

MasterCard® Government Services & Solutions Case Study

Nigeria National ID Card (NID)



Summary

At the May 2013 World Economic Forum on Africa, the Nigerian National Identity Management Commission (NIMC) and MasterCard announced the planned issuance of 13 million National Identity Smart Cards as a pilot program in 4Q13. Ultimately, NIMC plans to distribute cards to 120 million of the 167 million Nigerian citizens, making the program the largest rollout of a formal electronic payment solution in the country and the broadest financial inclusion initiative of its kind on the African continent.

The program is being managed by NIMC and calls for Nigerians 16 years and older and all residents in the country for more than two years to receive the new, multi-purpose identity card. For the Nigerian government, the program provides a verifiable means of identifying their citizens and creates a comprehensive database for providing

public services in the future. For Nigerian citizens the new card offers the safety, convenience and reliability of electronic payments, while providing a framework for improving the economic prospects of over 100 million Nigerians who have not previously had access to financial services.

The multi-function chip card will host:

- MasterCard M/Chip4 payment application
- Biometric identification
- MasterCard prepaid payment functionality
- Nine additional planned applications will expand the card's utility over time

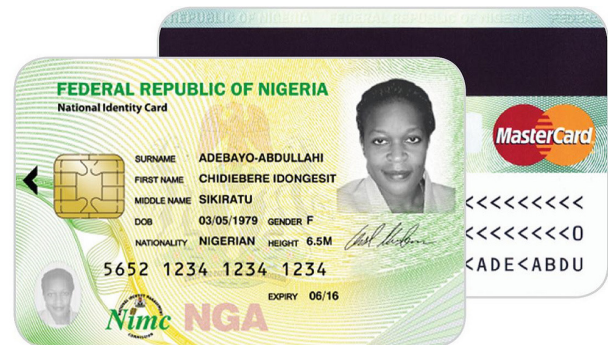
Besides NIMC and MasterCard, other project partners include Cryptovision (biometrics technology), Access Bank Plc (the first issuing bank) and Unified Payment Services Limited (a MasterCard certified payments processor). Additional issuing banks will include United Bank

for Africa, Union Bank, Zenith, Skye Bank, Unity Bank, Stanbic IBTC, First Bank, Standard Chartered Bank, and Fidelity Bank Nigeria. Eventually, every bank in Nigeria is expected to be able to issue the card.

NIMC's initial payments partner designed and tried to gain support for a closed loop proposition. In time, the Nigerian government allowed MasterCard to consult on the program, eventually awarding MasterCard the role of payments partner. Several factors influenced their decision to work with MasterCard. As important as presenting an integrated multi-purpose product solution, MasterCard was able to win the trust of the Nigerian government through knowledge sharing and by demonstrating how:

- An open loop operating model would add utility and flexibility to the program, while creating a better economic proposition to win the support of issuers
- A robust national program could be built by leveraging MasterCard's powerful acceptance network
- MasterCard's integrated global processing platform could handle the full range of citizens' payment needs from domestic to cross-border and card-based to mobile
- Advanced security could be ensured through integrated biometric authentication
- Speed to market and program scale could be achieved based on MasterCard's past track record of successful full-scale card program rollouts
- MasterCard's flexible, inclusive and collaborative approach leads to strong partnerships that work

In the end, MasterCard helped to drive the government's vision forward by showing how a flexible, open and experienced partner with a firm understanding of global payments, security, and the economics of payment systems can unite public and private sector partners to deliver value and promote economic growth at a national scale.



The Situation

The Nigerian economy relies heavily on cash, driving up management costs for the nation's banks. Cash withdrawals account for the majority of management costs, which are fueled by the government's no-fee policy for cash withdrawals under N150,000 (\$980). In order to cover these costs, banks pass on a significant proportion of the cost to all customers in the form of high service charges and high lending rates.

In 2005, the Central Bank of Nigeria (CBN) took action to alleviate the economic impact of heavy cash use by issuing a 'Cashless Nigeria Policy' with objectives to:

- Increase the proportion of transactions carried out electronically, approaching the global trend
- Decrease the banks' high cash management costs, thereby leading to decreased service charges and lending rates to the bank customers
- Ensure that a larger proportion of circulating currency remains within the banking system, thus enhancing the efficacy of monetary policy and economic stabilization measures
- Decrease risk inherent in holding or moving large amounts of cash, thus diminishing high incidence of theft and other crimes

The Nigerian government planned to establish a central database of its citizens and distribute cards to them as part of a holistic vision for creating better accountability,

preserving national security, and integrating a far more efficient way of managing payments across the economy, including between citizens and the government. The new integrated ecosystem would create a common electronic platform for interacting and transacting electronically across government agencies and throughout the economy.

In 2007, the government engaged partners with biometric and payment technology expertise to move things forward more quickly. Cryptovision, a German company, was responsible for implementing the biometric identity technology. A payments partner was brought in to consult in the development of a national payments infrastructure. In 2011, after four years of unsuccessfully promoting a closed loop approach, MasterCard was invited to join the effort. Because of deep experience with government prepaid cards and the flexibility to meet the functional, technological and economic requirements of the project, the Nigerian government replaced the incumbent partner and formally awarded the payments business to MasterCard that same year.

At the heart of MasterCard's selection was an open and collaborative approach in which open-mindedness, active listening, and flexibility were key. From the beginning, the Nigerian government expressed a desire to control the program and to fully understand the benefits of possible solutions. Through consultation and knowledge sharing, the MasterCard project team was able to earn the trust and respect necessary to build a close working relationship with the government and other solution partners.

The Solution

The new Nigerian ID card (NID) was developed based on MasterCard M/Chip4 technology. The chip will host National Identity data and prepaid payment functionality secured through biometric identity authentication. The new chip segments biometric data in one secure section and the MasterCard M/Chip4 application in another. As the program develops, several other applications will also be provisioned separately, enabling increased functionality without compromising identity or transaction security.

To maximize the utility of the card, Cryptovision, the biometrics partner, is working with MasterCard and NIMC on the possible inclusion of Match-on-Card (offline) fingerprint validation on terminals to ensure that consumers can access their funds and continue to validate their identity in a number of situations, with or without connectivity.

MasterCard's role includes payment products specification, switching and settlement, processing rule configuration, transaction interchange, exception processing, and brand management. Beyond the expected role of payments partner, however, MasterCard was entrusted to play a guiding role for NIMC, the program manager, the biometrics provider and other partners, ensuring a holistic, integrated and well-balanced system.

How the NID Card Works

The National Identity Smart Card will consist of an M/Chip4 payment application that stores a chip as well as PIN-based MasterCard prepaid platform with:

- Reloadable and top-up options to allow for incoming credits, whether government disbursements or private transactions
- Cash out capability including POS and ATM transactions
- P2P payments to extend the efficiency, security and transparency to all types of payment scenarios
- Many other applications will follow over time

When used as a prepaid payment card, cardholders can deposit funds on the card, receive social benefits, pay for goods and services at any of the 35 million MasterCard acceptance locations globally, withdraw cash from all ATMs that accept MasterCard, and reload via the financial institution's customer web portal from anywhere in the world. The card supports a broad range of payments including P2P, bill payment, school fees, post-paid bills, subscriptions, taxes, and more.

All of this convenience takes place in a secure environment enabled by the MasterCard EMV Chip and PIN standard.



The Enrollment Process

Citizens enroll at NIMC enrollment centers, with the assistance of enrollment executives. The enrollment process involves the recording of an individual's demographic data (age, gender, address, etc.). At registration, the NIMC also collect fingerprints, a picture, and a digital signature to be stored on the chip for identification and transaction authentication. Once registered, citizens are assigned a 15-digit National ID number (NIN) which they can receive at the center through SMS, by email, or courier service. Cards become available for pick-up and activation 30 days after enrollment, at the NIMC enrollment center or at a participating bank.

For Citizens, The Value of The NID Payment Functionality Is Felt Every Day And Continues to Grow

All of these features are delivered in a secure environment enabled by the MasterCard EMV Chip and PIN standard, eliminating the need to carry large amounts of cash and giving cardholders greater peace of mind. And, since cardholders can only spend the amount that is on the NID card, they are able to better manage their budgets and save.

The broader economic impact of the card will be felt as the previously unbanked and underbanked are able to gain

access to the mainstream economy and the visibility of their assets allows them to build a financial history and establish credit-worthiness with financial institutions. In turn, they will share in the opportunities for credit and economic growth enjoyed by wealthier segments of the population.

For the Government, the NID payment card provides an unprecedented level of visibility and inclusion

- **Financial inclusion is achieved** through a safe, simple and smart payment instrument that makes mainstream financial services available to those who cannot participate today due to a lack awareness of, access, or trust in traditional financial service offerings.
- **Transparency improves GDP** as fraud, grey economies and other forms of leakage are eliminated from the eco-system.
- **The government demonstrates financial leadership** as they leverage cutting-edge technology to drive up internally generated revenue (IGR) and consumer confidence.
- **Increased consumer insight** enables the government and issuers to see where and how its citizens shop, allowing for better policy making on the part of the government and opportunities to provide value-added services for issuers.

Promoting and Growing Cross-Channel Acceptance

A critical part of the success of the NID card program is widespread card acceptance. CBN and the government understand this and are actively enhancing acceptance throughout the country, with the goal of matching Brazil in number of POS/ATM locations by 2020. Their initiatives include:

- An e-payment rollout program in which 165,000 POS are expected to be deployed. A total of 375,000 POS and 75,000 ATMs will be deployed by December 2015.
- Improvements to electric power infrastructure will improve the availability of POS and ATMs. Additionally, CBN is enacting minimum POS standards, which specify adequate battery life to support uninterrupted availability of service for terminals.
- Sixteen additional mobile payment operator licenses have been issued with the aim of enhancing mobile payments across the country. There are 110 million mobile subscriptions in Nigeria, which could help to greatly speed up payment acceptance.
- Plans are being developed to produce a mobile phone wallet that can hold ID, payment capability (including MPOS), and other mobile applications. Plans are to link mobile phones to the NID project as early as 2014.

The Central Bank of Nigeria has achieved a rapid increase in terminalization from 13,000 in 2011, to 180,000 registered POS merchants in 2013. Meanwhile, MasterCard has begun planning for the enablement of mobile payments, including Mobile as Point of Sale (MPOS), and the use of MasterCard Mobile Money Service Manager (MMSM) to act as a bridge and translate traditional Mobile Money transactions into a format that can leverage the traditional POS infrastructure space.

Educating Nigeria's Citizens

To develop an intelligent, multi-function product like the NID card was just the beginning. Citizens need to understand the range of benefits and how to apply them. So, consumer outreach and education is essential to MasterCard's comprehensive approach. In partnership, CBN and MasterCard are committed to a robust grassroots awareness and education campaign strategy to aid the understanding, adoption and usage of POS and ATMs. MasterCard support for this effort has begun with the development of communication material, including a NIN Center Training Guide, posters, NID door decals, and product brochures. Campaign messaging emphasizes the benefits—time-savings, security, access to government funding and eligibility for other services—as well as basic consumer education on how the product works and where it can be used.

IT'S EASY TO GET STARTED. FOLLOW THESE SIMPLE STEPS.

- 1. Enroll:** Simply visit an NIN Enrollment Center today and complete an application form or visit our site from directly from www.insertsthere.com. When you arrive at the NIN Enrollment Center, present supporting citizenship documentation such as a birth certificate or passport. The NIN Enrollment Executive will obtain your signature, photograph, fingerprints, and scan your biometric information. Your unique NIN (National Identification Number) will then be created. You will be notified by email, SMS text message or regular mail when your NID Card is ready for pick-up.
- 2. Load Money to Your Card:** When you return to the NIN Enrollment Center you will be able to create a unique PIN (Personal Identification Number) which allows you to make secure payments. Banking representatives can help you load money onto your card. Simply provide the NIN Enrollment Executive with cash, and you will be shown the loading process.
- 3. Find Participating Merchants:** NID cards are accepted everywhere MasterCard is accepted worldwide. That's over 38 million acceptance locations, including more than 2 million ATMs. Fees may apply for ATM withdrawals outside of Nigeria.
- 4. Make purchases:** Your new NID Card contains a secure "smart chip" that is linked to your unique PIN. It's a digit number that you create when your card is activated. When you are ready to make a purchase at a participating merchant, simply insert your card at the POS terminal and enter your 4 digit PIN when prompted.
- 5. Check Your Balance:** You can always check your balance and track spending via ATM, at an NIN Enrollment office, or via an SMS text message.

RE-LOAD FUNDS: When it's time to load additional money onto your card, visit your local NIN Enrollment Center. At an NIN Office, you will insert your card in the Point-of-sale terminal (POS) and enter your PIN number to confirm the transfer of funds to your card. You also can load funds at participating merchants and bank locations. Simply insert your card in the POS terminal and enter your PIN number to confirm the transfer of money from your funding source to your card.

USE IT FOR PROOF. A The New National ID Card Now.

USE IT AT MANY OF YOU ALREADY SHOW.

- 1. Enroll:** Simply visit an NIN Enrollment Center today and complete an application form or visit our site from directly from www.insertsthere.com. When you arrive at the NIN Enrollment Center, present supporting citizenship documentation such as a birth certificate or passport. The NIN Enrollment Executive will obtain your signature, photograph, fingerprints, and scan your biometric information. Your unique NIN (National Identification Number) will then be created. You will be notified by email, SMS text message or regular mail when your NID Card is ready for pick-up.
- 2. Load Money:** Create a unique PIN (Personal Identification Number) and a bank representative will load money onto your card.
- 3. Make Purchases:** Your new "smart chip" linked to your unique PIN allows you to make secure payments at all participating merchants.
- 4. Check Card Balances:** Check your balance and track spending via ATM, at an NIN Enrollment office, or via an SMS text message.
- 5. Re-Load Money:** Visit an NIN Enrollment Center to load additional money onto your card.

LEARN MORE TODAY! TO GET STARTED, ASK AN EXECUTIVE OR CALL XXX-XXX-XXXX.

How MasterCard Earned the Business

From the beginning, MasterCard worked closely with NIMC and later, with the Central Bank of Nigeria and the Minister of Finance to design and implement payments functionality for the NID card.

Establishing trust was essential to MasterCard's success as a valued partner to the government. Three characteristics contributed to the building and maintaining of that trust and led to the integration of MasterCard payments as an essential part of the card:

- 1. MasterCard's willingness to share its deep knowledge** with the government how payments would work on the NID card, about the importance of the payments value chain, and how market drivers connect to success and long-term viability of public payments ecosystems.
- 2. MasterCard's flexibility** beginning with active and focused listening followed by quick response to the government's questions and needs.
- 3. MasterCard's respect for the government's objective** to maintain ownership and control of the program and the database of its citizens. Throughout its dealings, the MasterCard team took cues from the government, offering guidance and support wherever needed.

MasterCard had been a firm supporter of the Central Bank's Cashless Policy, sharing a vision of the efficiency, enhanced security, increased financial inclusion, and broad economic growth that electronic payments offer over cash, especially on a national scale. MasterCard provided the Federal Government of Nigeria with global insights and best practices on how to enable economic growth and create a more financially inclusive economy, based on our experience with other governing bodies, including Egypt, South Africa, and through our partnership with the UN World Food Program.



"We have chosen MasterCard to be the payment technology provider for the initial rollout of the National Identity Smart Card project because the Company has shown a commitment to furthering financial inclusion through the reduction of cash in the Nigerian economy." He added, "MasterCard has pioneered large scale card schemes that combine biometric functionality with electronic payments and we want to capitalize on their experience in this field to make our program rollout a sustainable success for the country and for the continent."

Chris E. Onyemenam

Director General and Chief Executive of the National Identity Management Commission (NIMC)

Lessons Learned

The Value of Flexibility

Flexibility requires active listening to determine government goals and priorities, and how they want to pursue them. Flexibility also involves responsiveness to these needs, even if it ultimately means a departure from traditional payment models.

Respect for the Government's Needs is Key

Many governments are feeling their way into the world of ID and payment cards—respect for their learning curve and for their sovereignty is necessary to maintaining a solid, productive partnership and moving things forward.

Leadership Can Take Many Forms

Sharing knowledge and demonstrating commitment are extremely important to developing true partnerships with governments, and they form a necessary foundation for leadership. Connecting private industry partners with public sector agencies also plays a big part in keeping a balance among stakeholders and steering the project forward.

Get Started

To learn more about the details of MasterCard's work with the Nigeria NID program and to receive other important case studies, please contact your local MasterCard representative or visit us at www.mastercard.com/government

About MasterCard Government Services and Solutions

MasterCard is a technology company in the global payments business. We connect consumers, financial institutions, merchants, governments and businesses worldwide, enabling them to use electronic forms of payment instead of cash and checks. We use technology and data-driven insights to make electronic payments more convenient, secure and efficient for people everywhere.

Electronic payments present an enormous opportunity for governments to better serve their citizens, while reducing costs and increasing fiscal transparency. As an experienced, globally-integrated payments network, MasterCard is in a unique position to help governments navigate the challenges that come with the design and implementation of these solutions. Working as an advisor and market facilitator, MasterCard brings governments and the private sector together to help create a flexible and secure payments ecosystem—while driving the greatest efficiency, social progress, and value to all stakeholders.

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