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TO: BOARD OF DIRECTORS

THROUGH: PHILLIP A. WASHINGTON 
CHIEF EXECUTIVE OFFICER

FROM: YVETTE RAPOSE 
CHIEF COMMUNICATIONS OFFICER

**SUBJECT: BUS CROWDING INFO NOW AVAILBLE IN METRO'S
OFFICIAL APP**

ISSUE

This Board Box provides an update on the launch of a bus crowding feature in Metro's official app, *Transit*. The feature was made available to Metro riders on August 13 through a collaboration between Operations, Marketing, and our partnership with *Transit*. The information presented to riders uses an innovative algorithm to predict how crowded the bus is based on the most recent ridership trends. This is a new, never before used feature for *Transit* app, making Metro the first transit agency in the nation to use this predictive feature as part of *Transit* app's suite of customer focused amenities.

..Background

BACKGROUND

As the pandemic continues, the public has grown wary of riding transit because of social distancing concerns. In rider surveys and comments on social media, Metro riders have voiced a strong desire for information and tools that help them make safe choices when they travel.

Rising near the top of their list in the rider surveys, has been the issue of occupancy/crowding information presented in real-time for Metro buses. According to *Transit's* survey of Metro riders, 60% said this information would help them plan differently and 40% of them claimed they'd ride more often if they knew ahead of time how crowded the buses were.

Challenged to make this information available, the Agency explored a variety of options, including securing new real-time automatic passenger counters (APCs), tapping into vehicle diagnostic hardware and AI-based video monitoring software. These options would, however, likely prove cost-prohibitive in this economic environment and require months, if not years, to implement.

Looking for a quicker solution to help riders, Operations began sharing historic APC data with *Transit*. Using two weeks of regularly updated bus passenger count data at the stop level, *Transit* developed an innovative algorithm that predicts the likelihood of how crowded a bus is based on how crowded that bus has been for each day at that time and stop over the previous two weeks. That information is then displayed within the *Transit* app for prospective riders to see.

The estimated number of riders is shown using three levels and is based on the size of the vehicle. In the app, riders see these three designations:

- “Usually many seats available” means that 0-33% of seated capacity is being used;
- “Usually seats available” means that 34-85% of seated capacity is being used; and,
- “Usually standing room only” means that 85% or more of seated capacity is being used.

Before launch, Operations performed video spot tests to determine the accuracy of this new feature and found it was correct at least 83% of the time. Compare this with MBTA in Boston who launched a similar, but different system with *Transit* based on real-time vehicle crowding information on over 30 of their bus lines and achieved an accuracy level of ~80%. Our approach can be a model for other transit agencies who at this time don’t have or can’t afford new real-time automatic passenger counters (APCs).

..Discussion

DISCUSSION

The no-cost partnership making *Transit* the official app of Metro was launched on May 18, 2020. The *Transit* app now has over 105,000 active monthly users in the Los Angeles area with thousands more being added daily.

The bus crowding prediction feature is one of many ongoing collaborations between *Transit* and Metro. To date we have:

- Improved the customer experience by replacing the 1.7-star rated GoMetro app with the 5-star rated *Transit* app;
- Shared data to better understand service demand trends and customer behavior; and,

- Analyzed the accuracy of our wifi router vehicle location and ATMS data.

In the near future, the partnership with *Transit* will help Metro:

- Create a consistent, single-source for accurate data on all customer-facing digital displays including Metro.net and screens at our stations and stops for more accurate arrival information;
- Develop real-time arrival and service disruptions feeds (GTFS RT) for Metro riders and third-party apps like Google and Apple;
- Extend mobile payment options to more customers by working with TAP to create an API for fare payment;
- Launch trip planning and booking of MicroTransit rides; and,
- Create customer feedback and incentive programs for riders.

Metro's no-cost contract with *Transit* is for three years and includes a minimum commitment of 100 hours a month of their time for strategy, development and marketing assistance.

The goals of our partnership are to improve the customer experience, maximize Metro's ability to be flexible in an uncertain technological future and minimize our exposure to financial risk by avoiding commitments to hardware and software solutions that have a limited shelf life.

We will do this by working with *Transit* to improve our core digital services like real-time information, customer engagement, data collection and mobile payment while focusing on making these services open and accessible to our riders wherever and whenever they prefer.