

Public Transit Systems Response to Ridership Decrease

This report is in response to a request from Commissioner Jordan. Its purpose is to provide insights on how public transit systems in the United States are confronting the issue of declining ridership. The Office of the Commission Auditor (OCA) obtained relevant information from seven transit systems: three (*Broward County Transit, Palm Beach County Transit and Jacksonville Transit Authority*) from the state of Florida, and four (*Orange County Transit Authority, California; Capital Metro, Austin, Texas; Dallas Area Rapid Transit, Texas; and Los Angeles Metro Transit Authority, California*) from other states. More specifically, we focused on the strategies and solutions that those transit systems have implemented or planned to implement in addressing decreases in their ridership. A minority of the transit systems are using privatization of less productive routes as an option. Majority of them are exploring many other initiatives to stem ridership decrease, as summarized below.

Summary of Strategic Solutions

The strategies and solutions implemented or planned to be implemented by the seven transit systems the OCA contacted can be broadly classified into four categories:

- *Improving Efficiency.* Some of the transit systems realized that more efficient services can attract more riders. Therefore, they have focused on initiatives such as redesigning route networks to create and take advantage of higher ridership corridors; increasing frequency of services to reduce waiting time at transit stations; creating rapid transit lanes on some of the Expressways; implementing priority treatments for buses at some intersections; reducing or privatizing services on less productive routes; and eliminating unproductive routes.
- *Expansion of services.* Some transit systems have added or planned to add new bus routes, new buses, new bus stations, new rails and rail platforms, and new Bus Rapid Transit (BRT) lanes.
- *Promotional Programs.* A few of the transit systems have employed targeted marketing and outreach programs, including the use of direct mails, street events and online marketing activities to draw potential clients.
- *First and Last Mile Connection Assistance to Riders.* The transit systems have realized that they can encourage more people to use public transit if they can help the riders address their pre and post-transit usage transportation concerns. Dallas Area Rapid Transit (DART), Los Angeles Metro Transit Authority (LA Metro) and Orange County Transit Authority (OCTA), for instance, are willing to experiment with pilot projects that involve cooperating with Uber, Lyft, and some Micro Transit companies to provide assistance to riders to and from transit stations.

General Considerations

Public transit ridership level can be affected by various external and internal factors. External factors can include gas prices, demographic changes, residential densities, employment, cost of living, level of income of residents, car ownership, availability and cost of parking, riders travel patterns and change in riders' work schedule.

Internal factors include transit fares, safety concerns, quality of customer service, cleanliness of transit vehicles and stations, parking at transit stations, and reliability of transit services.

Riders of public transit respond to changes in the internal and external factors either by increasing or decreasing the frequency of their use of transit services or by abandoning the transit systems altogether.

Though some transit systems may face similar issues, each transit system may respond to a common issue differently. Such is the case with the problem of declining ridership. In 2016 for instance, declining ridership was a nationwide phenomenon. Except for a few cities such as San Francisco, Boston and Houston which respectively gained 5.54%, 1.39%, and 1.94% in ridership, all of the large public transit systems in the U.S. have experienced some level of decline in their ridership (*Attachment I*). Although the ridership decline was a common trend among many transit systems, response strategies vary. Some of the strategies and solutions that a few public transit systems have implemented or planned to implement to confront the problem of declining ridership are outlined below. First, we present the transit systems in the state of Florida, followed by those in other states.

In-state Transit Systems

As mentioned earlier, we looked at three transit systems in the state of Florida: Broward County Transit, Palm Beach County Transit and Jacksonville Transit Authority.

Broward County Transit (BCT)

BCT serves a population of 1,909,632 residents. In 2016, it experienced a ridership decline of approximately 11.5%. Presently, BCT is in the process of analyzing its current service to determine the best course of actions to take to better address the decline.

BCT's typical approaches to addressing ridership decrease include the following:

- Determining how to build transit schedules in accordance with the demand using a transit system called Automated Passenger Count (APC);
- Increasing/decreasing headway (*frequency or interval at which bus arrives at a bus station*) according to the demand and reallocate surplus (*service vehicles that are no longer needed on a route*);
- Evaluating peak days of service (*determining through a survey which days of the week carry heavy ridership*) and planning bus service accordingly; and
- Eliminating transit service on unproductive routes.

Eliminating service is considered a measure of last resort given that it can put some neighborhoods at a disadvantage.

Palm Beach County Transit System (Palm Tran)

Palm Tran serves a population of 1,443,810 residents. It experienced approximately a nine percent decline in ridership in 2016. The transit system is responding to the decline by embarking on the following:

- Recruiting experienced senior staff at the executive, operations and planning levels to pilot a new initiative called Route Performance Maximization (RPM), which is a comprehensive

analysis of the fixed-route network. The RPM project will look at how Palm Tran's 34 bus routes are structured and scheduled in order to determine how to best increase ridership;

- Soliciting outside expert consultants to assist with the RPM project. These consultants will work with staff to conduct extensive public outreach in the next two years in order to effectively communicate the needs, goals and outcomes of the RPM to all stakeholders; and
- Pursuing enhanced passenger amenities as well as simpler fare payment technologies that will connect customers seamlessly to regional transit partners.

Jacksonville Transit Authority (JTA)

JTA serves a population of 926,255 residents. For three consecutive years (2012-2014), it recorded a decline in ridership of two percent each year. To reverse the negative trend, JTA underwent a complete overhaul which included expansion of its rails and a restructuring of its bus routes to make them more direct. Those actions were part of a plan tagged *Blue Print 2020*. The plan is a 20 year strategic plan which included the following initiatives:

- First Coast Flyer Bus Rapid Transit (BRT) – a premium transit service along Jacksonville's busiest corridors in the North, Southeast, East and Southwest quadrants that connect with the downtown area. BRT features include bus green light priority at key stoplights (*enabling the buses to travel 10-15% faster*), low floor, uniquely branded buses, and real time passenger information at transit stops.
- Route Optimization, which involves completely redesigning the JTA's bus and Community Shuttle services to make them more appealing to current and potential riders. This initiative aligns the routes with the First Coast Flyer; optimizes the transit routes to make them more frequent and direct; restructures the current bus system; and improves bus hours of operation.

As a result of its efforts, JTA gained approximately five percent ridership increase in 2015, though in 2016, it suffered a 1.5% decrease. To improve the result, JTA continues to implement some aspects of its *Blue Print 2020* while pursuing new ideas to secure the patronage of more riders.

A new idea that JTA is implementing and that is expected to impact transit ridership directly is *TryTransit*. This is a marketing strategy that challenges people who don't normally use public transit to try it while it encourages current users to explore and travel to additional destinations using transit. It encourages people to take pictures of themselves riding JTA and posting those pictures on social media to encourage relatives, friends and others to use public transit.

The *TryTransit* initiative features numerous campaigns and strategically positioned advertisements that are designed to attract potential customers to leave their cars at home and try one of the JTA's convenient modes of travel.

Out of State Transit Systems

Orange County Transit Authority (OCTA)

OCTA serves a population of 3,172,532 residents. From 2008 to 2015, it faced a 30% decline in its ridership. In 2015, in order to stem the trend, it implemented a plan called *OC Bus 360*, which

has improved ridership slightly in some routes. In 2016, it experienced an overall ridership decline of approximately nine percent. The *OC Bus 360* included the following:

- Implementation of new bus routes that offered customers up to a 30% travel time improvement;
- Redeployment of approximately 160,000 revenue vehicle hours to high-demand transit corridors in June and October 2016;
- A 20% promotional discount on the one-day pass, which is used for approximately 36% of fixed-route boardings;
- Rollout of a system-wide mobile ticketing system, allowing passengers to directly purchase fare passes via smartphone in addition to in-store purchases;
- Rollout of a new, real-time bus arrival smartphone app that is used by over 1.3 million passengers, allowing customers to better plan trips and reduce wait times at transit stops;
- Distribution of 165,000 direct mails, the implementation of 59 street team events, and online marketing activities (*display ads, social media, email*);
- One hundred outdoor bus advertisements and seven public meetings (*service and fare-related*); and
- Continued transitioning to contracted fixed-route operations. (OCTA has a set goal of contracting up to 40% of fixed-route bus service in Orange County as a cost saving measure).

In 2016, as a result of the efforts to assess the effects of the measures being implemented, additional options to improve ridership were being pursued. Those options include:

- Continue the implementation of 15-minute peak period frequencies on high-demand corridors to retain and grow ridership;
- For routes that operate more frequently than 15 minutes, evaluate minor frequency changes (*e.g. move from 12 to 15 minutes*) to decrease capital requirements and shift resources to corridors that could benefit from additional frequency;
- Implement more weekend service in high-demand areas to grow ridership and in response to changing employment patterns;
- Replace lower-productivity StationLink service with private, shared mobility services (*e.g. transportation network companies and taxis*) to reduce capital requirements; and
- Work with private, shared-mobility companies to replace traditional bus service in lower-demand areas of Orange County.

Capital Metro of Austin, Texas

Capital Metro serves a population of 2,111,820 residents. Capital metro has been facing a declining ridership since 2013. It ended the year 2016 with a decline in ridership of approximately seven percent. To counter this decline, the transit system is implementing a plan called *Connections 2025*, which will guide the evolution of the system for five years and identify long range opportunities for ten years. It calls for the implementation of a newly designed bus model. The transition to this new model will begin in August 2017, with the biggest changes set to begin in June 2018. Some of the key initiatives of the plan are outlined below:

- Simplified fare structure;
- Express bus routes operating on some freeways;

- Frequency enhancements on high-ridership routes;
- Route adjustments and realignments;
- Elimination of duplicative routes;
- Transition of some paratransit routes (some shuttle) to Local routes;
- Development and implementation of Mobility Innovation Zones (*Zones that replace low performing bus routes and which allow Capital Metro to pilot new services such as on-demand, micro-transit or flex routes, connecting to the larger transit network*);
- Removal of unproductive service;
- Installation of additional bus stations in some existing routes and creation of new bus routes;
- Implementation of priority treatments (transit signal priority, queue jumps – *type of roadway geometry used to provide preference to buses at intersections*, bus bulbs (*outward extension of a sidewalk or a pavement for a bus top*) and transit-only lanes);
- Increased core rail frequency to every 15 minutes during peak travel times; and
- Introduction of additional Park & Ride facilities.

Capital Metro has also launched a program called *Try Transit* to reach out to choice riders, mainly young professionals living in apartment communities in the urban core. Capital Metro's team offers transit adventures to fun destinations, and provides potential riders of the *Try Transit* with an easy, stress-free way to experience its services. This approach is expected to begin to change the car centric culture that pervades the City of Austin.

Dallas Area Rapid Transit (DART)

DART serves a population of 2,574,984 residents. It recorded a decline in ridership of approximately five percent in 2016. It is seeking to boost ridership by doing the following:

- Increasing frequency and service span of some of its most productive routes. For example, it has been adding weekend/Sunday services to a few of its most productive five-day and six-day routes and route segments; and a few of its most productive hourly services have been improved to every 30 minutes during selected time periods;
- Adding buses while reducing headways, rather than widening the headways to increase the cycle time for some routes that need improved reliability and better recovery; and
- A pilot project to use Uber/Lyft-type services to provide first and last mile connections to riders.

Los Angeles Metro Transit Authority (LA Metro)

LA Metro serves a population of 10,137,915 residents. Ridership for the transit system fell by approximately six percent in 2016. It aims at reversing this decline by implementing the following:

- New policing contract to increase police presence on the bus and rail systems, reducing response time to incidents.
- Using a Regional Ridership Task Force to work with 16 municipal bus operators on identifying the new market segments in Los Angeles County that will use transit. This work involves determining who the potential riders are; from and to where they travel; and what their concerns and needs are (*e.g. safety, fares, transit information, parking, reliability of service, frequency of services, cleanliness of trains and buses, etc.*);

- A system wide bus network restructuring which involves a complete overhaul of Metro's bus system to better match current travel needs and demands;
- Pilot projects with transportation networks and micro-transit companies (*these projects are still being scoped, but they will likely involve subsidy for first/last mile trips on Lyft and partnering with a micro-transit company to provide service at 2-3 pilot locations*).
- Measure R and M (*both two half cent sales taxes*) which were passed respectively in November 2008 and November 2016, and which provide funding for state of good repair, new Bus Rapid Transit (BRT) lines, bus system improvements, new Light Rail Transit corridors, etc.;
- Targeted marketing and outreach; and
- Working with cities to improve speed and reliability of bus and street running rail services.

Conclusion

In conclusion, those measures that have been considered or are being implemented by the above-mentioned transit systems indicate that there is a variety of countervailing initiatives that a transit system can undertake in an attempt to stem ridership decline. Existing transit services can be enhanced, restructured, expanded, contracted out or eliminated (*as a last resort if there are no better alternative solutions to salvage an unproductive service*). Response measures are often considered together as part of strategic initiatives for achieving overall improvement in transit ridership.

Attachment 1

Recent Ridership Report for Large Public Transit Systems

State	City	Transit Agency	Jan. thru Dec. 2015	Jan. thru Dec. 2016	Change
CA	San Diego	San Diego Metropolitan Transit System	95,395.80	89,695.20	-5.98%
CA	San Francisco	San Francisco Muni Rwy.	211,961.10	223,712.50	5.54%
CA	Orange	Orange County Transportation Authority	45,468.10	41,192.00	-9.40%
CA	Los Angeles	Los Angeles County	441,034.90	415,853.60	-5.71%
DC	Washington	Washington Metro Area TA	392,242.50	357,652.90	-8.82%
FL	Ft Lauderdale	Broward County Transit	39,209.10	34,694.00	-11.52%
FL	Miami	Miami-Dade Transit agency	104,154.00	96,228.80	-7.61%
FL	Jacksonville	Jacksonville Transportation Authority	13,388.1	13,177.00	-1.58%
FL	Orlando	Central Florida RTA	28,314.10	25,638.70	-9.45%
GA	Atlanta	Metro Atlanta Rapid Transit Authority	134,701.20	127,767.00	-5.15%
IL	Chicago	Chicago Transit Authority	515,964.00	497,704.20	-3.54%
MA	Boston	Massachusetts Bay Transit Authority	385,738.20	391,100.00	1.39%
MN	Minneapolis	Metro Transit	85,832.10	82,624.50	-3.74%
NY	New York	MTA New York City Transit	3,556,458.60	3,531,139.10	-0.71%
PA	Philadelphia	Southeastern Penn TA	328,933.20	314,702.00	-4.33%
TX	Austin	Capital Metropolitan Authority	33,523.60	31,124.10	-7.16%
TX	Dallas	Dallas Area Rapid Transit	67,514.80	63,914.90	-5.33%
TX	Houston	Metro Transit Authority of Harris Co	87,166.7	88,854.40	1.94%
WA	Seattle	King County Dept. of Transportation	126,184.40	125,903.00	-0.22%
WI	Milwaukee	Milwaukee County Transit System	34,997.20	34,840.20	-0.45%

Source: American Public Transportation Association – *Public Transportation Ridership Report (4th Qtr. 2016)*

Note: Positive changes are highlighted.