



**EXECUTIVE MANAGEMENT COMMITTEE  
NOVEMBER 21, 2013**

**SUBJECT: TRANSIT CUSTOMER-ORIENTED, TECHNOLOGY,  
ENHANCEMENTS AND INNOVATIONS**

**ACTION: RECEIVE AND FILE STATUS REPORT**

**RECOMMENDATION**

Receive and file status report on progress toward developing a technology-based investment strategy.

**ISSUE**

At the July 2013 meeting, the Board directed staff to investigate numerous customer-oriented technology improvements and return with recommendations for an overall customer technology-based investment strategy. The CEO created a multi-departmental task force to research and make recommendations on the variety of suggestions included in the motion. This report is the first status report detailing staff progress to date.

**DISCUSSION**

The motion commits to the highest level of customer-oriented service to the public, across a diverse demographic of system users through the use of technology and innovation. Toward that end, staff has been directed to develop a technology based investment strategy that will result in enhanced mobility, improved safety, reduced uncertainty and to ultimately attract new riders. The items below delineate the components of this strategy and provide a current status as well as describe future efforts.

*A. Metro's Customer Service Process*

**Current Status at Metro:** The Metro Customer Relations Department includes the Customer Relations and Customer Information functions within the Communications Division. Overall, the department services approximately 200,000 customers monthly, the bulk of which are telephone information inquiries followed by a much smaller number of customer complaints, electronic and paper comments, and walk-ins. Customer Information provides service for extended business hours, seven days a week and has 62 full-time agents and 22 part-time

agents. Customer Relations is open regular business hours, five days a week and has six full-time representatives. Most information calls are serviced within 90 seconds. However, responding to complaint calls can take somewhat longer for a variety of reasons including: nature of the complaint, the smaller workgroup qualified to handle complaints and whether the calls come in during peak periods or not.

There have been several recent efforts to improve this process including:

- Upgraded the Customer Comment/Complaint Tracking System (C/CATS). This newly networked system provides real-time desktop and mobile access by appropriate transit personnel located at Metro Headquarters or various Metro Operating Divisions throughout the County. It is anticipated that this improved electronic access coupled with newer more refined comment criteria will increase the agency's timely responsiveness and resolution to customer complaints and comments.
- A *Live Help* feature via the Metro website was piloted last year and we are in the process of making improvements based on lessons-learned.
- In process of migrating the Regional TAP Service Center from a contractor to internal Metro Customer Information staff to provide better oversight and improved service.
- Reduced fare was set up for seniors and students (K-12 and college) and we consolidated the reduced fare program with the *TAPtoGo* website.

**Recommendation for Improvement:** The following work is a continuation of the efforts described above.

- Re-implement the *Live Help* web chat feature with enhancements such as proactively targeting web-users that appear to be experiencing problems as opposed to the initial passive approach where a user must select the *Live Help* option, and providing a mobile app interface to enable smart phone access to chat. The go-live timeframe for *Live Help* is targeted for the second quarter of 2014 with operating hours from 6:30 am to 6:30 pm M-F, and 8:00 am to 4:00 pm on weekends.
- In process of procuring a new Call Center Telephone System to improve system reliability, include technology enhancements and provide better metrics tracking. Voice recognition and text-to-speech will be integrated with Trip Planning functions to support self-help applications when the Customer Information Center is closed or call wait-times exceed maximum thresholds. A "call-back" feature will allow customers to hang up and be called back when their time in the queue has passed without having to hang on the phone line - thus avoiding both cost and inconvenience. Expected implementation by summer 2014.

## B. Accommodations for Senior Citizens and Disabled Transit Riders

**Current Status at Metro:** There have been two significant efforts supporting this initiative:

- Implemented a senior citizen travel training program called *On the Move Riders' Club*. The program helps seniors learn about using new technology such as fare ticket vending machines, electronic fareboxes, fare gates and TAP cards so they can more easily ride the system. The seniors are made aware of the program by a consultant who visits senior centers and senior fairs on an ongoing basis. The contract for this program will expire in 2015. The annual expenditure is approximately \$100,000.
- Hands-Free Gate telephones (G-TELS) are being installed at all stations with latched gates. These units are designed to enable persons with disabilities to be able to continue to use the rail service with gates latched. The idea for the units was developed by individuals in wheelchairs and designed and fabricated in-house by our Wayside Communication department. This innovative hands-free system has not been used in any other rail system.

**Recommendation for Improvement:** There are several other efforts being planned to address the needs of senior citizens and/or disabled transit riders including the following:

- Improvements to new TAP Vending Machines for our expanding rail system. New ticket vending machines will be more accessible for persons with visual impairments through the addition of more Braille instructions, a volume control for customers' headsets and an optional blanking screen option to improve privacy and security.
- Investigating the adoption of variable message signs to provide next trip information. We will also ensure that all installations have an audio system so schedule and next trip information is available for the visually impaired.
- Installing tactile guidance in all future rail stations being built. This will assist all passengers, and particularly those with visual impairments in navigating our stations. The tactile guidance is low tech, but will assist in finding emergency/assistance intercoms, safe locations to wait, elevators, and exits.
- Starting in January 2014, future buses will be equipped with wider and more gradual ramps, new types of wheelchair securement systems and rear facing wheelchair positions as well as better identification for reserved seating for seniors and disabled. Our operators are being trained in their use and decals, pamphlets and outreach programs are being prepared to explain how they work.

*C. Internet-based Customer “Help-Desk”*

**Current Status at Metro:** We currently provide customer assistance over the Internet via our website [www.metro.net](http://www.metro.net) and the “Go Metro” mobile app for smartphones. Additionally, Metro has made available the data required to enable third-party developers to create transit apps that provide transit-related information for the public.

**Recommendation for Improvement:** The Communications and ITS departments are currently developing an interactive customer information kiosk based on a model being piloted at New York MTA. An early prototype has been created and will be further developed during the remainder of FY14. A pilot test will then be planned at a limited number of bus and rail locations in FY15.

A related effort involves replacing passenger intercoms at the rail stations to improve communication with all patrons. This effort is being implemented by Rail Wayside Operations and Maintenance and is slated for completion in FY17.

*D. Installation of mobile phone coverage in MTA underground facilities*

**Current Status at Metro:** There is a current project to extend mobile phone coverage in the Red and Purple Line underground locations. The Board approved a contract award to InSite Wireless; Notice to Proceed is targeted for mid-November. This effort will result in the public’s ability to use their mobile phones, regardless of carrier, in these facilities. This project is scheduled to take 24 months to complete.

**Recommendation for Improvement:** We plan on exploring additional enhancements such as public Wi-Fi in selected rail stations which would allow phone calls to be placed over the Internet.

*E. Installation of Wi-Fi on all buses and rail lines*

**Current Status at Metro:** Currently there are no Metro buses or rail lines equipped with public Wi-Fi.

**Recommendation for Improvement:** Metro Information Technology Services and Operations departments are working collaboratively to assess the feasibility of implementing public Wi-Fi on bus and rail lines. The following action items are currently in process:

- Surveying transit agencies conducting similar initiatives to elicit effectiveness of their programs by identifying types of lines (urban vs. commuter) where Wi-Fi is being deployed, public response to the service, costs, etc.

- Planning visits of nearby agencies conducting Wi-Fi demonstrations during the last quarter of 2013. OCTA and Santa Clara Valley Transit Authority are candidates.
- Evaluating vendor offerings currently available for factors such as reliability, acquisition costs, monthly subscription costs, and ongoing maintenance costs.
- Considering a free or low cost pilot test of a line with ridership from a diverse demographic group.

As a supplement or alternative to providing Wi-Fi on transit vehicles, we are also working on a cost estimate of providing public Wi-Fi at Union Station and other high traffic stations. Lastly, the Metro CIO is in discussions with the Los Angeles City General Manager of Information Technology to have Metro participate in their citywide Wi-Fi initiative which seeks to provide free Wi-Fi for the public. An addition to the scope of work for transit vehicles is being planned.

*F. Best practices for mobile applications fare collection and traveler information*

**Current Status at Metro:** Metro is currently reviewing numerous mobile technologies and gauging these technologies against its ridership profiles. From a 2012 system-wide Metro survey, <http://www.metro.net/news/facts-glance/>, 76% of those surveyed have a working cellphone; however of the total population surveyed, only 58% of those surveyed overall had a smartphone with internet capabilities. Based upon this current market profile, Metro has focused its mobile fare collection applications on two parallel paths. The first path targets the existing customer market profile of a 76% cellphone penetration and will be a text messaging-based pilot test. This pilot is slated to begin in early 2014, take about three months to develop, and will run for approximately six months. The second, parallel path focuses upon the growing population of smartphone patrons and will most likely use near field communications (NFC) technology. NFC will allow patrons to use their smart phones as a virtual TAP card, or to use their smart phones as a portable TVM from which to load their own TAP cards. To facilitate this path, Metro has begun the process of putting together a solicitation from which to pilot a NFC based mobile solution.

In the area of traveler information, the following applications are currently in use for the public.

- Metro Trip Planner and Google Transit are available on the Metro website and via mobile apps.
- Next-Trip time predictions for bus and rail are available via mobile apps, rail arrival time prediction algorithm is being improved/refined.
- Passenger information alerts are available via Twitter.
- Mobile app for 511 assistance has recently been introduced.

**Recommendation for Improvement:** The aforementioned mobile apps in use are continually being assessed for usability and compatibility with the current mobile technologies in widespread use.

*G. Feasibility of using TAP to maximize fare revenue*

**Current Status at Metro:** There are several recent and current developments supporting this item including:

- Gates at all Red, Purple and five Gold Line stations have been latched.
- Key Performance Indicator for fare checking was established to ensure that fares are being checked. New Mobile Phone Validators are being developed for this effort.
- Piloting use of 10 mobile payment devices at USC football games to allow individuals to use debit/credit cards to purchase new TAP cards. In addition, mobile point-of-sale devices were piloted on October 10<sup>th</sup> at the USC football game to allow individuals to add stored value to their TAP cards.

**Recommendation for Improvement:** Fare evasion continues to be a problem. To combat this problem, we conducted a proof of concept test using video analytics software to help identify fare evaders. This system uses artificial intelligence to analyze surveillance videos at the rail stations and help identify people jumping the turnstiles or pushing through the ADA gate barriers. It also can be used to detect aberrant behavior that may indicate safety or security problems. This test was conducted at the Hollywood and Vine Station in September 2013 and the results confirmed its value. As a result we will be purchasing the system for expanded deployment.

*H. Policy for providing systems data sets collected by MTA to third parties*

**Current Status at Metro:** MTA's policy is to provide system data sets to third parties unless it is confidential. The Metro Trip Planner is the web-based application that provides transit itinerary information for the Southern California Region consisting of LA, Orange, Riverside, San Bernardino and Ventura counties. Complete schedule, stop, route and fare data is provided and maintained for 69 transit agencies. The Trip Planner is one of the main drivers of traffic to our Metro.net website and generates close to six million transactions per month. It is used by the general public as well as the Metro Telephone Information Center and several municipal agency call centers as well. It serves as the computing engine for the 511 website and voice response systems. A mobile version of the application is built into the Metro mobile app for smartphones and will soon power the upcoming 511 mobile app. Lastly, using a special application interface, the Regional Ridesharing system used by the five counties has integrated trip planning into ride guides published for employers in all counties. This application interface is also published on the Metro website for

access by private developers for creating additional transit tools and services. We currently share data via:

- RIITS for real-time information from a variety of systems
- Metro.net website, where many third-party mobile apps have been developed that use the data
- MTA shares trip data from 69 agencies over five counties in Southern California

**Recommendation for Improvement:** An updated version of the Trip Planner is currently under development with beta testing anticipated by January 2014. The enhanced Trip Planner will offer mixed-mode travel for patrons who access transit via car, bike, walking or wheelchair. The new planner will be optimized for mobile devices with a screen layout that automatically adapts to portrait or landscape modes on the smaller screens of smart phones and touchpad devices. Features currently under development for the 511 mobile app which extend the app's functionality to all transit providers in the region (as opposed to just Metro service) will be integrated into the new Metro app as well. The new app will support all major mobile devices. It will feature the following:

- Be geo-aware, meaning it will "know" (via GPS) where the customer is and thus be able to display nearest bus stops, train stations with distance and directional information for walking or cycling navigation.
- Feature real-time information for all carriers that provide a real-time public data feed for their vehicles. Also, this information will be integrated into the trip planner so that a patron can check the status of buses and trains while en route to their destination. Patrons will see their location on the mobile map as it progresses from stop to stop with the "next" time predictions for their arrival or transfer route.
- Display current "alerts" for all carriers to facilitate customers using more than one carrier for their trip. This information will be provided via a "most-recent-first" list as well as alert icons plotted on a map.
- Provide a link to "live help" when it goes into production.

## **NEXT STEPS**

Report on a technology-based investment strategy in April 2014.

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