



THE ROAD TO DIGITAL GOVERNMENT PAYMENTS

A guide to improve efficiency,
transparency and financial inclusion
through Government-to-Citizen
payments (G2C)

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A close-up photograph of a man with dark, curly hair, a beard, and blue-rimmed glasses. He is looking down at a smartphone held in his hands. He is wearing a dark jacket over a checkered shirt. The background is a blurred cityscape with buildings and a bright sky.

Digitalizing emergency assistance payments must be a collaborative effort of governments, the private sector, and all relevant stakeholders in the payment ecosystem.

EXECUTIVE SUMMARY

The crisis the world is currently going through as a result of the COVID-19 pandemic has revealed the need to develop and implement rapid response government to citizens programs, a key tool to stimulate the safe and speedy financial recovery of individuals in the face of the current situation or other disasters or pandemics. The aim of this study is to offer guidelines that help governments digitalize G2C payments, especially disbursing emergency funds and funding for social programs, as well as leverage the data to facilitate better decision making processes and inform public policies that lead to a higher quality of life.

Countries in the Latin America and the Caribbean (LAC) region have different maturity levels when it comes to digital payment penetration, which so far has made it impossible to implement a “one-size-fits-all” model solution for social assistance payments. The pace at which governments adopt electronic payments to send funds to consumers and companies depends on factors such as the available infrastructure, the social and economic context, and applicable rules and regulations. This Guide presents several solutions, with a focus disbursing COVID-19 emergency funds.

Some of the solutions covered in this document are the result of collaboration between Visa and key stakeholders in the payment ecosystem. These initiatives have been made available to governments to meet the challenges caused by the pandemic and the resulting public health emergency that calls for social distancing and reduced working hours. These factors have necessitated channeling financial resources promptly and effectively to vulnerable, mostly unbanked segments of the population.

This Guide will assess G2C programs in different stages of maturity for adopting government e-payments. Some of the countries analyzed include Brazil and the United States, which have a mature environment thanks to their advanced payment ecosystem, their modern infrastructure, and regulatory policies that allowed their governments to provide rapid responses. However, other cases such as the Dominican Republic, with its “Quédate en Casa” (Stay at Home) program, and Guatemala, which established “Bono Familia” (Family Bonus) program, faced barriers such as financial exclusion and low banking access. However, these

programs managed to be successful due to their innovation. Both in the Dominican Republic and in Guatemala, beneficiaries received virtual accounts that can be used for other purposes. It is worth highlighting that the last two examples were successful in that they immediately responded to the emergency situation, providing assistance and securing funds to serve the most vulnerable segments of society. However, in both of those cases, the results are the steppingstone to a long-term financial inclusion process, an essential endeavor to create a robust digital ecosystem.

Although governments are taking steps toward digitalization, there is still room to develop more complete and sustainable solutions. These solutions should not only serve to further a robust, interoperable digital payment ecosystem, but also to increase banking access and offer benefits for all participants involved in their development and use, namely governments, merchants, financial institutions, beneficiaries and even fintech organizations.

To rise to the challenge of disbursing emergency funds, the innovation and product teams at Visa have designed two possible solution models for G2C payments that governments can develop with Visa.

Based on the lessons gleaned from the government programs featured in this Guide, the team proposed two types of solutions, which are dependent on the maturity level of electronic payment penetration in each country.

These solutions are flexible and rest upon three fundamental pillars¹ required to develop digital payments:



1. Infrastructure



2. Social and Economic Context



3. Regulations and Policy Context

To successfully implement digital payment systems, all participants must work in close and direct collaboration. The role of each party (governments, merchants, financial institutions, beneficiaries and fintech organizations) will be of paramount importance to build a strong, interoperable and long-term sustainable ecosystem.

Pandemics such as COVID-19 pose unimaginable challenges to every country, their governments and societies, but they also provide learning opportunities. This crisis has revealed existing gaps that call for modernizing processes and systems, opening the door for governments to assign resources aimed at digital transformation and innovation.

Payment digitalization is constantly gaining ground. Its development and application must be a priority in political and digital agendas, since it will allow governments to be better prepared in critical situations where funds must be disbursed safely, transparently and efficiently to individuals.

1. This Guide includes concepts discussed in the Government E-Payments Adoption Ranking (GEAR) study, a collaboration between Visa and The Economist Intelligence Unit. Learn more about the study here: <https://usa.visa.com/content/dam/VCOM/global/visa-everywhere/documents/government-e-payment-adoption-ranking-study-2018.pdf>

INTRODUCTION

Unprecedented situations, such as the COVID-19 pandemic, evidence the importance of having secure, efficient digital disbursement programs in place to disburse social assistance payments. Digitalizing existing government to citizens payments or G2C payments must be a top priority for governments, as it is the first step to transforming their economies. Having access to digital solutions makes it possible to expand a beneficiary network in record time, reaching mostly the poorest, highly unbanked segments of a population. Digital solutions also provide more acceptance points to guarantee individuals' jobs are not interrupted, so they can maintain their livelihoods.



The challenges posed by social distancing and movement restrictions as a result of COVID-19 reinforce the advantages offered by using digital payments.

This Guide will assess various G2C and emergency solutions applied in the Dominican Republic, Guatemala, Brazil and the United States. These particular cases were selected because they are representative of several models that, to a greater or lesser extent, leverage the use of digital payment infrastructures, and clearly reflect the importance of the three key pillars on which they must be built to work effectively and continuously: **1. Infrastructure; 2. Social and Economic Context; and 3. Regulations and Policy Context.**

The three pillars, defined in the next page, will help set the pace for each country to adopt the most appropriate solution as they begin to digitalize their G2C payments.



Infrastructure

This refers to technology infrastructure, including access to prepaid and debit cards, acceptance of contactless transactions, Fast Funds certification, availability of digital wallets, point of sale penetration (POS²), availability of mobile point-of-sale (mPOS), and availability of tap to phone³ and scan to pay (QR code) technology. All these factors significantly impact the ability of governments to quickly and effectively disburse emergency funds.



Social and Economic Context

This includes economic factors that define the beneficiaries' lifestyles, as well as social factors that allow a solution to be adopted with little problem. This context also includes indicators such as Internet and smartphone penetration, poverty rate and level of education.



Regulations and Policy Context

This refers to public policies that foster the development of a digital ecosystem, promote the acceptance and use of electronic payments, and facilitate the submission of digital or remote requests for basic bank accounts and products. This also includes public policies incentivize the acceptance and use of digital payments.

2. POS: point of sale

3. Tap to phone: contactless payment method between mobile devices through applications, with no terminals.

Lastly, based on these three pillars, this Guide also features solutions that governments can use as a model to develop and implement their own guidelines in collaboration with Visa.



Emerging Model

This solution focuses on unbanked populations, distant geographical locations and ecosystems lacking infrastructure. In this case, it is imperative to reach as many individuals as possible using existing technological capabilities (without requiring the use of modern devices). There should be a priority focus on cost reduction and efficient distribution. This model is based on SMS messages with Unstructured Supplementary Service Data (USSD) protocols⁴, which allow information flow regardless of mobile device features and availability of mobile data.

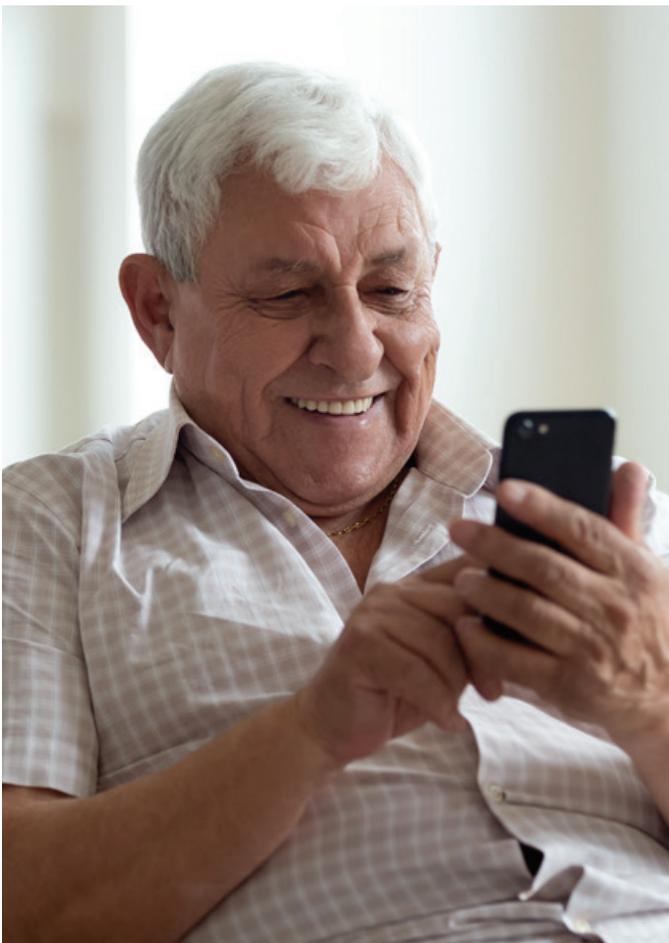


Advanced Model

This is a more sophisticated solution that requires smartphones and access to data plans or mobile data. In this case, comprehensive solutions can be developed within an application, making it possible to add functionalities that improve the beneficiaries' user experience. The latest trends in payment ecosystems can also be added, such as QR code and NFC technologies⁵.

4. USSD: unstructured supplementary service data.
5. NFC: Near Field Communication

IMPLEMENTED SOLUTION TO DISBURSE EMERGENCY FUNDS DURING COVID-19



Although programs including vouchers and payment cards may have been used in the past to tackle different sorts of crises, the COVID-19 pandemic has called for a search for alternative channels to distribute social assistance and emergency funds. This crisis has posed unique, complex challenges, such as the decreased uses of cash for hygiene reasons and strict social distancing rules established to prevent contagion.

Governments must find agile partners they can work with to face this and future challenges, finding ways to channel funds to the poorest segments of the population. Since the beginning of the COVID-19 pandemic, Visa has been working with partners, customers and governments to provide fast, effective, secure and transparent G2C solutions.

Apart from the already mentioned challenges, in Latin America and the Caribbean there are other difficulties that may complicate fund disbursement. Some include:

- Low levels of banking access: at least 140 million people work in informal conditions. In the LAC region, this includes about 50% of the workforce⁶.
- Low penetration of payment credentials⁷ and their acceptance at points of sale.
- Most beneficiaries of governmental social assistance programs belong to the poorest segment of the population, often live in rural areas with limited access to basic resources and technology and have rudimentary financial skills.
- Lack of infrastructure and regulations that make it easy to open basic bank accounts and attract customers online.

The following examples illustrate how Visa worked diligently, hand in hand with ecosystem players to develop and implement emergency fund disbursement solutions. Each experience is different and therefore may not necessarily be fully replicable. Visa desires to help LAC governments identify the best G2C payment solutions, taking the specific characteristics of each market into consideration.



DOMINICAN REPUBLIC Quédate en Casa (Stay at Home)

As a result of the social and economic crisis caused by COVID-19, the Dominican Republic government, through its Social Policy Cabinet, was forced to adopt an immediate solution to aid the most disadvantaged segments of the population, who were for the most part unbanked. The government implemented the Quédate en Casa (Stay at Home) program by creating partnerships that made it possible to disburse emergency funds quickly and effectively.

The program leveraged the existing infrastructure for the social assistance program “Progresando con Solidaridad” (Making Progress with Solidarity), which already included 800,000 registered families and a network of more than 2,000 merchants accepting prepaid Visa cards.

Considering social distancing rules and being hard-pressed for time, the government decided to issue virtual payment credentials. Not only were the costs associated with issuing and delivering plastic cards reduced, but this approach also avoided large gatherings of people and possible transmissions.

Visa’s role entailed developing these virtual payment credentials, consisting of six digits of the Visa BIN number⁸ and 10 digits of the beneficiary’s government-issued ID card. By activating this system, people do not need to go to an ATM. Instead, they could pay for their purchases at authorized merchants that were part of the program by showing their government-issued ID card.

6. Data obtained from the Global Findex 2017.

7. Methods of payment can either be linked to a physical element, such as plastic cards, or be stored in multiple physical or digital devices (form factors) such as digital wallets, bracelets, watches, etc. Therefore, the term “payment credentials” is used in this document to refer to both alternatives.

8. BIN: Bank Identification Number

The government provided to the Banco de Reservas state-owned bank, with a beneficiary ID number database and the funds to cover all corresponding virtual account deposits. Thanks to this collaboration, the program was implemented faster while simplifying the Know Your Customer (KYC) process at the same time.

To put the program into action, merchant acquirers VisaNet Dominicana⁹ and Cardnet were also key, as they provided merchants with the necessary platform to receive payments. Cardnet developed a remote terminal update system and an agile model to enroll new merchants, while VisaNet Dominicana created a mobile application for merchants to enable them to use their Android mobile phones as payment terminals (capturing transaction details manually). Thanks to their agility and innovation, in less than two weeks, both companies managed to sign more than 2,000 new merchants each.

Since existing technologies were used when setting up POS, a larger number of channels were made available for the most disadvantaged groups of the population. Until then, these individuals could only make cash purchases in nearby stores, but now they were able to use other retailers and make payments showing their government-issued ID card.

Since no physical cards were distributed, it was key to educate and effectively communicate with merchants and beneficiaries. Beneficiaries learned how to access their funds via the government's website, SMS¹⁰ notifications, and a customer service and support center. The government also provided instructions on how to use funds through press releases, digital developments and posters at POS's. As for merchants, the government distributed communication pieces with instructions to enter the data required to process transactions.

The "Quédate en Casa" (Stay at Home) program managed to reach one million households, delivering **\$100 USD per family on average**. Within the first five months of the program, more than 5.6 million transactions had already been made, accounting for **\$243 million processed through the VisaNet system** for disbursing COVID-19 governmental emergency funds, using the new personal ID card solution developed by Visa.

This solution has provided benefits and opportunities for all the parties involved. Beneficiaries managed to access government funds quickly and securely, taking a first step toward becoming bank users. The government was able to comply with the safety measures established as a result of COVID-19 and administered the program efficiently, providing effective financial assistance to beneficiaries. It also cut down costs by not issuing new plastic cards or incurring complex distribution logistics. Thanks to payment digitalization, the government was able to monitor how the funds were spent. Players in the payment ecosystem, including payment credentials issuers and merchant acquirers that allow retailers to accept digital payments, increased the number of digital transactions. This increase was due to new channels opening, offering a more convenient, secure service to the population. This solution has opened the door for unbanked beneficiaries to adopt digital payment methods and for small merchants to accept and adopt them in the mid to long-term future.

9. VisaNet Dominicana is the commercial name of CMP, S.A., a Dominican independent merchant acquirer of Visa, Inc. and its subsidiaries.

10. SMS: Short Message Service



GUATEMALA **Bono Familia** **(Family Bonus)**

Through the Ministry of Social Development (MIDES), the government of Guatemala developed the “Bono Familia” (Family Bonus) program to help the groups hit hardest by COVID-19, allocating \$780 million USD. Several groups came together, including Visa, the Ministry of Development, the Ministry of Finance, 11 banks, two ATM networks, VisaNet Guatemala¹¹ and BAC Credomatic, in a joint effort to create an emergency fund disbursement solution in only 15 days. Moreover, this solution was interoperable, transparent, secure and auditable.

The program’s goal was to help more than two million families, providing them with a 1,000-quetzal grant (approximately \$130 USD) for three months.

This solution gave beneficiaries access to a virtual bank account, allowing them to make essential purchases at merchants, gas stations and convenience stores, and/or withdraw cash.

¹¹. VisaNet Guatemala is the commercial name of Compañía de Procesamiento de Medios de Pago de Guatemala S.A., a Guatemalan independent merchant acquirer of Visa, Inc. and its subsidiaries.

The Guatemalan government partnered with the electricity company to communicate to beneficiaries that they were eligible via a notice printed on the electricity bill stating, “Eligible for Bono Familia”. Through the channels determined by the government, pre-screened beneficiaries were required to register with their personal ID card (DPI) and their phone number. Once MIDES confirmed and approved them as eligible, beneficiaries’ mobile phones were sent a 16-digit code, which allowed them to make purchases and/or withdraw cash (alongside showing their DPI).

The program leveraged technology offered by Visa Direct¹² to integrate the solution into the ecosystem, making it possible to make deposits for the “Bono Familia” program in real time, effectively providing instant access to the funds. In turn, VisaNet Guatemala opened the door for beneficiaries to be able to spend those funds at any point of sale accepting Visa cards, 24 hours a day, 365 days a year. Lastly, the government of Guatemala assigned several banks the task of administering the funds and expanding the number of virtual accounts. Thanks to this decision, different institutions issued thousands of electronic Visa payment credentials.

As the ecosystem integrator, VisaNet Guatemala played a key role, creating the tokens¹³ linked to the virtual accounts opened by the banks. The company also made sure that the funds were credited to the virtual accounts in real time following standard procedure.

Solutions such as the “Bono Familia” program make it possible for governments, banks, ATM networks and merchants to make use of a single platform to develop a service. As with any other G2C fund disbursement system, it is essential to establish effective communication with beneficiaries and provide retail staff training, so beneficiaries can have a more convenient, secure experience.

The development of the “Bono Familia” program could be described as a historic event in Guatemala. The whole country's financial industry infrastructure worked together to optimize the technological development efforts necessary to disburse emergency funds to the population.

12. Visa Direct: Visa's real-time payment platform

13. Token: Number identifier issued according to the EMV Payment Tokenization Specification that can be used instead of an account number to initiate a transaction.



BRAZIL COVID-19 Emergency Assistance

During the COVID-19 pandemic, the government of Brazil launched an emergency assistance program targeting 18 million families.

Through the state-owned bank Caixa Econômica Federal (Caixa), individuals in need received a R\$600 (\$117 USD) monthly grant through September 2020. Beneficiaries in this group included individuals who had previously been unbanked. They received a digital savings account (Conta digital de poupança, in Portuguese) through a mobile application (Caixa Tem). In addition, the five main telecommunications service providers operating in Brazil — Algar, Claro, Oi, TIM and Vivo — allowed free access to this application.

Grant recipients had to be over 18 years old and not have a formal job or receive social security benefits (except for Bolsa Familia). Additionally, their monthly individual or household income had to be below R\$522, or not exceed a total household income of R\$3,135.

The government estimated that a large percentage of the 45 million unbanked adults in Brazil received the Corona Voucher emergency assistance grant.

The Corona Voucher includes a virtual card and provides basic payment and transfer functionalities. Together with Caixa, Visa has launched a virtual debit card to provide digital credentials that can be used to make payments, withdrawals and transfers, expanding the ways to use funds.



UNITED STATES Stimulus check

The United States government passed the CARES Act to help all individuals whose jobs and businesses were affected by COVID-19. Over the course of three months, the government distributed more than \$267 billion USD in payments¹⁴. These emergency financial aid grants consisted of a single \$1,200 USD or \$2,400 USD payment to citizens and residents with an annual income of \$150,000 USD or less¹⁵.

Since the United States boasts a mature financial system and high electronic payment penetration, the government used multiple fund disbursement channels, including checks, account deposits and Visa prepaid debit card reloads.

Through an existing prepaid debit card program, the U.S. Department of the Treasury partnered with MetaBank, Fiserv and Visa to disburse Economic Impact Payments (EIP) funds using Visa prepaid cards¹⁶. This type of program allows beneficiaries to both withdraw cash and use their cards in Visa's vast network to make purchases. It has been proven that this prepaid card system speeds up fund disbursement, while preventing banking fraud, since it allows issuers to detect the misuse of prepaid

products using monitoring tools. Visa recommends issuers of prepaid products define product risk parameters and monitor any behavior pattern that deviates from the established risk profile through their fraud prevention and detection departments.

Payment platforms such as Venmo and Square introduced new functionalities that allow their users to receive payments directly in their digital accounts, instead of having to wait for a paper check.

Square provided its users with the option to receive COVID-19 stimulus funds using its Cash application. This functionality provided quick access to emergency funds, even for users who are not traditional bank account holders. To use this functionality, users receive a routing number and an account number issued through the application, similar to the ones normally issued by banks, which are then entered into the IRS portal¹⁷. From the Cash application, beneficiaries can access their funds to make person-to-person payments or request a physical Visa debit card to make purchases at merchants and withdraw funds through the ATM network.

Venmo and its parent company PayPal offered similar services. To access emergency funds, beneficiaries had to first apply for a Venmo card or a PayPal account. Cardholders were able to receive stimulus payments visiting the IRS portal and entering both their routing number and account number.

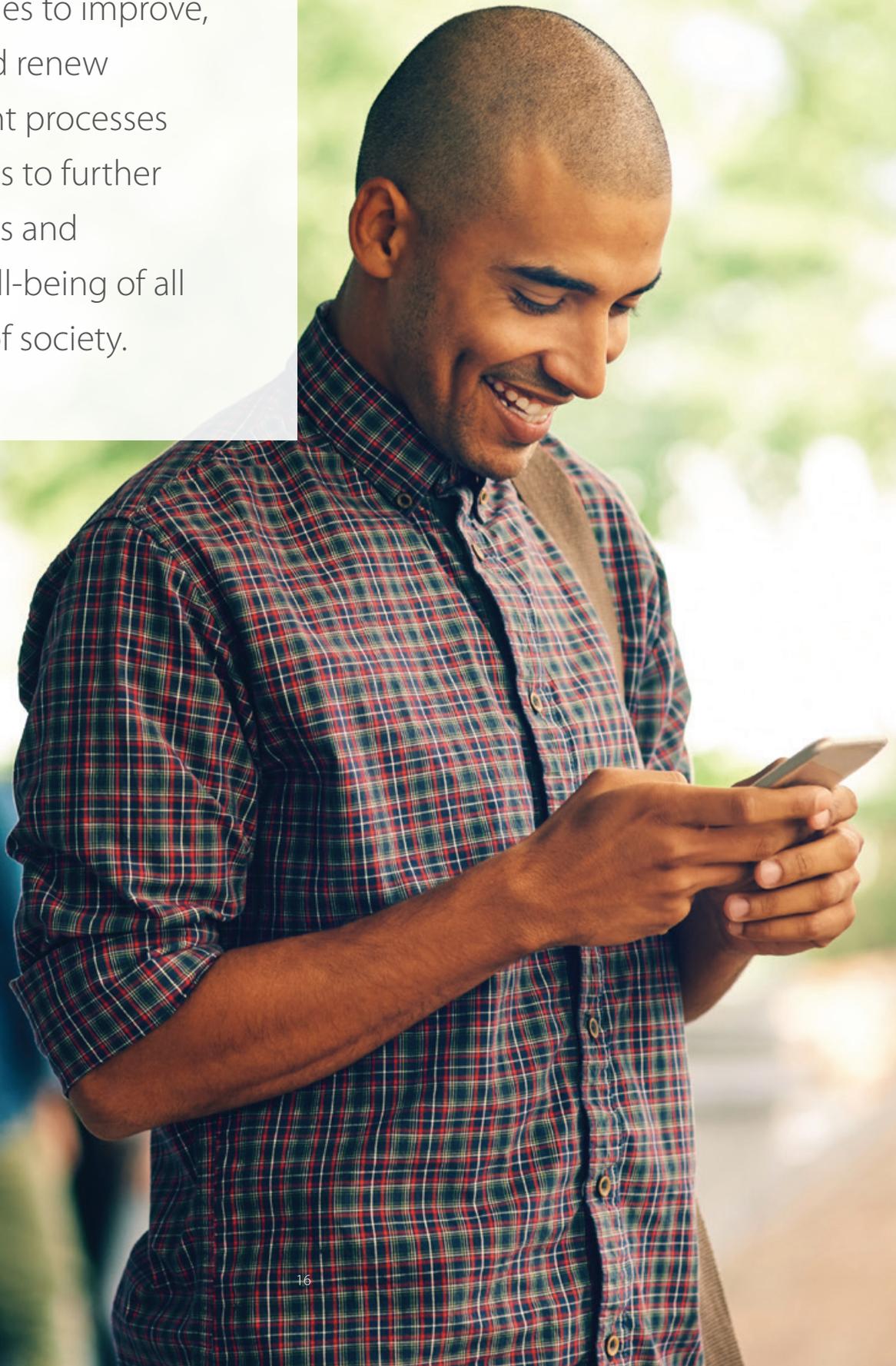
14. Source: <https://home.treasury.gov/news/press-releases/sm1025>

15. Eligible U.S. citizens and U.S. resident aliens received an Economic Impact Payment of \$1,200 or \$2,400 if they filed married filing jointly and if they were not a dependent of another taxpayer and had a work eligible Social Security number with adjusted gross income up to: \$150,000 for married couples filing joint returns / \$112,500 for head of household filers and / \$75,000 for all other eligible individuals.

16. Source: <https://home.treasury.gov/news/press-releases/sm1025>

17. IRS: Internal Revenue Service

Crisis situations reveal opportunities to improve, change and renew government processes and systems to further the interests and general well-being of all members of society.



KEY FACTORS FOR IMPLEMENTING G2C PAYMENTS

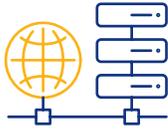
The combination of factors and circumstances brought about by the COVID-19 pandemic has revealed the need for governments to have efficient, transparent and secure tools in place to disburse funds. Even more so, in many Latin American countries there have been and there will continue to be emergencies caused by natural disasters or socioeconomic crises that will pose challenges similar to the COVID-19 pandemic. These challenges will cause governments to redouble their efforts to digitalize social assistance payments.

Many of the models being used before COVID-19 have proved deficient and had to be adapted unexpectedly due to a new scenario and to the fact that a large segment of the population remains unbanked. As observed in the country cases presented in this Guide, several factors have influenced the solutions' success. In some cases, there was a limited timeframe for implementation, while in others, insufficient technology infrastructures created constraints. Population characteristics and social and economic conditions were also taken into consideration.

Although some progress has been made in the region, in most Latin American countries, G2C fund disbursement processes have not evolved enough to meet beneficiaries' needs.

To get there, some functionalities and characteristics specific to their needs must be considered, such as how easy it is to apply for the program, how funds are received, what information systems are available, and the solution's degree of usability.

Three key factors that must be considered when implementing digital payments are discussed below.



Infrastructure

A fund disbursement project's infrastructure is the foundation on which all subsequent functional and technical functionalities are built. The more advanced and complete the infrastructure level, the more functionalities the solution will have, which in turn will allow for developing a more robust program that better meets the expectations and needs of beneficiaries.

For this type of solution to be successful, the ecosystem must have some basic elements: channels to disburse funds, issuers and administrators for the solution, an electronic payment network, such as Visa, that facilitates the flow of funds and enables payments with multiple acquirers that process purchases and/or withdrawals, and technology companies that can provide solutions for agile development and implementation. It is key to have a diverse team of players who complement their capacities and coordinate the payment solution development together.

At Visa, since we are an open network, we partner with various ecosystem participants to drive innovation among the global payment network. In doing so, we allow transactions to begin in a network and end in a different one. But we do not stop there: we also offer our value-added capabilities in areas such as data, risk and security to multiple networks. In this way, we become the connection point to help consumers, companies and governments all over the world send and receive money securely and efficiently.

In our approach, solution issuers and administrators are in charge of delivering digital payment credentials based on prepaid or debit cards, as well as administering them. It is highly recommended that these solutions support contactless payment with tokenization¹⁸, a credential can be acquired securely in a digital ecosystem and be used in contactless terminals or through QR code scanning.

One of the solutions to disburse G2C funds quickly is Visa Direct, a payment platform that makes it possible to send and receive Visa funds in real time. To use Visa Direct, issuers must have Fast Funds certification.

The acquirer network is in charge of making sure the funds can be used to make purchases at merchants and/or withdraw cash. Fortunately, most Latin American countries have an extensive ATM network, multiple bank branches, and in some cases, networks of banking agents, which makes the task easier.

18. Tokenization: Process of substituting a sensitive data element with a non-sensitive equivalent, referred to as a token.

Although in many countries payment coverage and acceptance can even be applied to health and education, in others where informal economies still prevail, reaching small merchants and businesses is challenging. The key to penetrate these segments is offering solutions that require a low initial investment, are easily acquired, and have low costs of maintenance. One of the tools that can cover this need is mPOS¹⁹, a relatively inexpensive device that is attached to a smartphone to receive payments. Another option is tap-to-phone solutions, which make it possible for smartphones — provided they are NFC-equipped — to receive payments through contactless technology without the need for additional devices or terminals. There is another option with scan-to-pay technology, which despite its similarities with tap-to-phone, does not require merchants to have smartphones, since the beneficiary completes the transaction by scanning a QR code with their own device. Each of these options has different advantages, and a G2C solution's design will reflect the approach chosen.

Access to mobile phones and Internet services has become a priority in household budgets, which has resulted in exponential growth for those markets. Thanks to technological advances, there has been a significant migration toward low-cost smartphones. Fintech organizations can play an important role here, as they can become strategic partners in developing and implementing these types of solutions. Some fintech organizations are already issuing credentials, while others operate as payment facilitators for acquirers. It is important that every country be able to identify these possible partners and invite them to be part of the project to add value.



Social and Economic Context

When deciding to implement a fund disbursement solution, governments should assess both its adoption potential by beneficiaries and its usability. These variables are directly related to the users' social and economic context, including their behavior, their lifestyle and especially their stage of digital adoption.

A country's access to digital technology and banking services is closely related to the level of income and education of the population, and it also varies according to age. The degree of financial inclusion in Latin America is usually low when compared to advanced economies. Only 54.4% of adults in the region have access to a bank account²⁰, and this rate decreases dramatically within the most disadvantaged segments of the population.

Another factor to consider for LAC countries is the existence of informal economies that prioritize the use of cash for transactions. It is essential to focus efforts on incorporating these small merchants and/or informal retailers into the financial system, since their inclusion would greatly contribute to social development.

In Latin America, digital adoption is rapidly making progress, partially because telecommunications service providers have managed to create successful models to introduce smartphones in most households, regardless of their social and economic level. Therefore, most families today have access to the Internet via a mobile device and consequently access to communication and education platforms that make their personal and professional lives easier.

Despite the fact that many challenges remain in connection with social and economic context, especially in rural areas, it is key to focus efforts on education and banking access.

19. mPOS: Mobile Point of Sale
20. Source: Global Findex 2017.



Regulations and Policy Context

In the social assistance payment ecosystem, the government can be the client and facilitator of a solution. It is essential to have regulatory flexibility that allows for developing digital financial products with minimal barriers to the processes involved.

A regulatory environment that promotes using digital payment solutions in general, and the disbursement of G2C assistance in particular, acknowledges the importance of adopting measures for the financial inclusion of beneficiaries. This includes being able to open deposit accounts easily or through simpler processes and establishing simple tax systems that help accelerate acceptance by small merchants.

As facilitators of payment digitalization, governments play a key role making public policies that foster the use and acceptance of electronic payments. These policy decisions will depend on the particular conditions of each market, but usually include incentives and regulations. Incentives are addressed to both sides of the payment ecosystem:

1. Merchant incentives, allocating government funds as subsidies for point-of-sale (POS) terminals; tax reductions, such as value-added tax (VAT) credits for transactions using electronic means of payment; tax credits equivalent to the cost of a POS terminal; and reductions in tax withholdings on card payments.
2. Consumer incentives, typically tied to their use of electronic payments, which range from VAT rebates or income tax deductions based on volume of payment-card spending to participation in lotteries to reward the use of electronic methods of payment.

As for disincentivizing cash, governments may explicitly seek to make cash more expensive to the consumer or merchant. This can come in the form of taxes or even bans on cash withdrawals or deposits above a certain size, tightened regulatory oversight for merchants who do not accept electronic payments, bans on cash discounts and electronic payment surcharges, and mandatory acceptance of electronic payments in certain market segments or time slots, among others²¹.

21. From "Perspectives on Accelerating Global Payment Acceptance". Available at: <http://www.visa.com/acceleratingacceptance>

Key Factors in the LAC region

Faced with the COVID-19 pandemic, many governments were forced to find alternative methods to support vulnerable or affected segments of the population. Most governments have focused on allocating billions of dollars as stimulus payments, which provide some relief to the myriad of people who have lost their jobs. The challenge for many governments, especially in less developed countries with larger informal economies, is to find a secure, effective and transparent way to disburse these funds. To understand the barriers posed and the opportunities created by G2C assistance payments, Visa created a heat map with 16 key indicators that measure the levels of digitalization and financial inclusion in several Latin American markets.

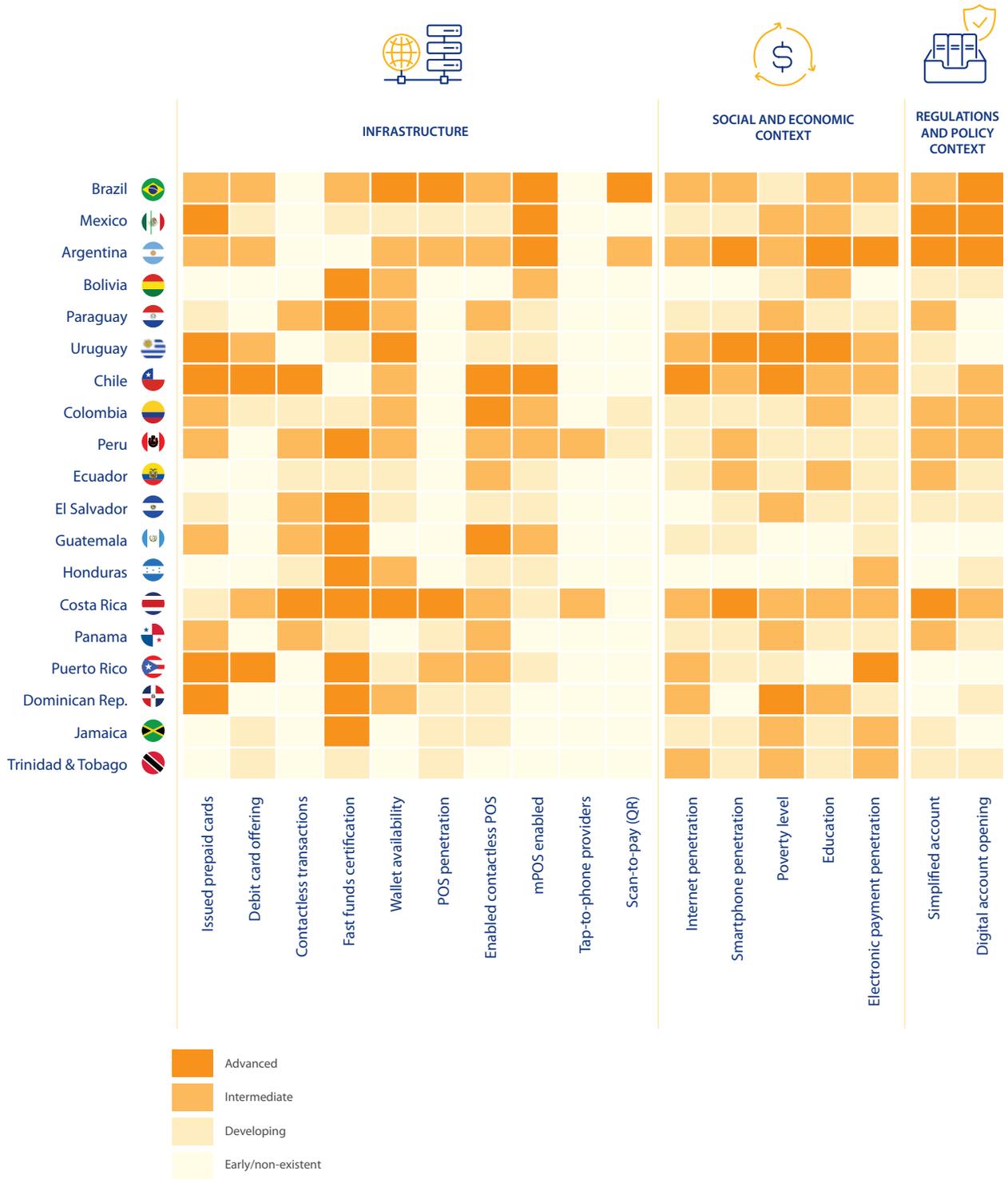
The heat map assesses each country according to the three key factors already discussed for implementing a digital solution to disburse G2C funds: **1. Infrastructure; 2. Social and Economic Context; and 3. Regulations and Policy Context.**

The goal of the heat map is to provide a regional overview of the degree of digitalization in each country, divided into key indicators that are directly related to the government's capacity to distribute assistance to individuals. One limitation present in most countries in the region is the lack of acceptance of payment credentials by informal merchants and/or small businesses. Integrating these players into the ecosystem is key since it can produce collateral benefits for other economies.

In the LAC region, some countries show advanced development levels in multiples categories, which facilitates a more immediate implementation of solutions with extensive digital capabilities. These countries usually have a higher GDP per capita, market-friendly regulation, and a mature adoption level of payment technologies, while others struggle to connect with their unbanked members of society and resort to ineffective ways of distributing funds. Enacting financial inclusion or fintech regulations that make it easier to open basic bank accounts and encourage unbanked individuals to open bank accounts online is also essential for the region to successfully implement G2C payments.

In the future, countries should drive higher financial inclusion by establishing payment-friendly regulatory frameworks, adopting advanced digital technologies, and identifying partners who facilitate the development of such technologies. The countries that follow this path will achieve a more inclusive and speedy recovery after the pandemic.

Visualizing key factors in LAC²²



22. Methodology explained at the end of this document.
 Source: AMI Internal Data and Analysis, AMI Interviews, Visa shared data, World Bank, Global Findex Database, GSMA Mobile Connectivity Index, Public Sources.

SOLUTION MODELS FOR G2C PAYMENTS

Rising to the challenge of finding the most efficient ways to disburse emergency funds, the innovation and product teams at Visa have designed two possible solution models for G2C payments that governments can develop in association with Visa.

As discussed, there is no “one-size-fits-all” model solution for every case. Each country must use a solution that fits its existing degree of digitalization and/or targeted geographical locations or segments of the population. It is also important to bear in mind that multiple solutions can exist within the same country.



The models below have been designed taking the following goals into account, with the aim to create a sustainable digital payment ecosystem. The below digital payment ecosystem graphic further illustrates the concept:

- 1**

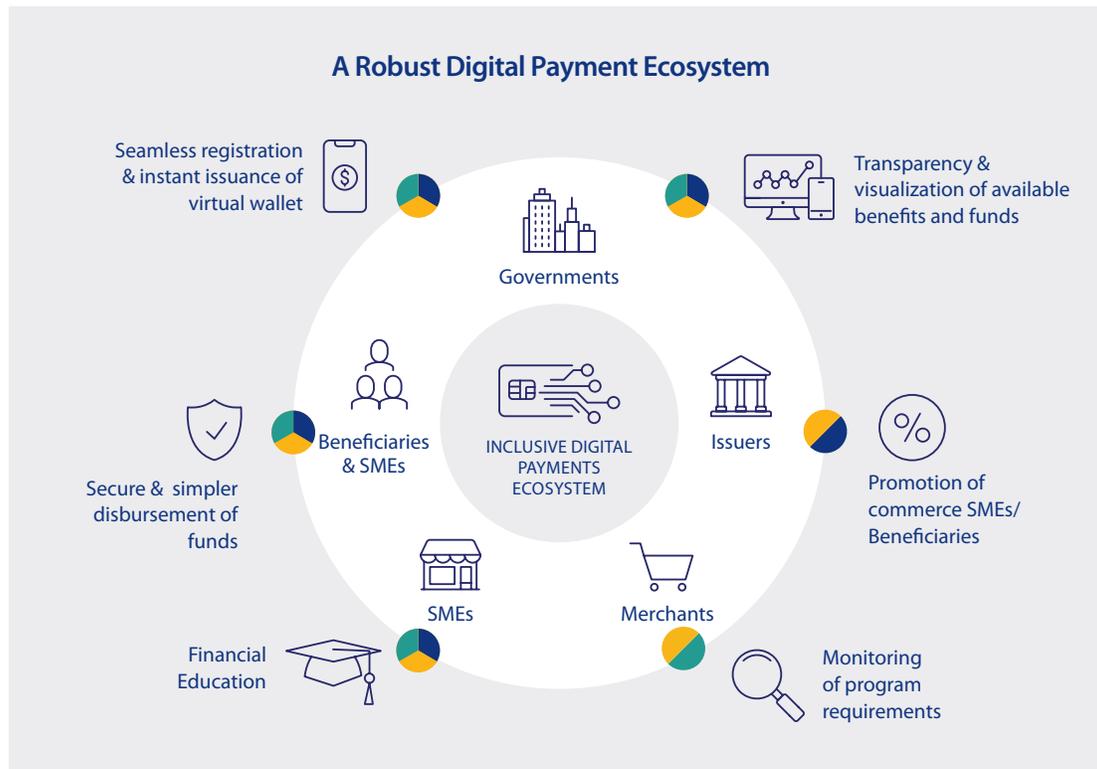
Support governments in digitally disbursing emergency funds in a secure manner, help governments monitor emergency programs, and increase visibility of fund usage.
- 2**

Allow beneficiaries to apply for and receive emergency funds easily, quickly and securely.
- 3**

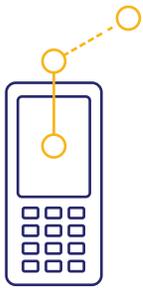
Speed up the acceptance of digital payments by small- and medium-sized businesses that are currently excluded from the digital payment system.
- 4**

Promote the financial digital inclusion of unbanked segments of the population.

● In favor of the beneficiary
 ● In favor of the government
 ● In favor of the Small and Micro Enterprises (SMEs)



The first model is an emerging model that can be applied to countries or regions with an early or developing degree of digitalization. This emerging model is a basic option supported by all mobile devices (with or without a data plan) and has a simple interface with manual reading mode. The second, advanced model is designed for countries or regions with a moderate to advanced degree of digitalization. This model covers the development of an application that works on smartphones, which allows the integration of several functionalities and increased interaction and information sharing.



Emerging Model

The emerging model option is focused on serving unbanked individuals, as well as individuals living in distant geographical locations or in ecosystems lacking infrastructure that are taking a first step toward banking access for these sectors. This model is accessible for most people, as it does not require the use of modern devices and takes advantage of existing technological capabilities to reduce costs.

This solution does not require access to the Internet and has a very simple interface, which means that only basic technological skills are required to use it. A country's rules and regulations should not hinder participation in the programs.

This model uses a USSD-based messaging service. Users have access to an interactive menu and are able to exchange alphanumeric information when they enter an exclusive number assigned to that end. Information is exchanged directly and securely, as there are no intermediaries in the process. For increased security, the system must have a PIN activation and personalization mechanism that validates each transaction.

Funds may be used throughout Visa's POS network. To this end, merchants must have a manual reading mode and PIN validation.

With this solution, beneficiaries can check their balance and account movements, and make transfers directly from their screen by entering the recipient's phone number. Beneficiaries may also withdraw funds using the extensive ATM networks present in every country, and in some cases, use banking agents that may even process bill payments.

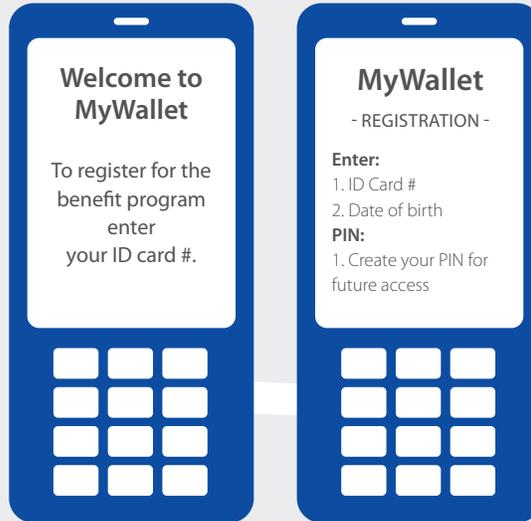
Using Visa's services, fund use can be limited by industry or merchant type, thus creating different programs with specific purposes. Although this model does not allow much interaction with beneficiaries, it is effective for fund disbursement and allows governments to use their databases to analyze and improve their programs in the future.

The following graph illustrates the beneficiary's experience with this solution.

Emerging Model



1 USER REGISTRATION

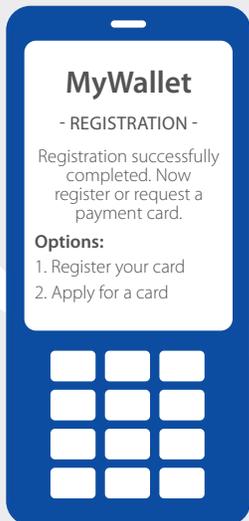


Fernando registers in the MyWallet application with his personal data: identity card and date of birth. Then the application requests the creation of a PIN for future access.

Fernando receives a welcome message to sign up for the MyWallet application.



2 REGISTRATION OR CARD APPLICATION



Fernando already has his MyWallet access PIN, and now he must choose between entering or requesting a payment card.



3 MAIN MENU

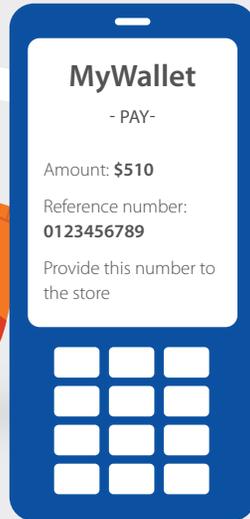


Fernando gets a welcome message asking him to enter his PIN.

On the main menu, Fernando can check his movements and balance, make payments, reloads, transfers or withdrawals.

Emerging Model

4 PAYING

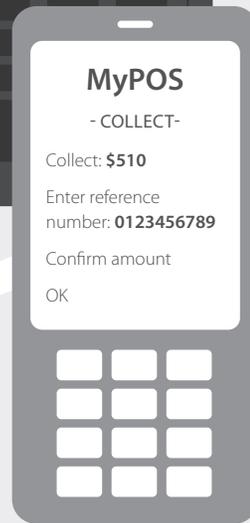


Fernando selects the option "Pay" and enters the amount. Fernando gives his reference number to the merchant to authorize the purchase. The transaction will only be completed if Fernando has a positive balance in his account.

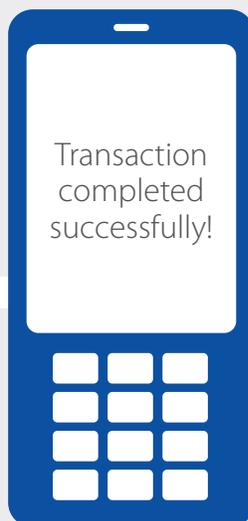
Merchant



The merchant, by manually entering the data either in MyPOS or an existing POS, enters the amount to be collected and the reference number to start the authorization process, and receives the amount of the sale.

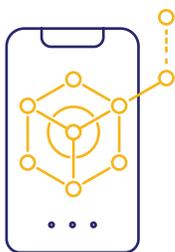


5 PAYMENT CONFIRMATION



To end the process, Fernando and the store receive the confirmation of the transaction.





Advanced Model

This model is a more sophisticated option since it requires the use of smart mobile devices. **This approach makes it possible to develop and use a “digital wallet” application where social assistance programs can be operated remotely.** By integrating several functionalities, users can authenticate a beneficiary's identity, validate credentials, fill in forms and perform an automatic analysis to approve, generate and supply funds. Since the system is more complex, it also offers the option for users to check their balance and transaction history. It is also highly secure, as there must be an authentication before each transaction (either through a password or an integrated biometric reader).

This type of solution allows for interaction with beneficiaries, who can apply for grants by submitting information and/or documents digitally, as well as have access to a report of their purchase and transaction history. Interface flexibility also means that the application can also be used as a financial education or informative platform.

Once the application is downloaded to a smartphone, beneficiaries can choose the grants they will have in their profiles, upload documents, activate accounts, receive payments, and enter reload dates in the same interface. In addition, once their grants are received, users can make payments and purchases through the application, choosing their preferred method of payment (either QR or contactless NFC technology).



QR Code

Even if this model requires the use of smartphones, they can be low end, provided they have a camera capable of capturing a QR code. The credentials lodged within the application can contain several transaction details and self-management process options, which reduce maintenance costs for users.

Acquiring merchants must show a QR code that beneficiaries can capture with their mobile phone camera. This code can be exhibited as a picture on a sign or through a mobile device application. The application is downloaded to a smartphone and transforms it into a payment terminal, allowing merchants to receive payments, close sales and administer funds.



NFC technology

In the advanced model, it is also possible to integrate the latest trends into payment ecosystems thanks to the use of high-end mobile devices (with NFC technology). NFC emulates contactless frequencies, allowing credentials to be read by any enabled payment terminal. Especially during crises such as COVID-19, where unnecessary contact when shopping should be avoided, a contactless solution is particularly useful.

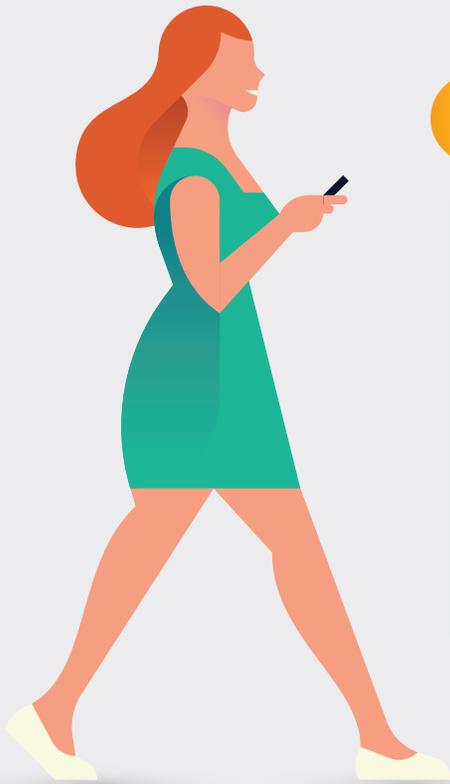
Acquirers can also take advantage of NFC-enabled devices through **Tap-to-Phone** technology. This system makes it possible to sign merchants remotely, quickly and with low investment costs. This solution definitely provides a robust tool to expand electronic payment acceptance in the LAC region.

Another option is to use an external device called mPOS, which is attached to a smartphone to support contactless payment acceptance. This is a very useful alternative when working with mobile devices that are not NFC-enabled.

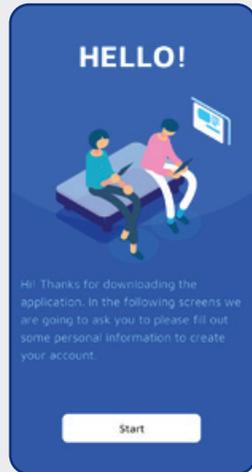
Adding the capabilities offered by Visa for this type of models makes it possible to reach a larger number of individuals, expanding digital inclusion even further.

The following graph illustrates the beneficiary experience with the advanced model solution.

Advanced Model



1 USER REGISTRATION



Maria downloads the application and starts her registration process.

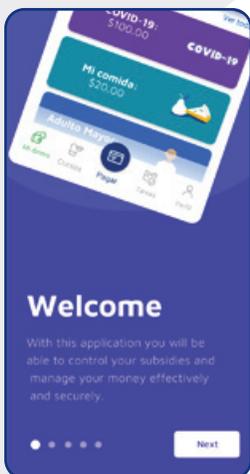


Maria then confirms the subsidies she has now available and adds them to her profile.



Then, to create her account, Maria scans the documents requested by the government for review and approval.

2 WELCOME

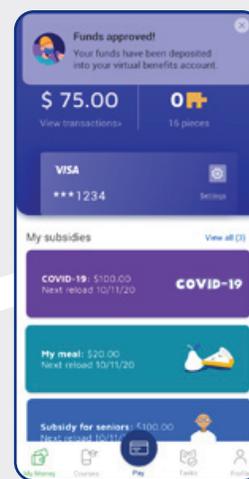


Once the documents have been successfully attached, Maria can browse through an introductory tutorial to understand the application functionalities.



Among the main application functionalities are viewing details of subsidies received, accessing the digital wallet and transactions, as well as viewing courses and financial education information.

3 MAIN MENU

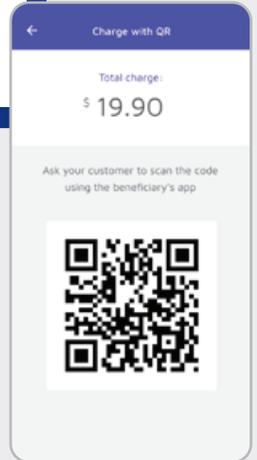
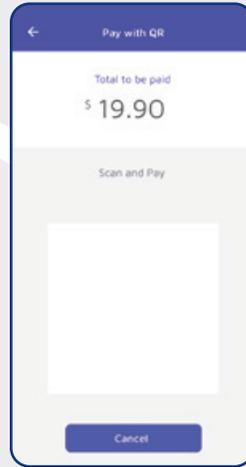
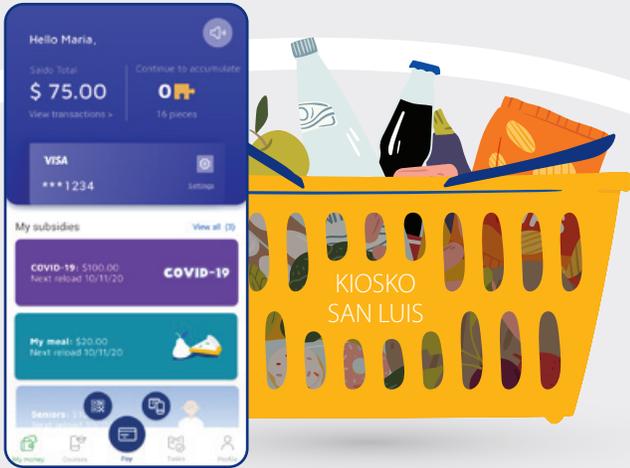


From the application, Maria has access to her account where she can see the funds she has according to the subsidies she has received, check dates of subsidy deposits, monitor her transactions, and make payments using her digital wallet.

Advanced Model



4 PAYING



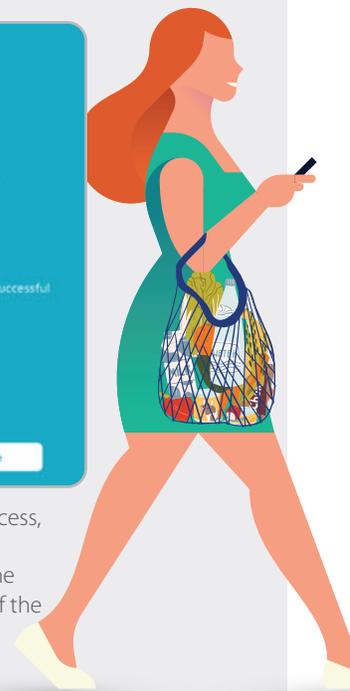
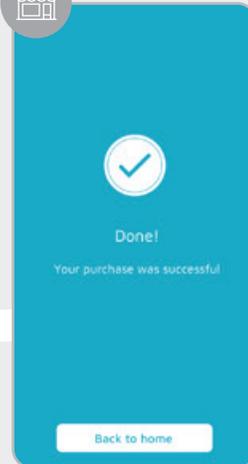
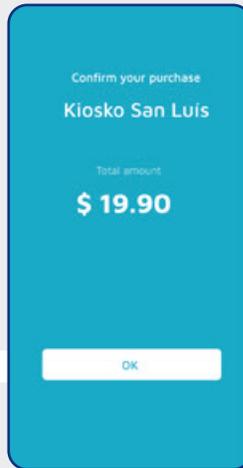
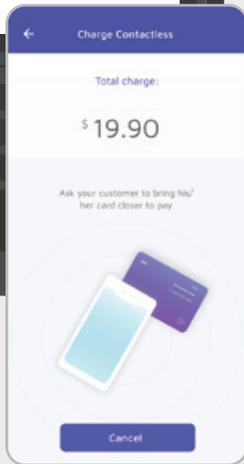
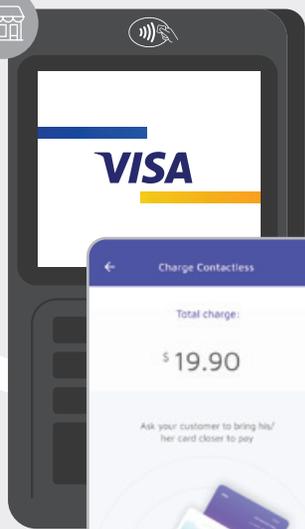
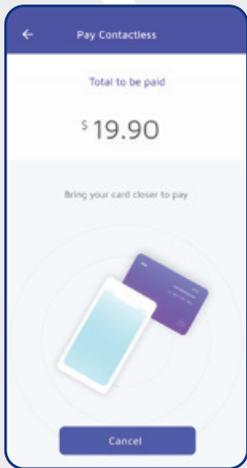
Once the money is available, Maria can use the funds to make payments through

- QR Code
- Contactless payment

To pay with a QR code, Maria must scan the code with her phone's camera (QR provided on paper or on the store's phone).



5 PAYMENT CONFIRMATION



To make a contactless payment, all Maria has to do is bring her phone closer to the POS or to the merchant's phone.

Maria gets the final amount on her phone and confirms the purchase.

To end the process, Maria and the store receive the confirmation of the transaction.



IMPLEMENTATION AND IMPROVEMENT STRATEGIES FOR G2C PAYMENT SOLUTIONS

Visa has many years' experience working with governments all around the world, providing support for their digital transformation agendas. Since each government is different, Visa customizes its consultation to create solutions tailored to each country's specific needs. However, our cumulative experience has allowed us to establish some general guidelines to develop and administer G2C payment disbursement solutions. When all the parties involved are correctly adjusted, governmental programs can increase the efficiency and volume of payments and transactions at merchants once a comprehensive digital payment ecosystem is in place.

IMPLEMENTATION STAGES

With the work and exhaustive analysis we have conducted in this area, we have developed a process that works as a starting point for every country and government, regardless of their particular situation. Below are the recommended stages for the best approach to develop and implement G2C payment solutions:



STAGE 1

Preparation

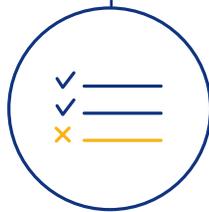
- Put together a team dedicated to designing the program.
- Conceptualize the program for maximum impact.
- Share ideas with potential partners, such as financial institutions, issuers and acquirers, payment processors and fintech organizations, among others.



STAGE 2

Planning and Development

- Establish program requirements and internal approval processes.
- Develop operations, control policies and procedures.
- Establish merchant acceptance.
- Finalize internal approvals and determine partners.
- Facilitate development internally and with partners according to the specifications.



STAGE 3

Testing and Adjusting

- Choose a pilot group and a test period, set success indicators.
- Test controls and services.
- Review reports.
- Adapt and change program as required.



STAGE 4

Launch

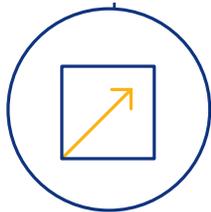
- Keep all stakeholders updated.
- Work together with government organizations.
- Inform the media and consumer rights organizations when appropriate.
- Provide notice to beneficiaries about waiting times, application process and expectations.
- Educate beneficiaries.
- Confirm availability of partner and internal support resources.
- Enroll beneficiaries and activate accounts.
- Load and disburse funds.



STAGE 5

Monitoring

- Review activity reports.
- Audit financial processes entirely.
- Confirm regulatory compliance.
- Supervise service calls and interview support staff.
- Assess beneficiaries' and merchants' satisfaction.
- Calculate real vs. planned savings.



STAGE 6

Program Evolution

- Positive feedback in all program areas through continued communication among all stakeholders and participants.
- Permanent oversight in search of improvements or necessary changes.

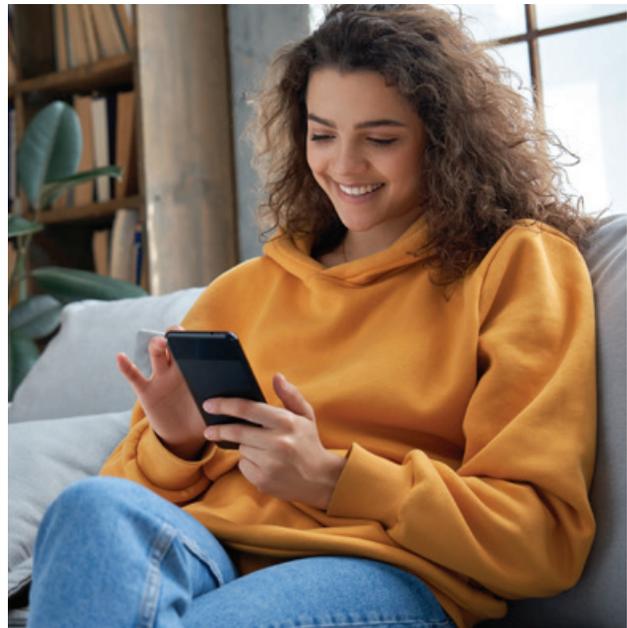
Additionally, in the process of developing payment disbursement solutions, Visa identified some mechanisms that may help governments improve their G2C payment implementation practices. A sampling is listed below:



Fund disbursement through an existing debit card that can be used at authorized merchants. For unbanked individuals and long-term disbursement programs (over 180 days), Visa recommends opening an account and issuing digital payment credentials, or a single contactless card, which can also work as a supplement for the digital solutions included in each model.



For short-term programs (less than 180 days), Visa is able to work with governments to make the most of personal ID cards as a method of payment (in the selected categories of merchants).



Communication plays a key role in these types of programs; therefore, governments must keep beneficiaries informed of grant duration and terms, so they know where, how and until when their funds will be available. The most efficient way to establish communication is through a website and/or a digital wallet application, including complete and updated information such as:

- A message to beneficiaries reminding them that they must protect and keep their accounts confidential (including their personal ID information).
- Notices about the possibility or lack thereof of withdrawing funds from ATMs. Visa recommends making this option unavailable, so as to promote the use of funds to make purchases at merchants and therefore expand digitalization.
- Instructions on how to receive real-time alerts about purchases made and available balance (via text message, e-mail or the application).
- Institution contact details to report missing or stolen credentials or cards, or to report unrecognized or unauthorized transactions.
- Information regarding pending balances on the accounts once the assistance program has ended.



During the COVID-19 pandemic crisis, Visa has seized the opportunity to learn and grow. However, these situations also create a favorable atmosphere for opportunists who want to use fear and confusion to their advantage.

During this time, we have observed a number of fraud and deception schemes, such as user enumeration attacks and identity thefts. In some cases, governments have detected the regular distribution of malware²³ via e-mails containing links or requests for information or donations, allegedly related to the fight against COVID-19.

Our number one priority is the continued safety of our customers. In this respect, Visa works hand in hand with governments and issuers helping them recognize and implement data security standards, programs, protocols and guidelines for the payment industry that help oversee and authorize transactions in real time, protecting both the beneficiaries' personal information during transfer, storing and/or processing, and the appropriate disbursement of funds.

23. Malware: Malicious Software



CONCLUSION

Digitalizing emergency assistance payments must be a collaborative effort among governments, the private sector and all relevant stakeholders in the payment ecosystem (merchants, financial institutions, payment processing companies, fintech organizations and beneficiaries). This cross-sector collaboration is fundamental for creating an interoperable and robust G2C digital solution.

Although governmental electronic payment systems have evolved significantly, the assessment conducted by Visa's team based on the three key pillars in this context — infrastructure, social and economic context and policy — has concluded that there is still much to be done to achieve a higher degree of maturity.

As more social assistance payments become digital, financial inclusion will increase, providing banking access to half of the population in the LAC region. It is essential that financial services, either digital or analog, can be adapted to the most disadvantaged group's particular situation.

Something as simple as a mobile phone can potentially lead the way to accessing financial services such as digital accounts. Having access to the internet further expands the range of possibilities. These two factors could eradicate the need to travel long distances to access a financial institution, indirectly lowering the cost of providing banking services and increasing digital accessibility at the same time.

Crisis situations such as the COVID-19 pandemic reveal the shortcomings of government processes and systems, and provide opportunities to improve, change and renew them to further the interests and the general well-being of all members of society.

Payment digitalization is constantly on the rise and must be a top priority in political agendas, since digital payments are paramount to creating market rules that underpin the development of mature digital ecosystems. Governments must be involved and committed to establishing nationwide strategies, reaching partnership agreements that strengthen ties and produce mutual benefits, while providing feedback for continuous learning. This will make it possible to adopt new, innovative business models for the market segment being developed.



**This document was sponsored and developed by
LAC Visa Payment Experts:**

Vanesa Meyer

LAC Vice President of Innovation and Design

Ana Dominguez

LAC Senior Designer

Nidia Martinez Quezada

Director of Government Engagement for Caribbean and Central America

Maribel Corrales

LAC Payment System Risk Director

Ricardo Rodriguez Campollo

LAC Product Manager

Roberta Isfer

LAC Innovation Experience & Content Director

Ursula Pineda

LAC Associate Product Manager

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Visa Inc. (NYSE:V) is the world's leader in digital payments. Our mission is to connect the world through the most innovative, reliable and secure payment network - enabling individuals, businesses and economies to thrive. Our advanced global processing network, VisaNet, provides secure and reliable payments around the world, and is capable of handling more than 65,000 transaction messages a second. Our relentless focus on innovation is a catalyst for the rapid growth of digital commerce on any device, and a driving force behind the dream of a cashless future for everyone, everywhere. As the world moves from analog to digital, Visa is applying our brand, products, people, network and scale to reshape the future of commerce. For more information, visit usa.visa.com/about-visa.html, usa.visa.com/visa-everywhere/blog.html and @VisaNews

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About the heat map

Given the COVID-19 pandemic, governments have had to find different methods to ensure citizens' protection. Most programs have focused on providing trillions of dollars in stimulus payments to their populations as a relief to those who have lost their livelihoods. The challenge for many governments, especially in less developed countries with larger informal economies, is to find a secure, effective and transparent way to disburse these funds. To understand the barriers posed and the opportunities created by G2C assistance payments, Visa Innovation Center, together with Americas Market Intelligence (AMI), developed a heat map including key indicators that measure the levels of digitalization and financial inclusion in several Latin American markets.

The heat map shows a country's readiness to receive G2C assistance is directly related to its level of socioeconomic development, their regulatory frameworks and their payment ecosystem infrastructure. Countries such as Chile, Costa Rica and Brazil, with higher GDPs per capita, market-friendly structures and mature adoption of payment technologies have fared better. Others, such as Honduras and Jamaica, struggle to connect with their unbanked citizens and resort to ineffective ways of distributing funds. In the future, countries can drive higher financial inclusion by establishing payment-friendly regulatory frameworks, adopting advanced digital technologies. The countries that follow this path will achieve a more inclusive, speedy recovery after the pandemic or similar crisis. The goal of the heat map is to provide a holistic overview of the degree of digitalization in each country, divided into key indicators that are directly related to the government's capacity to distribute assistance to individuals. The hope is that this tool will facilitate talks between Visa and the region's respective governments, enabling greater collaboration to help the Latin American population sail through these difficult times.

Methodology

In a range of discussions with Visa, AMI defined each indicator and established the criteria to be used for the research. Then AMI compiled data by conducting interviews, gathering information from its database, doing documentary research, and accessing local and international public sources. This information was then analyzed and verified to ensure maximum accuracy. In case the data was not publicly available, AMI used proprietary knowledge and circumstantial evidence to estimate a range that represented the data as accurately as possible. Any irregularities are specified in the footnotes of this document. Within each indicator, according to the data, countries are classified as follows: advanced or emerging. Due to the uniqueness of each indicator, the thresholds used to determine digitalization levels were specific to each data point. AMI determined this by observing how each country compared with each other, as well as compared to other more developed countries, such as the United States.

Criteria

1) Simplified account

Definition: The simplified account is an account that can be opened and maintained for free. There are few or no requirements to open an account (for example, ID card or a telephone number). Although the exact definition may vary by country, this type of account is often referred to as a simplified account (in Brazil, this account type is also known as Conta Fácil).

Criteria: Measures the availability of simplified accounts offered by leading banks (i.e., the most important banks in the countries, what percentage offers them?) and analyzes the regulatory framework in terms of fintech or financial inclusion regulation.

2) Digital onboarding

Definition: Digital onboarding (registration and activation process) includes a 100% ability to open an account online, either by phone or on a website, without having to go to a physical branch. If you need to go to an ATM or a perform a physical action, then this would not apply.

Criteria: Out of the 10 main banks in the country, what percentage allows customers to open accounts in a fully digital way (online or mobile)? What kind of presence do neobanks have in the country?

3) Prepaid cards

Definition: A prepaid card is a payment card that is loaded with funds before it is used. Although some cards may require a bank account, some are connected to fintech companies and merchants, which helps the unbanked population. No gift cards or temporary cards were included.

Criteria: Number of prepaid card offers divided by the number of offers, plus banks in the market.

4) Debit cards

Definition: A card that does not operate with credit, but rather withdraws funds directly from a bank account.

Criteria: Percent of debit card holders age 15 and above and debit card use (debit card used to make a purchase in the last year, percent of card holders age 15 and above)

Source: World Bank, Global Findex, 2017

5) Contactless Transactions

Definition: Contactless transactions include payments with RFID or NFC technology (contactless technology), using a debit/credit card or mobile phone. To put it another way, a user can hold his or her card or phone close to point of sale to buy something in a store.

Criteria: Contactless transactions as the percentage of total face-to-face transactions with cards (i.e., physical).

6) Fast funds

Definition: Cards issued by Visa (credit, debit and prepaid) enabled for Fast Funds. With Fast Funds, Visa Direct transactions are processed in real time, and funds can be available within 30 minutes of approval, with real-time payment confirmation. **Criteria:** Percentage of cards issued by Visa enabled for fast funds.

7) Digital wallets

Definition: A digital wallet can be open loop or closed loop on mobile phones, allowing the user to pay in stores using NFC or scanning a QR code. Most smartphones available in Latin America are not yet enabled for NFC, showing that contactless technology has space to grow.

Criteria: Digital wallet users as percentage of the total population.

8) POS penetration

Criteria: POS devices per 1,000 inhabitants.

Source: Global Data Chile Cards & Payments, Public Sources.

9) POS-enabled for contactless payments

Definition: Contactless include payments with RFID or NFC technology (contactless technology), using a debit/credit card or mobile phone. To put it another way, a user can hold his or her card or phone close to a point of sale to buy something in a store.

Criteria: Percentage of POS devices enabled for contactless technology.

10) Activation of mPOS

Definition: A mPOS is a mobile point of sale. For example, CLIP in Mexico.

Criteria: mPOS suppliers in relation with the total number of buyers in the country.

11) Tap-to-phone for phone suppliers

Definition: Tap-to-phone includes transactions where a contactless card or mobile wallet is connected to a phone.

Criteria: Is tap-to-phone commercially available in the country? If so, how long has it been available?

12) Scan-to-pay (QR codes)

Definition: Scan-to-pay = QR codes. Most QR codes in Latin America are closed loop, led by Mercado Pago. This means that use is limited to consumers who have the right wallets for those specific QR codes.

Criteria: Percentage of merchants accepting QR codes.

13) Internet

Definition: Global internet penetration based on people using internet.

Criteria: Individuals using internet (as a percent of the population) in the country.

Source: World Bank, 2017 and 2018

14) Smartphones

Definition: Smartphone penetration with at least a 3G or 4G SIM card.

Criteria: Total number of 3G and 4G SIM cards divided by the country population.

Source: Mobile connectivity index of GSMA, 2018

15) Poverty

Definition: Percentage of the population with a poverty rate of less than \$1.90 USD per day.

Criteria: Poverty headcount rate at \$1.90 USD per day (Purchasing Power Parity- PPP, 2011) (Percent of the population).

Source: World Bank, 2018

16) Education

Definition: Expected years of schooling

Criteria: Primary education completion rate total (Percent of relevant age group)

Source: World Bank, 2018

17) Electronic payment penetration

Definition: Penetration of card payment as a percentage of total consumer spending. Card payments do not include transactions at ATMs.

Criteria: Total card payment volume divided by total personal consumption spending.

Source: Banking associations and local statistics; Global Findex 2017; Visa

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