Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

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**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 it's 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 fulfilment 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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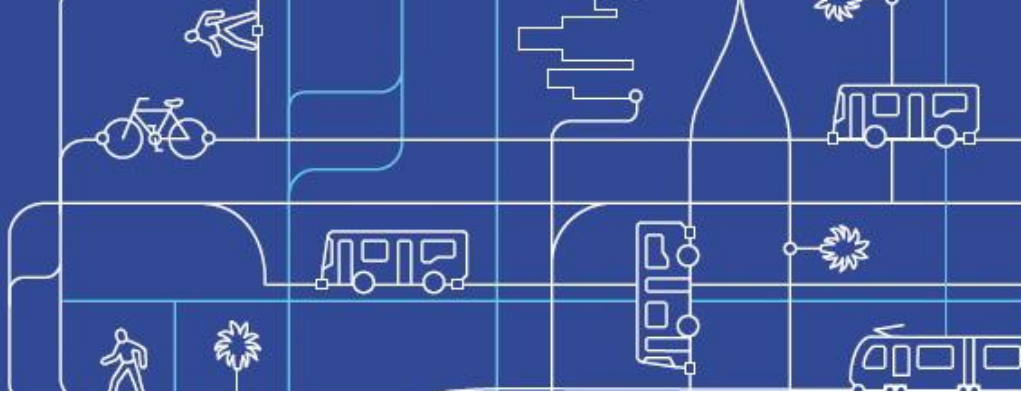
Phillip A. Washington
Chief Executive Officer


# NextGen Bus Study: Frequently Asked Questions

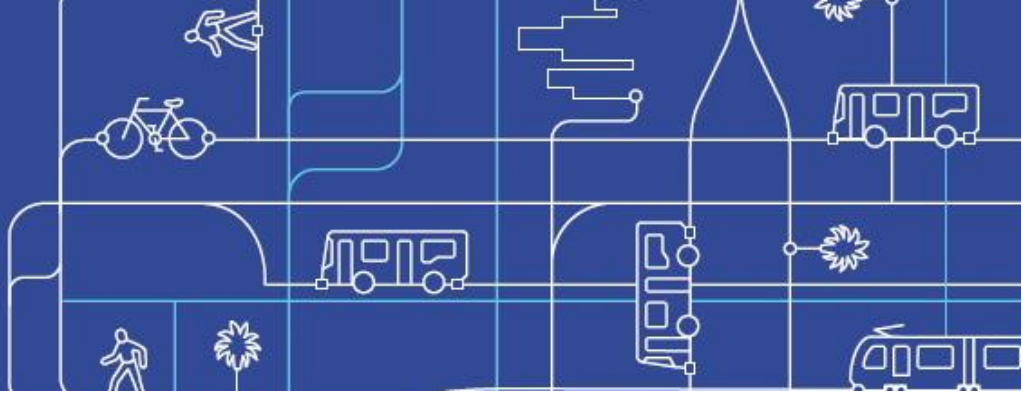
**OVERVIEW**

| **1) What is the NextGen Bus Study?** |
|---|
| Metro has set out to design a new bus network that is more relevant, reflective of, and attractive to the residents of LA County. We believe this redesigned network will improve service to current riders, attract a new generation of users and win back past customers. The NextGen Bus Study consists of four steps. At each stage, the public will be encouraged to actively participate and provide informative and valuable input. |
| **2) Why is Metro doing this now?** |
| Simply put, the bus network in LA County carries over 70% of Metro customers but has not had a major overhaul in 25 years. Since that time, our county has evolved dramatically. Over a million residents have been added, transforming many local communities with new travel patterns. The Metro Rail system was just beginning 25 years ago, but now LA County has 105 miles of service and service will continue to grow steadily over the next 25 years. In addition, with new transportation options like ride hailing apps and bike share, it is important that our bus system integrates with all the ways Angelinos travel today, with flexibility built in for the future. |
| **3) When is the NextGen Bus Study happening?** |
| The NextGen Bus Study began in Spring 2018 and is estimated to take 18 months to be completed. |
| **4) When will the NextGen Bus Service Plan be implemented?** |
| Bus service changes will be implemented starting in Fall 2019. |
| **5) Will the NextGen Bus Study result in minor adjustments to the current bus network or truly redesign the system with a "clean slate approach"?** |
| The goal of the NextGen Bus Study is to create an attractive and competitive world-class bus system. To achieve this goal, all aspects of Metro bus service are on the table for study, including speed, distance, frequency, time of day, reliability as well as quality of service and safety. Some of the most heavily traveled lines, e.g. Vermont Ave., Western Ave., Ventura Blvd., may not see major changes, but may be modified to provide better connections to other routes and services. Public input along with the technical evaluation of travel data will inform the extent of the changes. |



## COORDINATION WITH OTHER STUDIES/SERVICE PROVIDERS

| |
|---|
| **6) How is the NextGen Bus Study integrating with Metro's Bus Rapid Transit (BRT) Vision and Principles Study?** |
| The BRT Vision and Principles Study will establish and build consensus on a clear vision, goals and objectives for the BRT system and develop guidance on the design of the BRT network. It will also facilitate the identification and prioritization of future BRT candidate corridors. The NextGen Bus Study will coordinate and share data with the BRT study team in order to improve bus speeds and maximize Metro's investment in future BRT corridors. Data to be shared includes travel demand data, identification of congested corridors, and auto vs. transit travel time ratios for major travel corridors, which will assist the BRT study with the identification and prioritization of the first decade Measure M BRT project, which has an expected opening date of FY 2022-2024. In addition, the NextGen Bus Study will develop short term recommendations for "hot spot" speed and reliability improvements on major transit corridors based on guidelines, which will further help guide BRT investment. |
| **7) How is the NextGen Bus Study integrating with future Metro Rail/BRT capital projects?** |
| The NextGen Bus Study is focusing on a 10-year horizon (2030). Therefore, all rail lines under construction, including Crenshaw/LAX, Regional Connector, and Westside Purple Line Extension Phase 1, 2, 3, are assumed as part of the existing transit infrastructure. In addition, future projects currently in the planning stage and expected to be under construction within the next 10 years will be considered in route planning and scheduling decisions, including the East San Fernando Valley Transit Corridor, Sepulveda Transit Corridor Project, West Santa Ana Branch Transit Corridor, Gold Line Foothill Extension Phase 2B to Claremont, Green Line Torrance Extension, Vermont Corridor BRT, North Hollywood to Pasadena Transit Corridor BRT, and North San Fernando Valley Transit Corridor BRT. |
| **8) How is the NextGen Bus Study integrating with the MicroTransit Pilot Project and Mobility on Demand Grant Program?** |
| The Mobility on Demand Program and the MicroTransit Pilot Projects will be integrated into the network once they have been implemented. The NextGen Bus Study will account for these during the study process. |
| **9) Will bus service provided by the LA County municipal transit operators also be included in the NextGen Bus Study?** |
| Through the NextGen Bus Study, we are taking a holistic approach to the LA County bus system that does not look at Metro alone but instead leverages all resources, including municipal operators. |



**10) How is the Long Range Transportation Plan integrating the NextGen Bus Study in its update process?**

The NextGen Bus Study and the Long Range Transportation Plan (LRTP) are already integrating in terms of coordinated public outreach efforts and travel demand data sharing. The LRTP has many components, but the portion on future bus system operations will be structured around the findings and outcomes from the NextGen Bus Study, along with other Metro policies and programs. This includes a thorough examination of how the system can best function in future decades based on what NextGen tells us about Metro's current system, combined with other forecasts about future regional growth, and how to ensure the bus infrastructure is funded and maintained in a constant state of good repair. This is a sequential coordination with each phase informing the next.

## FUNDING/RESOURCES

**11) Will the NextGen Bus Service Plan be constrained to the 7 million service hours currently available?**

The initial assumption of the NextGen Bus Study is to develop a service plan within the range of 7 million service hours, plus or minus 10 percent (6.3 million to 7.7 million hours). However, this does not preclude Metro from developing a service plan that exceeds this range should the benefits justify any tradeoffs to other Metro projects and programs.

**12) How will fares be affected?**

The NextGen Bus Study is a study of the bus system; fares are not being considered as part of this effort.

## PUBLIC INVOLVEMENT & COMMUNITY ISSUES

**13) Will there be further opportunities for public input on the NextGen Bus Study?**

Yes. Public engagement is critical to the success of the NextGen Bus Study and Metro is actively soliciting input. Here are some of the current and upcoming opportunities:

- Help Metro rank and prioritize bus service characteristics with our online engagement tool: https://nextgen.metroquest.com.
- Attend a public meeting in November 2018 - visit www.metro.net/nextgen for more details.
- Email your thoughts or request a presentation for your organization by contacting Robert Cálix at nextgen@metro.net.

# NEXTGEN Bus Study

## Transit Competitiveness and Market Potential

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

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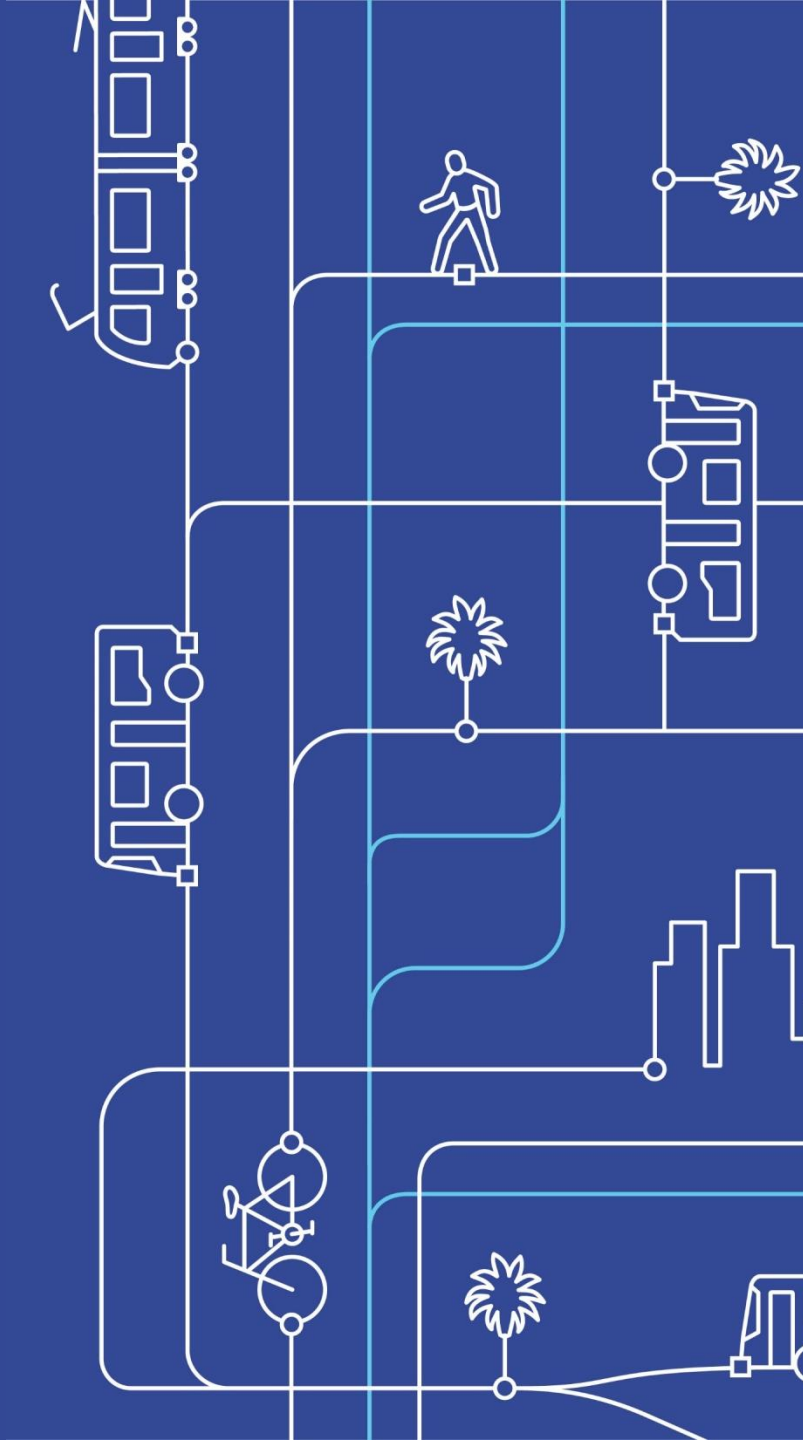


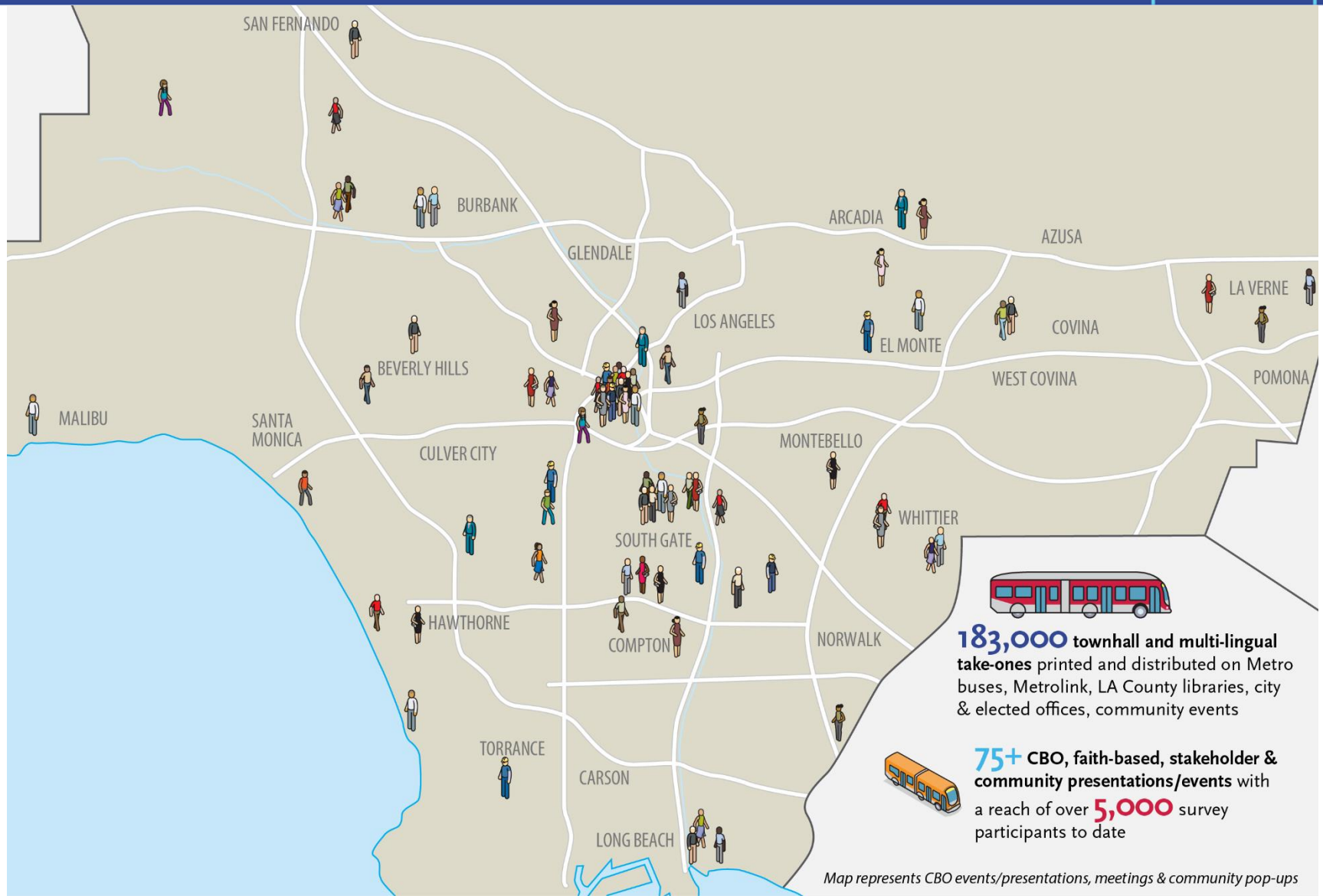
# Study Process

NEXTGEN Bus Study

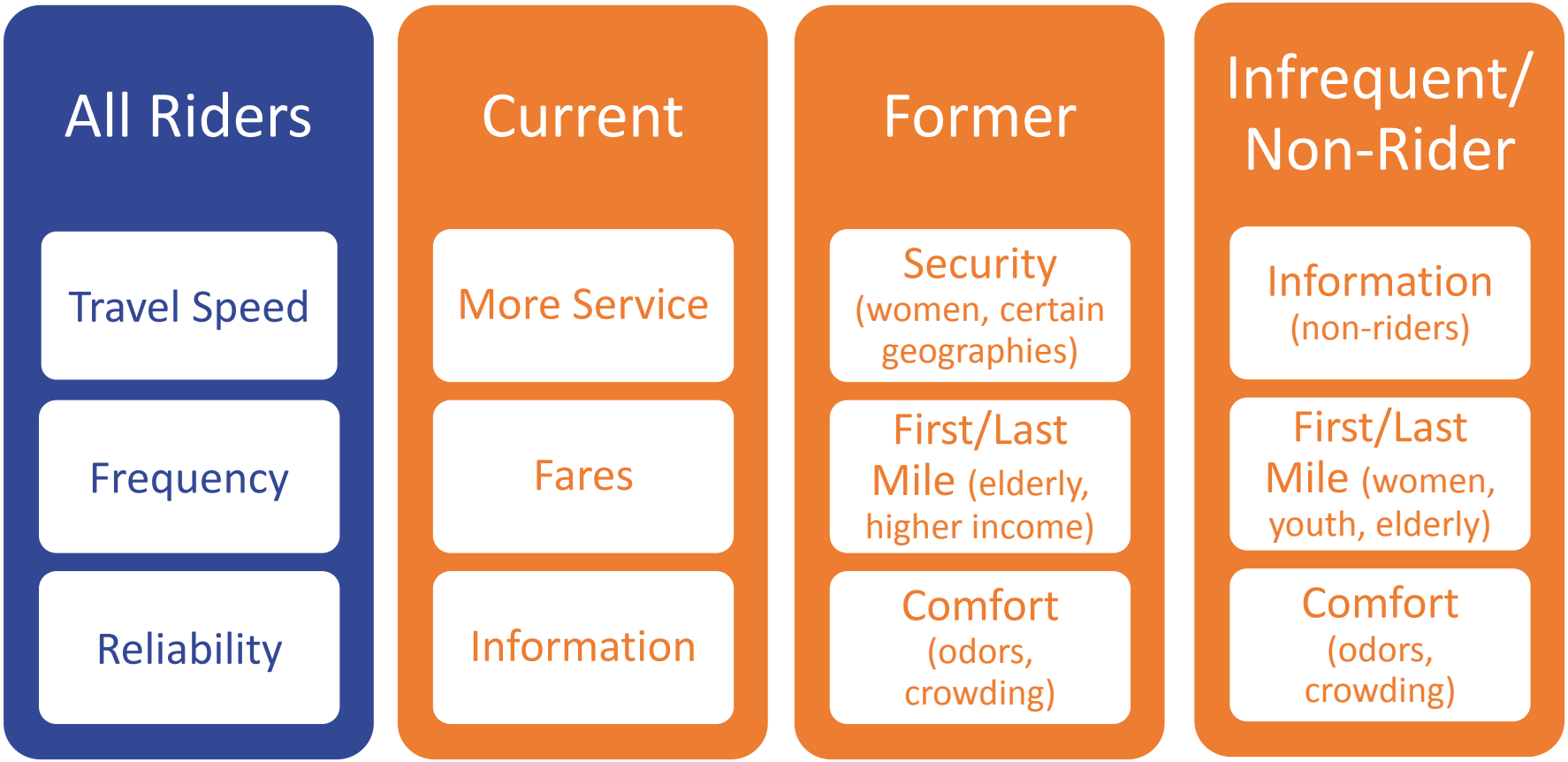
| SPRING/SUMMER 2018 | FALL 2018/WINTER 2019 | SPRING/SUMMER 2019 | FALL 2019/WINTER 2020 |
|---|---|---|---|
| **Step 1**<br>**Market Demand and Travel Patterns, Existing Service Evaluation**<br>Project awareness and listening to what the market tells us about how we travel, evaluate how existing bus service relates to the needs of the rider. | **Step 2**<br>**Policy Choices for Service (or Market) Priorities, Service Characteristics, and Network Design**<br>Policies to develop potential bus service priorities to better meet the needs of the rider. | **Step 3**<br>**Service Design Guidelines and Route/Schedule Changes**<br>Redesign new routes and schedules based on guidelines and parameters reflecting the adopted Policy Choices. | **Step 4**<br>**Implementation and Marketing**<br>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<br>Community Pop-up Events<br>Community Based Organization Briefings<br>Service Council/Board Briefings | Community Pop-up Events<br>Working Group & Stakeholder Briefings<br>Public Meetings & Webcasts<br>Service Council/Board Briefings<br>Metro Board Approval | Telephone Town Hall Meetings<br>Muni Operators & Local Jurisdictions Collaboration<br>Formal Public Hearings<br>Service Council/Board Briefings | Marketing & Messaging<br>Community Pop-up Events<br>Public Meetings & Webcasts<br>Service Council/Board Briefings<br>Metro Service Council/ Board Approval |
| **Continuous online engagement tools: questionnaire, interactive survey and map** → | | | |

# Stakeholder Engagement



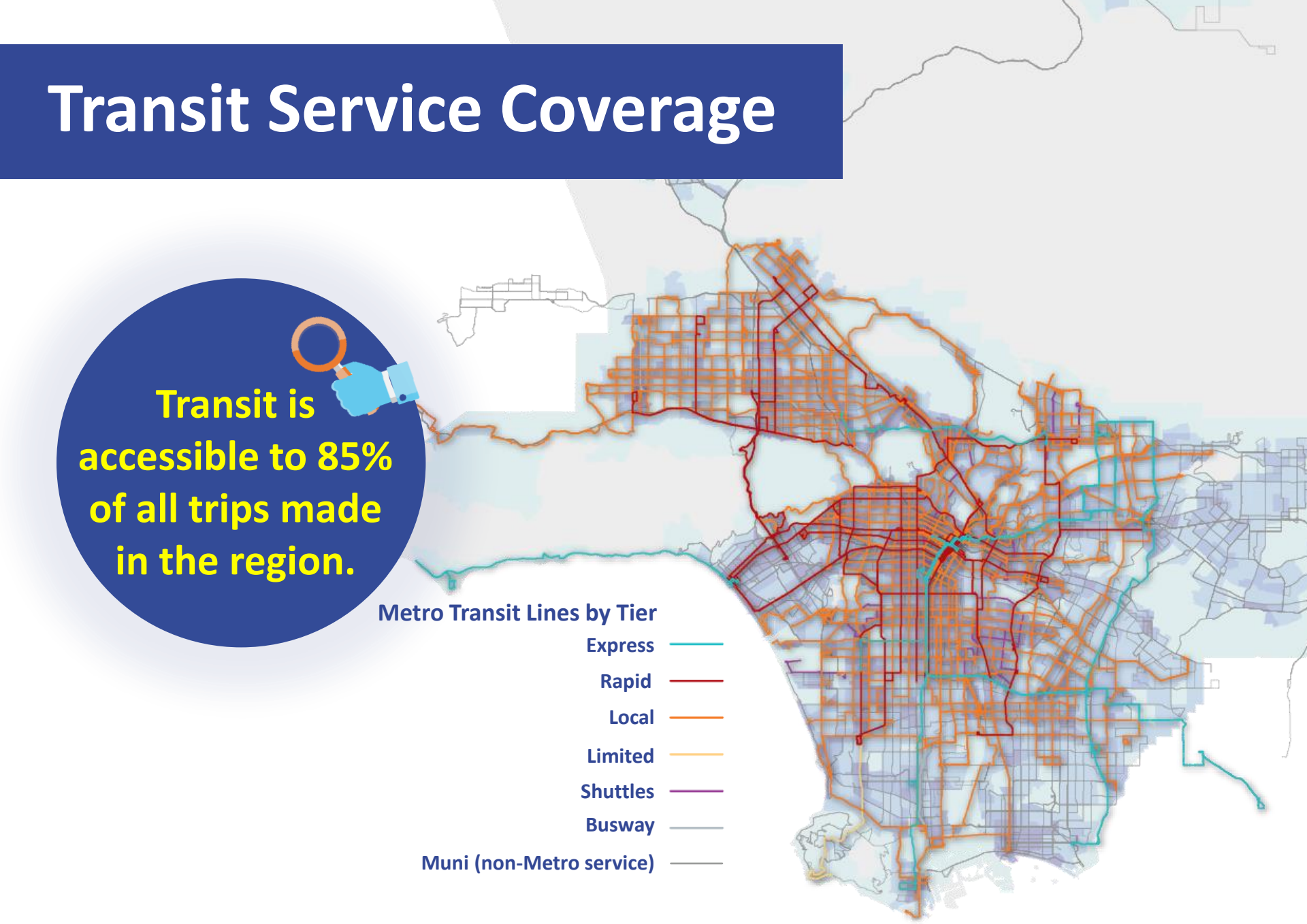


# Service Parameters



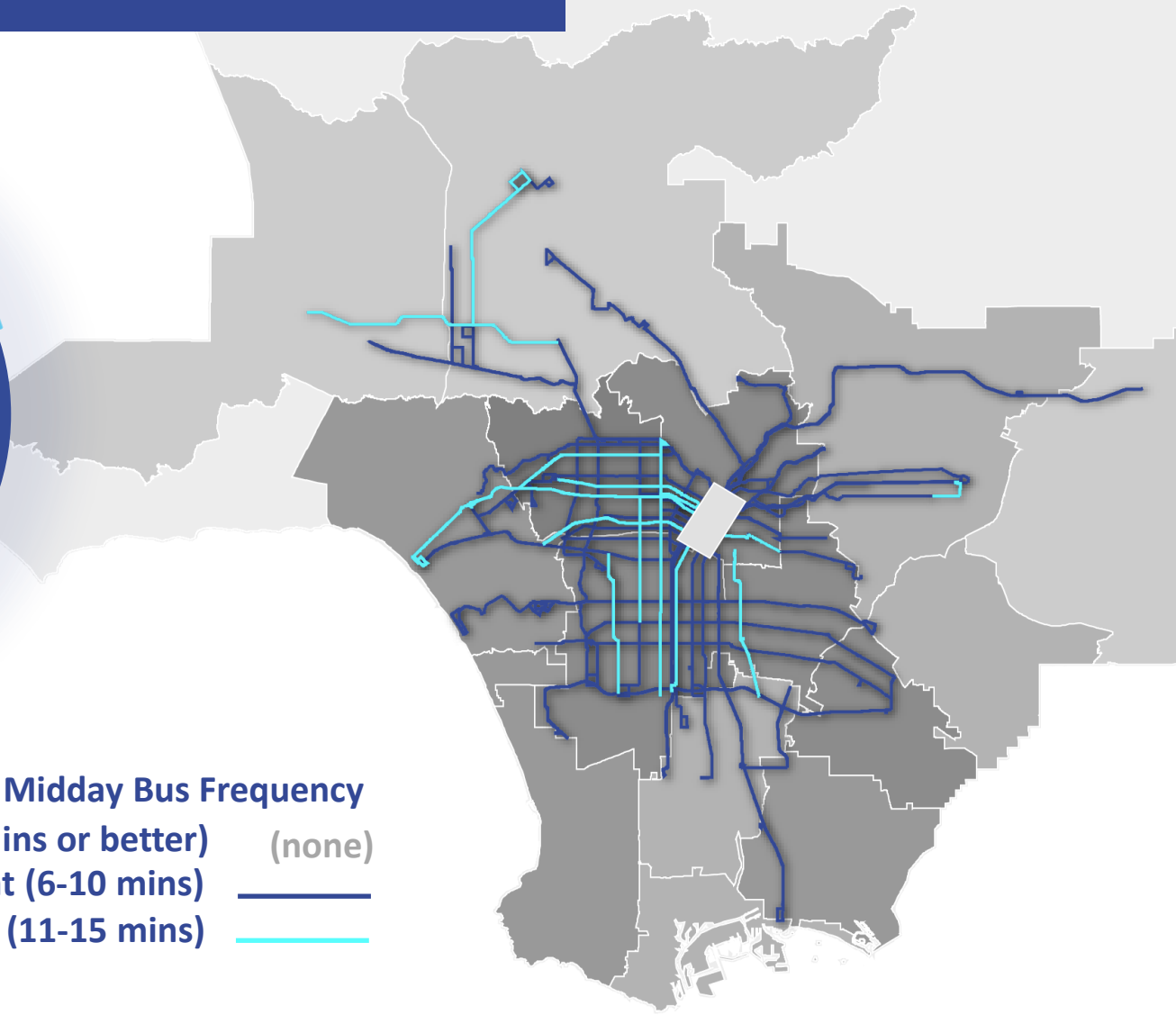
# Transit Service Coverage

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



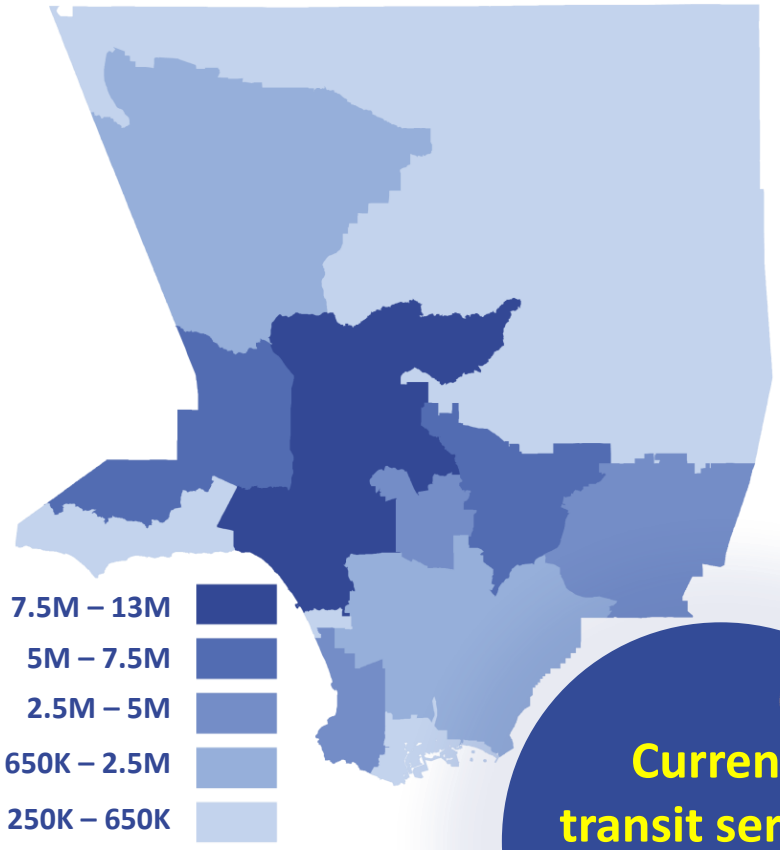
# Transit Service Density

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

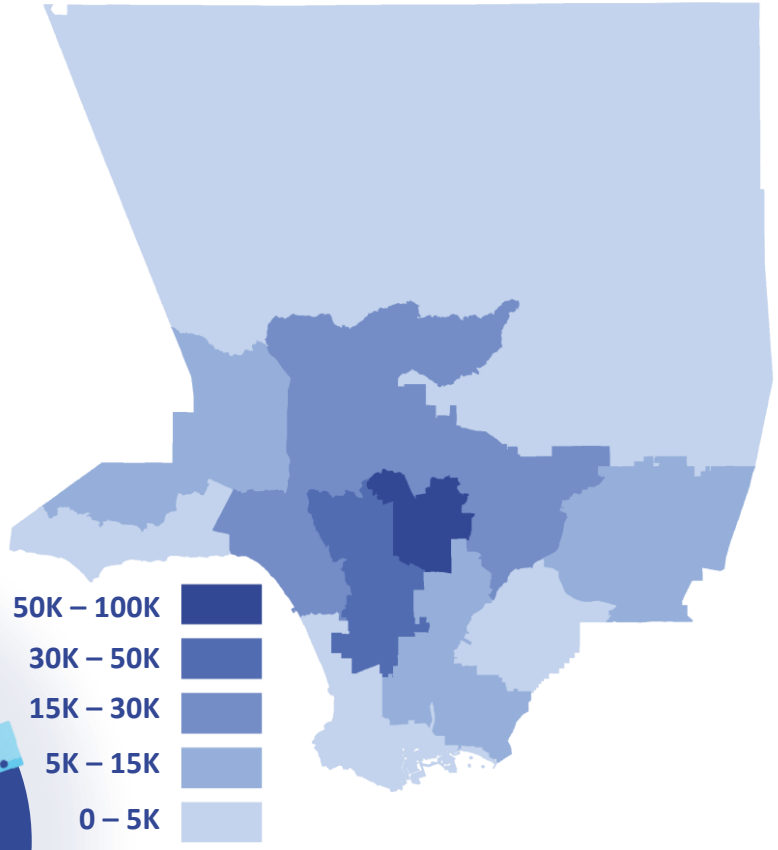


# Trip Origins Total vs Transit Trips

## All Trip Origins (cell phone data)




## Transit Origins (TAP data)




**Current transit service is not always competitive**

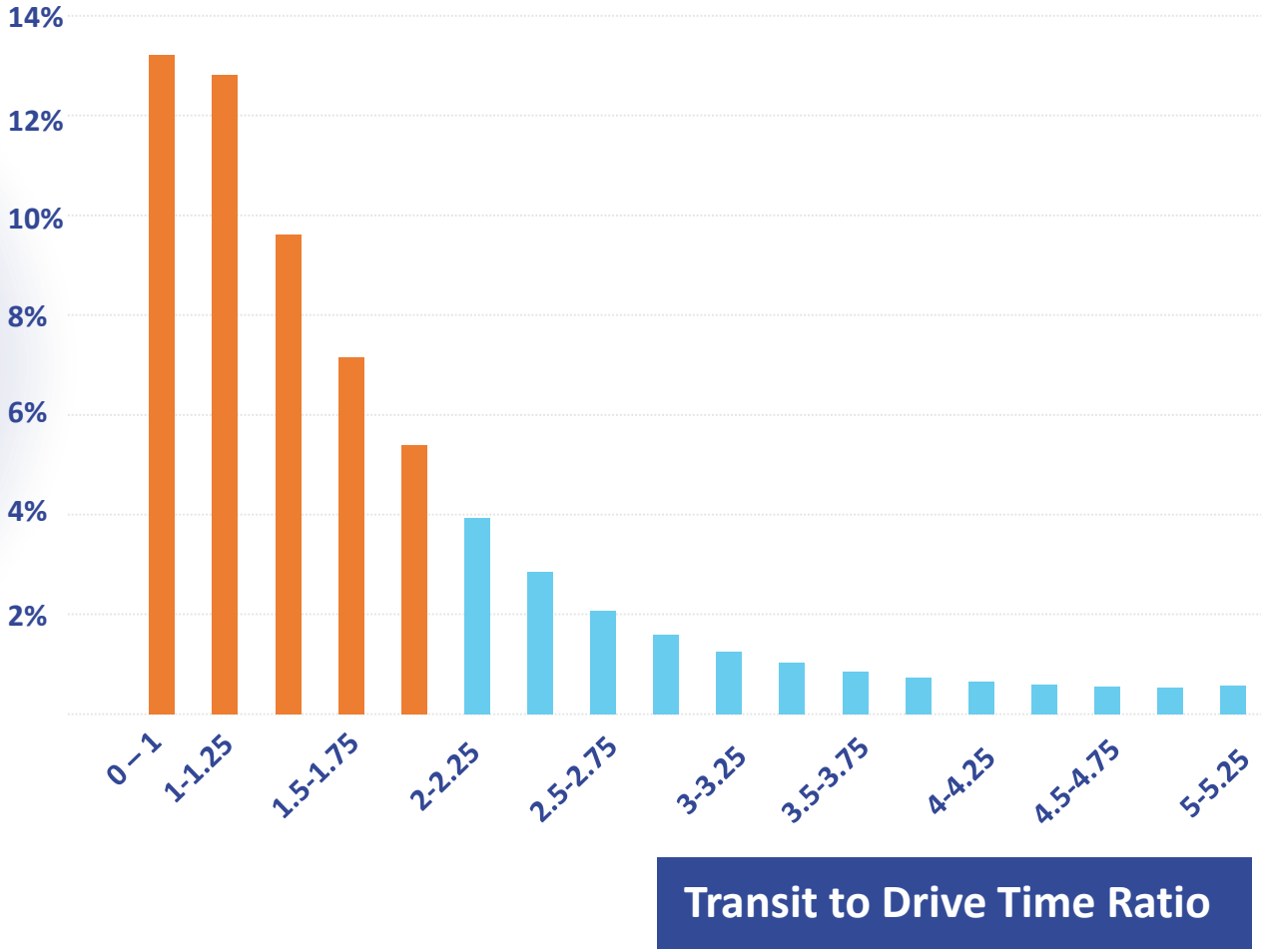
ta - Metro and Municipal Operators & LBS Data (July through October, 2017)

# 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**



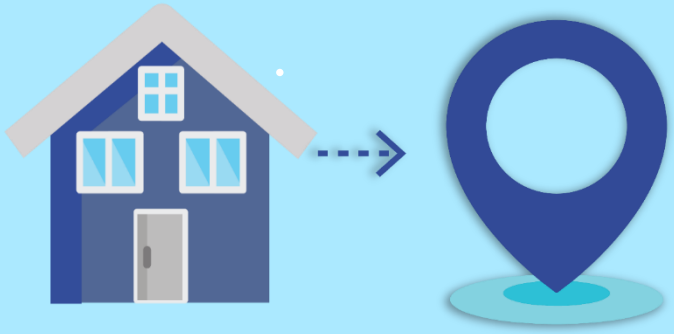
# Understanding Trip Purposes

## Commute Trips

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

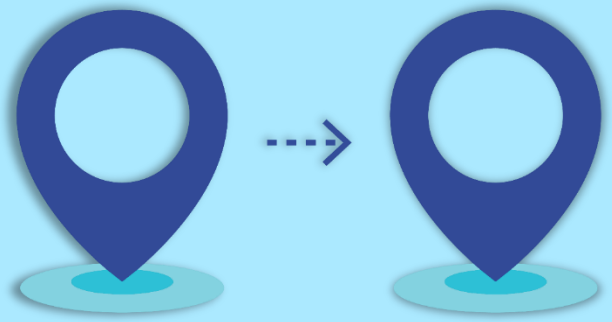
## Work Trips

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*

**Frequency is the key factor for shorter trips.**


50% of time
getting to/from transit

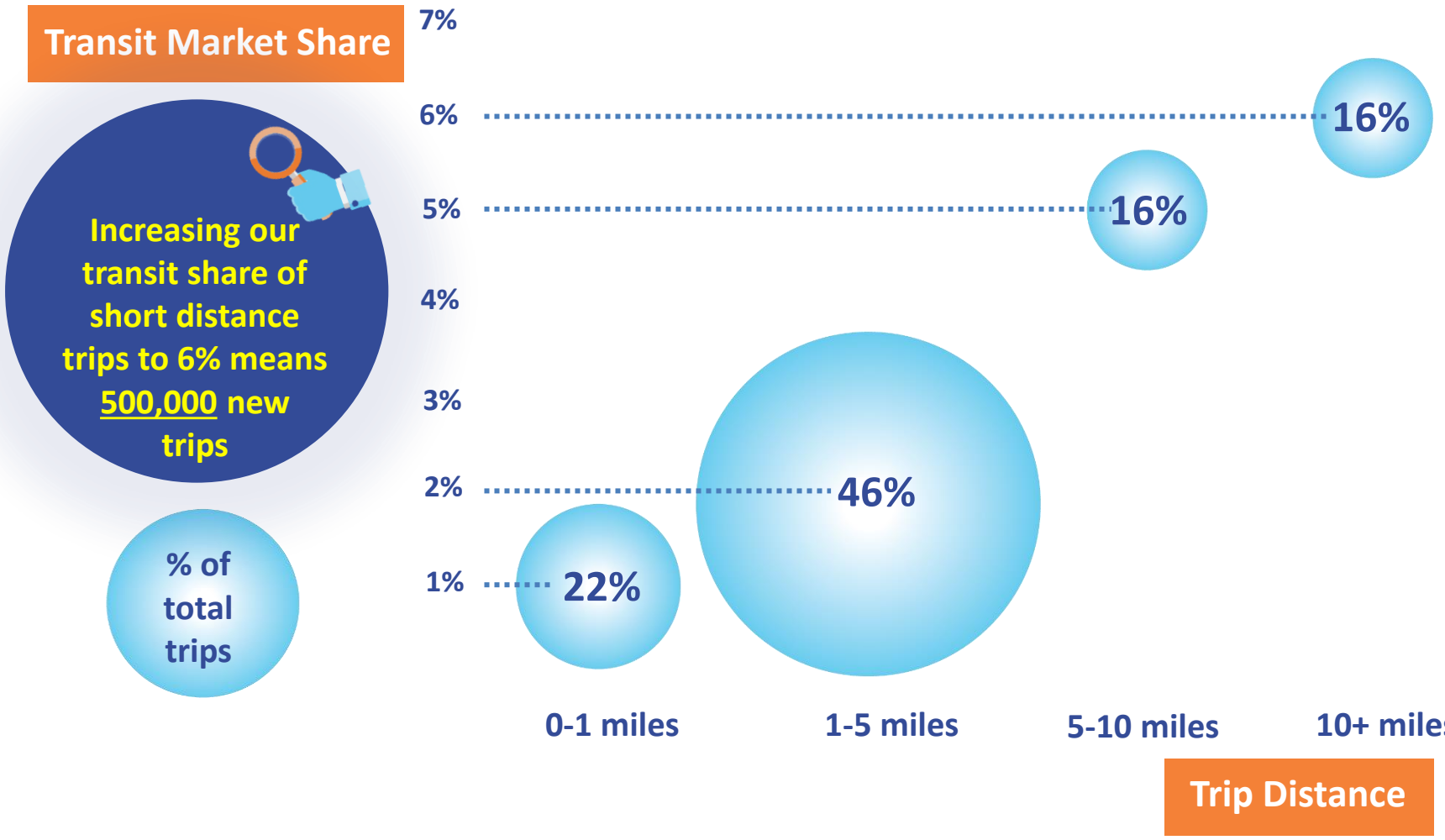
***e.g. 10 mins***

50% of time
on-board transit

***e.g. 10 mins***

# Competitiveness and Market Potential

## Transit Market Share by Distance & Percent of Total Trips

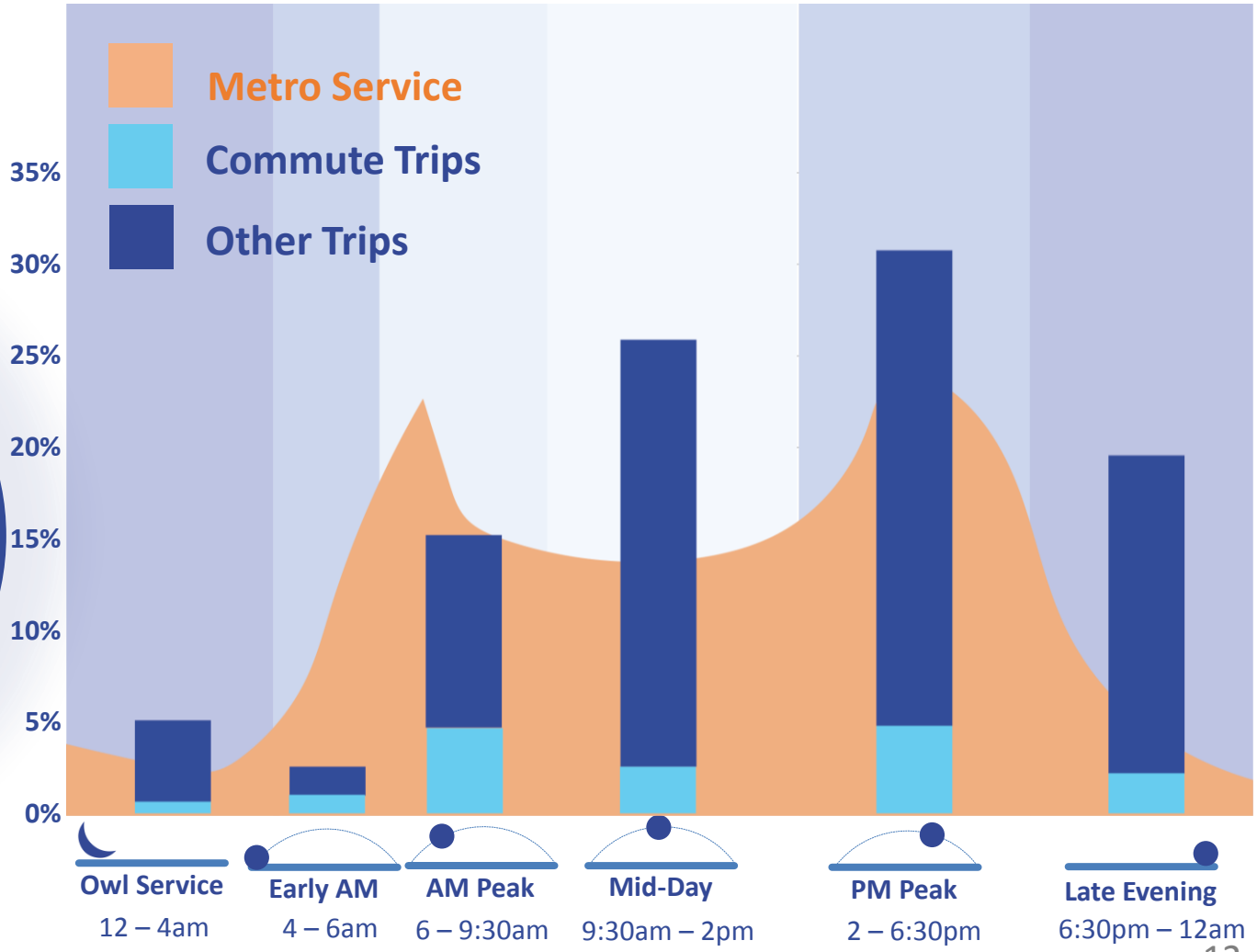


# More Frequent Service for Non-Commute Trips

## 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<br>*Frequency* | Long Distance<br>*Speed* |
|---|---|---|
| **Commute Trips**<br>*Peak Hour* | **8% of all trips**<br>**5% transit market share** | **We are successful here and should continue to focus on this travel market.** |
| **Other Trips**<br>*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**<br>**4% transit market share** |

# Next Steps on Service Concepts

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

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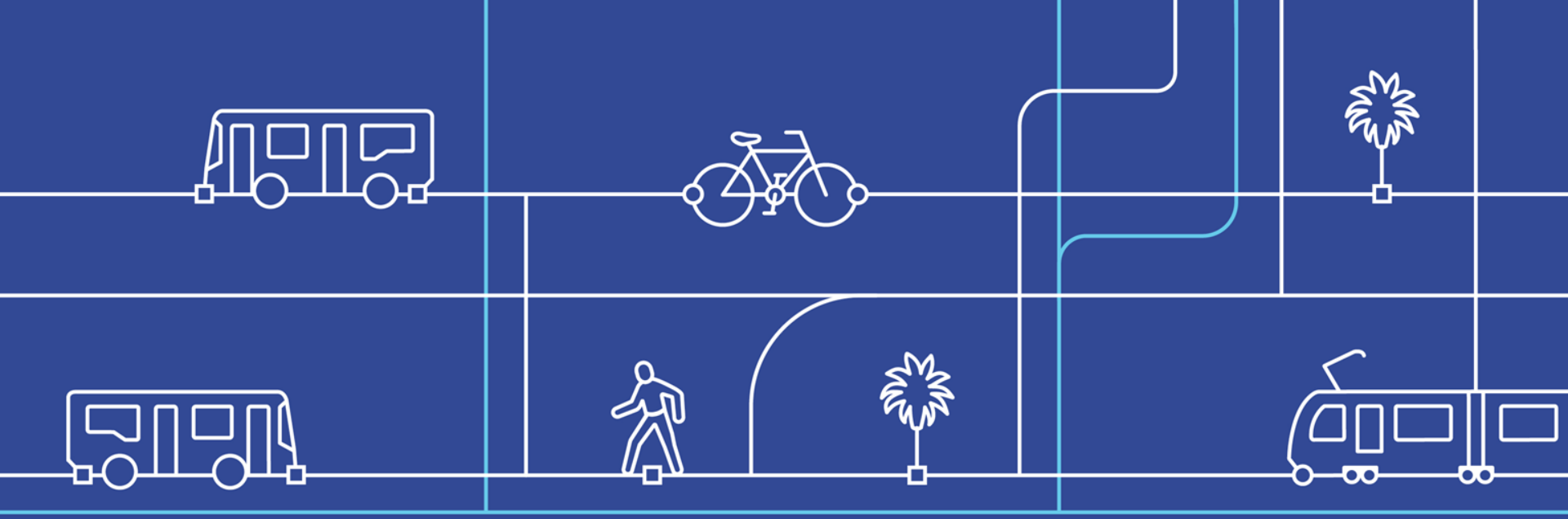
*Beginning of detailed route and schedule planning based on Service Concept



# Thank You

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