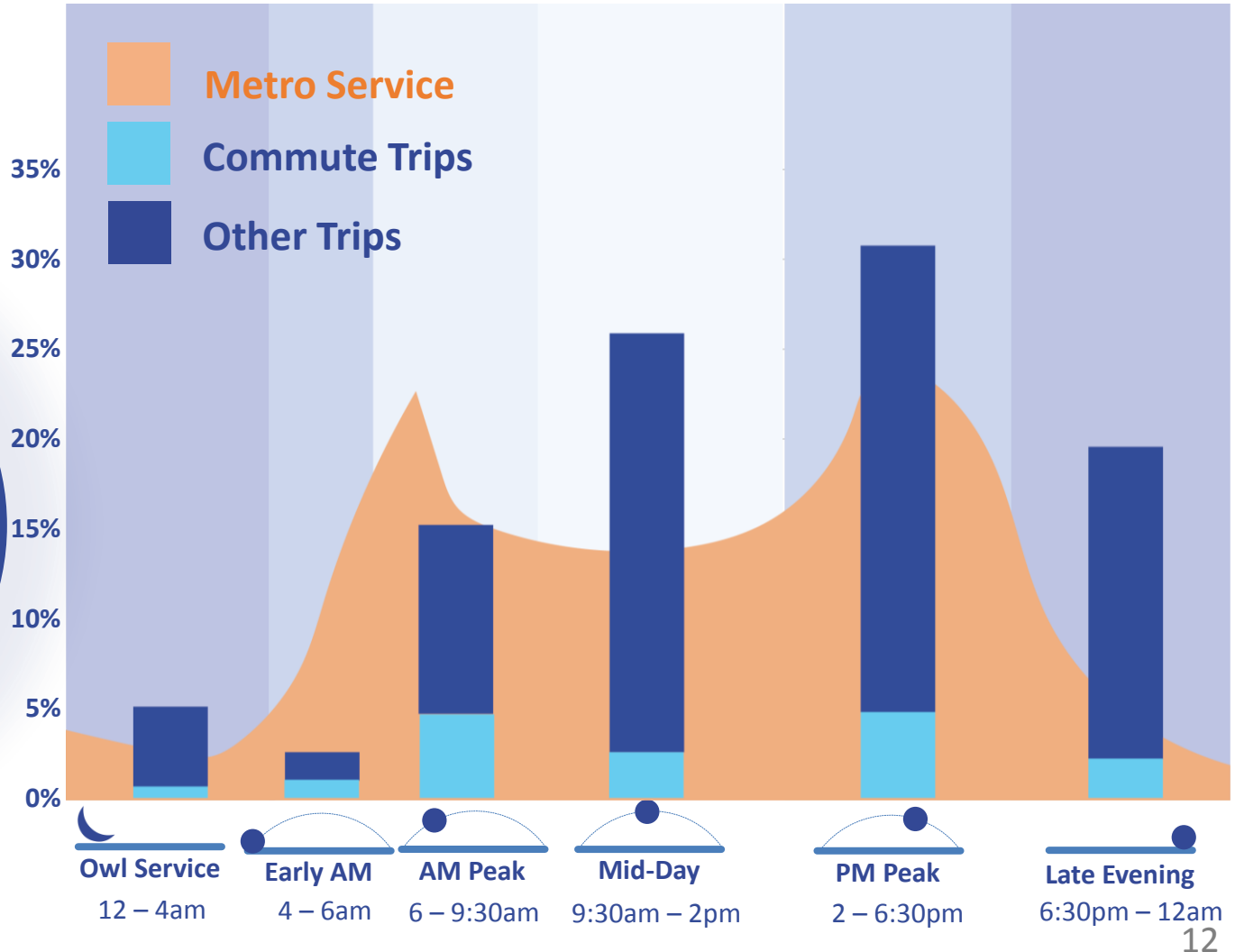
Trip Distance

More Frequent Service for Non-Commuter 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

Commuter 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.

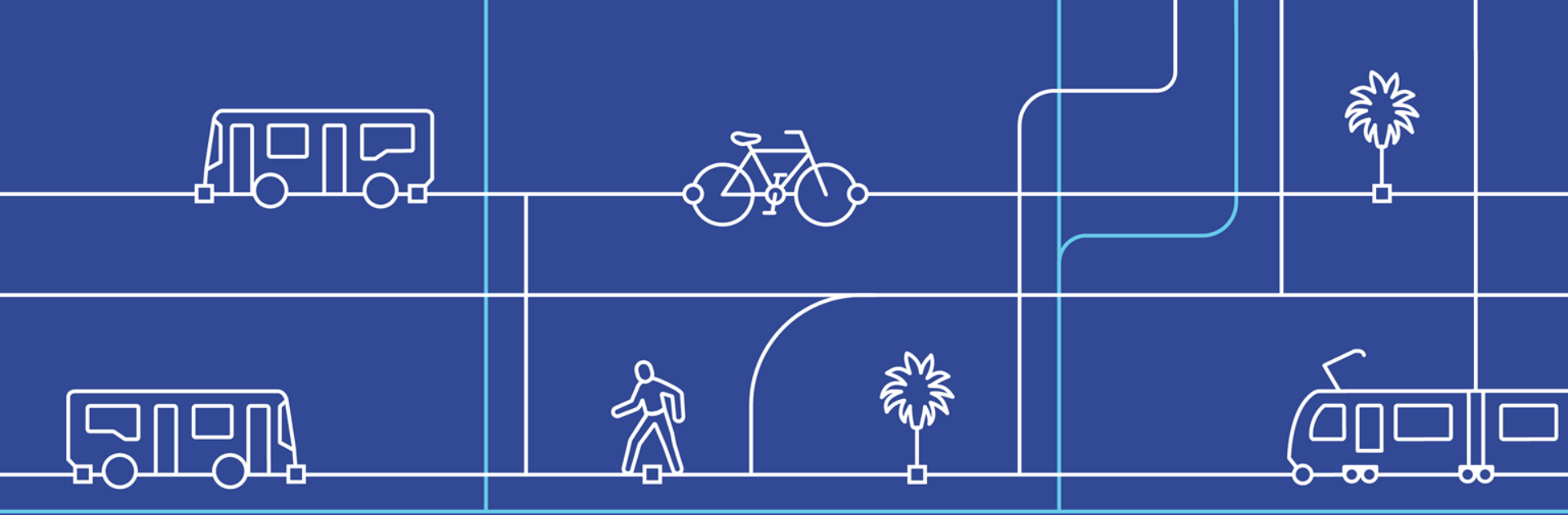
24% of all trips
4% transit market share

Next Steps on Service Concepts

Date	Stakeholder	Topic
Sept 2018 Sept 6, 2018 Oct 15, 2018	Service Councils Board Staff Metro Board	Transit Competitiveness & Market Potential
Sept 25, 2018 Jan 2019 Jan 2019	External Working Group Service Councils Public Workshops	Tradeoffs & Service Concepts
Jan-Feb, 2018 TBD	External Working Group Board Staff	Recommend Service Concepts (for Board approval)
Mar 2019	Metro Board	Draft Service Concepts (Policy Guidance)
Apr 2019	Metro Board	Final Service Concept* (Policy Guidance)



*Beginning of detailed route and schedule planning based on Service Concept



Thank You



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