MTA Moves Toward a 'Smart' Way to Pay Fares

by Cody Lyon
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Photo by Angeline Evans

At around 8 on a hot July night, deep inside the Columbus Circle subway station, frustration was on full display. A small group gathered around a bank of MetroCard vending machines, toes tapping, eyebrows raised and arms across chests. While trains rumbled in and out of the station, three young women chatted as they struggled to insert cash into one of the machines. In front of another machine, obviously flabbergasted by what he saw, a thin bearded man exclaimed, "Can't you see it doesn't take bills!"

He continued, "Only one of these damn things does, this one here, I'm waiting for it."

Indeed the messages ticking across the tops of two of the three machines informed MetroCard buyers, this machine "does not accept bills at this time." One of the three also advised, no single ride tickets. All three card dispensers did welcome plastic.

New York's time consuming and often inconvenient fare collection lags far behind that of many other large cities, according to experts. Some might say the dysfunctional MetroCard vending machines reflect deeper systemic problems at the Metropolitan Transportation Authority , one of the world's largest public transit agencies.

Change, though, might be on the way. Within the next few years, transit riders might be able to simply tap their cards and go, rather than having to swipe -- and sometimes swipe again and again. In addition, rather than purchasing a ticket from the transit authority, they could have their fares automatically debited from their bank accounts or charged to their credit cards.

The switchover, though, promises to be lengthy and cumbersome and could present straphangers -- and the authority -- with a new host of challenges.

Ticket Sales

As it stands now, fare collection and the processing of billions of dollars takes a significant financial toll on the transit budget. In 2010, the MTA said that, for every dollar it takes in from MetroCard sales, it spends 15 cents managing and administering the fare collection system. Shaving just one penny off that 15 cents could save around $55 million a year, according to the transit authority.

A team of 124 employees work around the clock to maintain the system's 1,650 MetroCard vending machines.

"We had 28,456 service calls" for machines in July alone, said Antonio Suarez, chief officer of fare collection equipment maintenance at New York City Transit . The machines, manufactured by Cubic Transportation Systems , a unit of the Cubic Corp. have been in operation since 1994 .

Meanwhile, a separate revenue office picks up the cash that all the machines hold. The revenue collectors go into the system at various times of day, equipped with gun toting special officers. But the MTA says that budget constraints have "impacted" the frequency of those cash pickups

as well as the actual restocking of new MetroCards.

Even though many machines only accept credit or debit card payment, cash accounts for 64 percent of all MTA transactions -- at machine and at ticket booths. The cash transactions are smaller, though, so account for only a third of the fare revenue.

Changing the System

MTA's current fare collection is "a generation behind places like Chicago, Atlanta and London," said Randy Vanderhoof, executive director for the Smart Card Alliance , a multi-industry association.

As riders know, New York City Transit has been slow to embrace many technological advances that could enhance the efficiency and speed of the system . "The MTA has expertise at building and maintaining, they have a poor record at implementing technology," Said Neysa Pranger of the Regional Plan Association .

The current executive director of the transportation authority hopes to change that.

Jay Walder previously served as managing director for finance and planning at Transport For London . While there, he was widely credited for spearheading that system's wildly popular fare collection system known as the Oyster Card .

The Oyster Card The smart chip uses a secure micro controller, or equivalent device with internal memory, and a small antenna to communicate with an electronic reader through a contactless radio frequency. In London, as well as a bevy of other cities including Chicago, a rider simply taps a pre-paid, agency-issued card or key fob with a smart chip on a specially equipped terminal, like those seen in New York City cabs or at drug stores and fast food restaurants. The cost of the ride then is automatically deducted, as it is from a MetroCard today

Getting 'Smart' in New York

In June, New York's MTA, in partnership with the , New Jersey Transit and credit card issuer Mastercard , re-launched an earlier tap and go smart card pilot program. Plans are to phase in pay systems, first in on city buses and then subways.

In addition to making it easier to pay and collect fares, the plan also would make fare payment between agencies in the tristate area more seamless, helping customers who, for example, take the PATH into the city and then hop on a subway.

In London the transit agency issues a hard plastic prepaid smart card. But signs indicate that New York's MTA would like to get out of the fare card selling business and farm out most of those duties perhaps to the credit card or banking industry. This would happen under what gets referred to as an "open loop" system.

The MTA pilot project is testing whether bank and credit cards embedded with smart chips can be used to make direct payments into the transit system.

Essentially, a rider would no longer have to buy a MetroCard but would simply tap a debit or credit card at the turnstile. The MTA has said it will provide alternatives for cash paying customers but has not devised exactly what they will be.

If New York adopts an open loop system such as that, it "will leap frog other cities" that still issue all tickets themselves," said Vanderhoof.

The "open loop" appeals to public transit agencies, he said, because selling tickets is expensive. "Transit industries across the country are finding it costs them a lot of money, in machines and service, and collecting cash out of them, to be able to operate the transit ticketing and fare payment services they offer," Vanderhoof noted.

No Tickets Please

"Anything transit agencies can do to reduce the number of tickets they have to sell, and the number of machines they have to supply in the stations, will allow them to save money," he said, adding that after all, "people have the ability to pay already in their wallets."

Both London and Chicago are looking at potential open payment options.

The idea has obvious appeal for credit card companies as well. In a case study of the original MTA 2006 pilot program, Mastercard, which had partnered with Citibank, said "Citibank wanted to expand cardholder usage to a desirable everyday category like mass transit, part of the daily routines of million of people."

Columbia University Professor of Law Ronald J. Mann said the incentives for banks and issuers of credit cards to become involved in transit are even greater today.

"They will earn revenues of some sort from transactions on the cards," he said, "and in New York City, there would be a powerful incentive for individual consumers to obtain cards of the type that give them MTA access without having to buy a fare card."

Mann explained that the credit card "market is saturated, the overwhelming majority of people in this country that have any income or assets who want a credit card, have a credit card," so the card companies are looking for new places they can use those cards -- such as transit.

In New York City alone, around 7 million people ride the subway daily, and that could translate into a lot of transaction volume.

Customer Convenience

Vanderhoof of the Smart Card Association said the open loop system could offer added convenience for customers, even those from other cities. For example, he said, someone from San Francisco would be able jump on an New York City subway or bus by just tapping a card she already has in her purse -- "without having to deal with a MTA vending machine."

Mann predicted that "every large credit and debit card issuer will want to be allowed to issue smart cards in New York City.

"Because of the convenience that the ability to use smart debit or credit cards will offer MTA commuters," Mann added, "no one in New York City is going to want to be using plastic that they can't use on the subway. ... You're going to have to figure out which of the banks will give you a smart card, and you are going to go and get it."

Customer Inconvenience

But what about those customers who do not have debit or credit cards? According to the New York City Department of Consumer Affairs , 13 percent of all city households do not have bank accounts -- the largest percentage of adults in any community in the United States.

Mann wondered how people without bank accounts would obtain cards to give them convenient access to MTA services. Will the cards have higher fees than the cards more well-heeled consumers already have in their wallets? And, if MTA completely migrates to the open loop system "will the transit agency move to make it less and less convenient to use cash or buy MTA fare cards?" he asked.

MTA figures for 2009 indicate the average cash purchase was $6.87 per transaction while credit and debit transactions averaged $19.71. That could indicate that some less affluent New Yorkers -- many of whom do not have bank accounts -- simply cannot afford to buy subway or bus rides in bulk.

Amy Linden, senior director of the MTA's New Payment Systems said that eventually, customers without bank accounts might be able to purchase and use pre-paid cards, as many do now for phones, although, she said the authority is not yet testing any of those methods. She said the authority would continue to accept cash on buses.

At some point, riders also many be able to use phones with Near Field Communication, or NFC, technology which might b able to connect to a pre paid account. With that, a transit rider could simply tap the phone on the reader and enter the system. This might help some people without credit cards because, according to Linden, more individuals own mobile phones than have bank accounts.

Even people with bank accounts could face increased risk of stiff customer fees from their banks or card issuer under a smart cart system. For example, customers who overdraw their bank accounts and have overdraft coverage, could be charged a stiff fee when they tap their bank cards to enter the subway.

Further, the plan raises questions about the MTA's fare structure and how the this new payment system might affect unlimited ride plans or volume discounts. For now, the MTA says packages will continue to be available.

Linden said the MTA will deal with all this but first needs to go first to an open payment system since the authority must reduce costs and make travel in the region more seamless.

Making the Change

Whether it can make that vision a reality remain in question. The man who would oversee it all, Executive Director Walder, has an extensive urban planning public sector resume and, as someone who worked for the MTA from 1985 through 1993, knows its complex culture . But, as the Regional Plan Association's Hope Cohen has written, Walder still will confront "interagency rivalries and contradictory union contracts and work rules."

How those pressures, along with public concerns and strained budgets will affect the move to a smart card -- and what the system might look like in the end, is still anyone's guess.

Already, though, the agency's plans appear to be encountering delays. Last year, news reports said a smart card plan would be in place by 2014, but now the agency is not sure when that might happen.

This month MTA spokesman Aaron Donovan would say only that "the new smart card program will see full subway and train implementation in the coming years." He did not provide any more specific information.

Wishing New York the best of luck in its new endeavor, Peter MacLennon of Transport For London said that city's of "tap and go" fare payment system, "has transformed the way passengers pay for journeys on London's transit network."

New Yorkers will have to wait and see if any similar transformations take place here.