

Global Urban Mobility and Financial Inclusion: *A Virtuous Circle*

Financial inclusion is a prominent goal for global leaders and the development community. The World Bank Group considers it a key to reducing extreme poverty and increasing wider prosperity around the world. It is, in fact, central to enabling eight of the 17 United Nations Sustainable Development Goals—including eradicating poverty, ending hunger, sustaining good health and well-being, achieving gender equality and economic empowerment of women, and promoting economic growth and jobs.¹ Accordingly, more than 115 countries have committed, are developing, or have launched a financial inclusion strategy since 2010.²

As financial companies continue to increase their digital offerings, more people are gaining access to financial tools and services. By adopting these financial capabilities and networks, citizens can pursue a greater variety of work and educational opportunities and take advantage of a wider range of resources. In addition, as citizens have more tools and services, these benefits collectively enrich the cities and countries in which they live and provide new streams of business for financial institutions.

Widespread adoption of digital finance could increase the annual GDP of all emerging economies by 6% over business-as-usual and could provide 1.6 billion people—more than half of them women—access to life-changing financial services.³

Urban transportation payment systems are a key element in increasing access to financial networks globally, improving the lives of the under- and unbanked. When transportation network providers develop inclusive systems, they innately help more city residents sustain their livelihoods, connect to services and pursue activities that create a vibrant city life. Moreover, they are uniquely positioned to connect city residents with other kinds of networks—such as public services, educational institutions and financial services.

This “virtuous cycle” seeks to give the under- and unbanked a tremendous lift: Transportation policies can increase financial inclusivity by increasing connections to financial networks via innovations in digital payment solutions. Those with better digital access can in turn more easily use transportation to enhance their lives.

As the *network of the networks*, Visa creates products, services and global frameworks to connect digital financial services with transportation networks, giving more people access to these systems. With Visa’s innovations in digital payment solutions, transportation operators can provide fare types and payment functions that work for everyone—such as fixed fares, distance- and time-based fares, multi-modal fares, fare capping, concessions and delay refunds.

These options allow people with fewer resources to benefit from fare capping options that have, until now, mainly benefitted those with the ability to pre-pay for weekly, monthly or annual passes. As they engage with the system of digital payment to use these options, under- and unbanked people tap into the formal banking and credit sector, gaining a financial foothold with the prospect of growing their economic capacity.

Digital finance and financial inclusion

Today, 69% of adults globally have a bank account, which means almost one-third of adults around the world—or 1.7 billion—still do not have any contact with banks.⁴ The growing middle class, which represents 46% of the population in emerging markets around the world, currently relies on cash, with more than 80% of this population using cash for most or all transactions. However, change is coming fast: At least half of those in this group say they anticipate using digital finance tools within five years.⁵

The financially excluded go digital

Digital finance that allows people to access payments, savings and credit products via payment cards and mobile devices is poised to increase financial inclusion around the world. These services have launched in more than 80 countries to assist financially excluded and underserved people.⁶ The result is that millions of formerly excluded customers are moving from only using cash to engaging with formal financial services.

Under- and unbanked communities can use these financial tools to:

- Take advantage of services such as savings accounts, credit, and insurance
- Facilitate low-cost transactions for sending and receiving small amounts of money
- Reduce risk of loss and theft endemic to all-cash businesses
- Enable asset accumulation—especially by women, who are less likely to have control of their financial lives
- Access government programs and services

The major shift has been the normalization of mobile digital finance tools among the formerly unbanked and underserved; more than 90% of the global emerging middle class own and use smartphones.⁷ This greater access to mobile tools enables a broader reach of formalized borrowing and other business functions and gives emerging economies and their populations a tremendous lift.

How urban transport networks help city dwellers

Accessible transportation is a civic service meant to improve the lives of all in a community. Omnibus, from which the word bus derives, means “for all.”

Correspondingly, anything that acts as a barrier to using public transportation networks, including cost and method of payment, serves to disenfranchise people and hinders the development of thriving cities.

Cities around the world are growing, along with increased economic activities. The world’s urban population increased six-fold between 1950 and 2018, from 751 million to 4.2 billion. All told, 80% of global economic activity currently takes place in cities.

Moreover, cities thrive financially and socially when transportation systems help people get to and unlock opportunities for employment, self-improvement and communal enhancement. Citizens can easily and affordably access education and jobs in all parts of the city. Doubling job density increases economic productivity by 5 to 10%.

“In regions that are looking for high economic growth, urban transportation systems and access to them can be transformational. Whether that’s Mexico City, Dubai or Ho Chi Minh City, having a higher-quality mass transportation system will unlock economic opportunity.”

– Stephen Cooles, Global Mobility Communications & Planning Director, Visa

How public transport can support financial inclusion

The transportation industry's role in financial inclusion is as much about the structure of payment systems as it is about the cost of tickets. Digital payment systems accessing transportation networks give under- and unbanked people an entryway into broader financial services.

"Financial inclusion starts with payments," states the World Bank's Committee on Payments and Market Infrastructures. "They serve as a gateway to other financial services, such as savings, credit and insurance."

Mexico City offers an example of this dynamic. In 2017, the city's transportation agency introduced a transit card that can also be used to make utility payments and shop at particular stores. Unbanked riders who secured a transit card to ride the bus suddenly had access to a form of credit they could use to better manage payments in other areas of their lives.

Digital payment systems also allow governments to interact with riders' payment tools in order to subsidize fares riders, which can help low-income people access better jobs and higher wages.

For example, in Bogota, Colombia, the poorest residents were spending as much as 17% of their income on transportation. The introduction of an electronic transportation card, called [Tu Llave](#), enabled the city to subsidize their fares, resulting in these riders increasing their monthly ridership by 56% compared to normal fare card users. There is evidence that these subsidies are associated with 20% higher hourly wages for informal workers.

In addition, Visa Digital Ticketing will enable local authorities to provide workers with a wider variety of offers—such as granting them access to public transportation during their first month of work prior to receiving their first paycheck.

How cities can promote widespread use of public transport

Governments, city planners and transportation operators have a variety of means to make public transportation more appealing to residents, such as enhancing the fleet with new buses that are greener and have lower

"For pre-paid or debit, as a new segment, what it means is we are giving users the first entry to the financial system, whether because there's a need to access this product that allows them to use transportation systems or because they really want it. That is a big opportunity."

Diego Norena, LAC Urban Mobility Lead, Visa

emissions. They have typically upgraded the payment infrastructure at the same time, enabling transportation agencies to accept new payment technologies.

Enhanced policies

Making fares as affordable as possible—and even subsidizing fares for the lowest earners—can increase public transportation usage substantially. In many cities, such as Sao Paulo and Rio de Janeiro, the bottom 20% of earners cannot afford public transportation. Making systems more efficient using technology and analytics and helping governments subsidize fares via digital payment methods can help make these systems more accessible to low-income urban residents.

Other pricing mechanisms can help encourage would-be car commuters to make use of public transportation. Targeted charges and restrictions can encourage urban commuters to opt for public transportation instead of relying on cars for commuting. Congestion pricing has shown its effectiveness in London, Stockholm and Singapore, where toll pricing to enter the city center was increased to discourage car commuting. The new congestion fees included other changes, like establishment of high-occupancy lanes, the imposition of tolls on taxis and other for-hire vehicles and increases in parking fees inside the restriction zones.

Upgrade infrastructure

Investment in transportation infrastructure can pay dividends in increased ridership as people find the system more pleasant, reliable and easy to use.

In cities such as London, Singapore and Stockholm, efforts to increase ridership on public transportation have meant instituting more frequent bus routes, increasing the number of park-and-ride spaces and improving bike and pedestrian infrastructure. Upgrading payment infrastructure is also beneficial. In London, contactless payment upgrades allowed fewer buses to meet the same demand because boarding became more efficient, resulting in the ability to expand, add or improve routes with existing buses.

Upgrading buses, trains and light rail systems can have a demonstrably positive effect on usage rates, perceptions of (and actual) accessibility and emissions and air quality.

In Sacramento, for example, the Regional Transit District is moving to purchase 20 light-rail vehicles as part of a larger light-rail modernization plan. The new cars, manufactured by Siemens Mobility, Inc., will be electric and emissions-free and will have low floors to allow seniors, disabled riders, bicycles and strollers to access the light-rail more easily.

Institute an open-loop payment system

Digital payment in transportation networks can be implemented on closed-loop or open-loop systems. Open-loop payment systems use international EMV® standards and universal technology to enable payments at most transit providers. Closed-loop systems (such as the Oyster card in London and the Clipper card in San Francisco) are limited to particular providers and usually apply specific standards and proprietary technology.

A major advantage of open-loop payment options is that customers who have credit or debit cards—or a smart device—can access the transit system using something they already own.

In the case of transportation, open-loop payment systems enable the use of bank-issued contactless credit cards, debit cards, mobile devices and wearables, as opposed to bespoke cards issued by transit authorities or transportation operators. Open-loop transportation cards can be used across all industries and sectors, so a card that gets you on the bus can also buy your morning coffee and a sandwich for lunch.

Open-loop systems represent the best option to increase the logistical accessibility of transportation systems and a movement toward financial inclusion for a greater share of the urban population.

Implement digital payment technology

Instituting digital payment systems that promote ease-of-use and inclusion is another way to make public transportation better suited for handling increased ridership. These options help transportation users access the system more easily and quickly, especially contactless payment options.

Contactless payment—often referred to as tap-to-pay—allows riders to pay by tapping a card, payment-enabled

smart watch or smartphone to a digital reader as they enter the system. Contactless EMV cards use open-loop payment technology, thereby eliminating the need to top up the card, either digitally or at physical machines. This not only provides a faster, more convenient way for riders to access the system but also reduces overhead. Agencies that institute contactless EMV payment options are able to slash fare collection expenditures by more than 30%. More than 100 transit systems around the world currently use contactless payment, including London, Sydney and Vancouver.

Use fare-capping on digital payment

It is common for public transportation systems to offer discounts to riders who can pay in bulk for multiple fares upfront, such as carnets, a pack of individual fares or a pass that covers a set period such as a week, month or year. These systems benefit wealthier riders, ultimately giving better value fares to those who can afford to pay a higher upfront fee.

Cities can better accommodate the financial needs of more riders by finding a way to provide that bulk discount to all riders, including fare-capping that provides the pay-ahead discount to pay-as-you-go riders.



The Practical Benefits of Automatic Fare-Capping via Digital Payment:

Imagine a construction worker who is in night school to become a lawyer. At full price, each ride on the light-rail in his city costs \$3, which means his commute to and from work costs \$6 per day.

If he travels to night school after work and then rides home, his daily transportation cost jumps to \$9, well above his \$6/day budget. A weekly pass is available for \$30 — amounting to \$6 for each weekday — but he cannot afford to front that money every week to get the discount.

Luckily, his city has just introduced a contactless transit card that automatically tracks daily and weekly rides and institutes fare-capping when costs go above \$30/week. Now he can travel to work, school and back home for \$6/day and continue to pursue his dream of becoming a lawyer.

Making transportation more affordable

Digital payment methods such as open-loop contactless payments allow all riders to access appropriate discounts. Fare-capping rules and digital ride tracking allow all riders to get the same discounts for frequent ridership.



With weekly capping, a rider gets all the price benefits of a weekly ticket without pre-paying upfront. Instead the payment is spread over the days the rider uses the system; a rider who doesn't end up using the system enough to get the discount just pays the fare for the rides they have taken without paying for additional journeys they did not make.

Integrating transportation networks into urban life

Open-loop payment options allow riders to pay for transportation and other necessary or discretionary goods with the same payment methods, thereby integrating ridership seamlessly into daily life.

Riders of limited means, including under- or unbanked riders, can use money loaded on a pre-paid card to pay for other things, if needed. Wealthier residents are more likely to use the public transportation system since an open-loop system is more user-friendly, seen as modern and reduces lines and crowding around payment terminals. Getting more riders from across all financial demographics using transportation helps sustain the system and improves the meshed social fabric of urban life for both locals and visitors.

Increasing financial inclusion

Open-loop cards address some pain points that riders experience when using transportation, such as waiting in line to buy a ticket or a card, losing a card with no recourse and finding a place to reload a card at the right time. These challenges can be especially difficult for riders who typically do not have bank accounts and credit cards and can least afford to take time away from work to navigate the system.

Cities have successfully offered pre-paid Visa debit cards, making the system easier to navigate for lower-income



In Ho Chi Minh City, Vietnam, a project is underway to use open-loop, pre-paid Visa cards to get unbanked people to ride public transit. The project gave 5,000 pre-paid cards to people near four bus stations in a university town as a way to get users familiar with the system and to provide them an entry point to financial institutions.

“Our Visa pre-paid cards issued in Ho Chi Minh City have empowered many unbanked riders to take their first step towards digital payments while reducing the cost of ticketing and increasing ridership.”

Mr. Ho Phan Hai Trieu, Deputy CEO, Vietbank

riders, and introducing uncarded riders to financial systems. This introduction provides an entryway into other financial resources and tools, such as bank accounts, credit and insurance.

Thriving cities put people at their heart

Digital payment options that improve transportation systems are pro-people innovations. They make transportation easier and more pleasant to use, provide the most affordable mobility to all riders and help improve ridership across all demographics. A more robust system with greater ridership and happy riders will build a solid revenue stream that can be used to make improvements and ensure sustainability.

Cities around the world have a chance to make urban life work better for all people by developing systems that are accessible and beneficial for all.

This effort will take the cooperation of all stakeholders—including government agencies that must create or improve the policies and standards needed to make partnerships work for financial inclusion, and financial services providers that are innovating the next generation of digital payment solutions. These life-changing gains can enable wide adoption of digitally connected transportation systems to ensure that everyone has the opportunity to access these systems and digital payment tools to create the biggest impact for financial inclusion.

Visa has the expertise and experience working with government and transportation agencies to develop forward-thinking transportation systems that are safe, secure and provide more people with greater access to these vital resources. We are here to help you build inclusive digital transit solutions for all.

To learn more about Visa's Global Urban Mobility solutions and how we can help, visit visa.com/urbanmobility.

Appendix

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