Contents
Executive Summary

The Digitizing Government Payments, Kenya Study maps the payment ecosystem in Kenya, examines the gaps, and identifies the challenges and the potential benefits of strengthening the digital payment system in this country. This report presents the findings of the study and the opportunities for the Government of Kenya in respect to digital payments.

Governments play a powerful role in strengthening a country's payments landscape. They have the ability to influence the behavior of citizens and the private sector, acting as an enabler in the evolution and development of digital payment systems. This report demonstrates that there are significant gaps in Kenya's current payments landscape and that the government has an important role to play in addressing these gaps.

Digital payment solutions can have great positive social impact, lowering the cost of transactions to expand access to, and uptake of digitally-based financial tools and services. Digitizing payments also presents an opportunity for governments to realize significant financial rewards, boosting growth, increasing revenues and lowering incidences of fraud, and increasing efficiencies.

The growth of digital payments in Kenya has been impressive; however, the benefits of modern electronic payments (excluding M-Pesa) are yet to reach all sections of society. Kenya's payment system may be more advanced than other countries in the region but the options available to Kenyans to make payments electronically remain limited by partial interoperability due to a lack of implementation of a comprehensive policy and regulatory framework for digital payments, low Internet penetration, low credit card acceptance and low trust levels among citizens and within the business community.

While detailed recommendations were beyond the scope of the study this report outlines two avenues for change: a top-down leadership approach and a more tactical approach whereby early adopters are provided with the support they require to achieve success. The benefits available to government from digitization of payments in terms of economic growth, increased government revenues and efficiency savings, serve as a call to action to senior government decision makers to drive development of electronic payment systems. In parallel, a discussion of early-adopters shows that there are clear opportunities today to support current initiatives to realizing the full benefits of digitizing payments.

In Kenya, government collections are inefficient. Over a third of the government payments examined in the course of this study were cash-based, presenting a high opportunity for leakage and abuse of the system. In one case, 60 percent of revenues were spent on making collections. That said current digitization initiatives have already increased revenue collections for some government organizations by upwards of 200 percent. In fact, in the case of the Ministry of Lands, a complete overhaul of the front office collections saw revenue rise from KES 800 million to KES 9 billion in 2012; a 1,125 percent increase.

There should be no doubt that any path to digitization will require investment. If the government is serious about taking advantage of the potential that digital payments present, then efforts should be focused on developing a clear strategy for digitizing which takes a holistic view of the changes required across the organization, including payment processes, the supporting technology and the activities and resources required to achieve this. Moreover, realizing the direct impact these changes can have on all parties involved is a critical lesson learned from previous unsuccessful digitization initiatives, particularly on adoption and behavior towards these payments.

This report is based on research funded by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.
Introduction

In recent years, governments and multilateral institutions such as the World Bank have paid increasing attention to national payment systems as an integral part of a country’s financial sector stability and development. Secure and efficient payment systems are essential for the proper functioning of a financial system.

They connect government, businesses and consumers; support broad-based economic activity, opportunities and growth; increase consumer confidence; and reduce transaction costs. Payment system modernization has become a prominent feature of financial sector reform in many countries. However, the Sub-Saharan Africa region lags the rest of the world when it comes to electronic transactions or “e-payments”. It has the lowest e-payment rate worldwide: at 0.2 non-cash retail payments per capita, cash remains the predominant retail payment mode used in Kenya for 98 percent of transactions.¹

The high cost and risk of cash transactions represents one of the main barriers to affordable financial services for the poor. Shifting from cash to mobile or other modes of digital payment is an effective way to remove this barrier. Digital payment also offers opportunities to tailor financial products and services to better meet the needs of poor households and businesses in the informal sector. In addition, there is the social benefit of improved security for individuals and communities where dependence on cash is reduced.

For governments, digital payments and automated record keeping offers a means to increase transparency and accountability, and with the greater reach that digital payment facilitates, there is improved consistency in collecting payments from citizens. This translates into an ability to offer more equitably distributed services, especially in a devolved political landscape where local service provision is linked to the capacity to collect taxation from the same area.

A digitized payment architecture that is accessible throughout a country should generate economy-wide efficiencies by connecting large numbers of people to one another at low cost. Financial services providers, government agencies, businesses and citizens should realize productivity gains that accelerate growth when unburdened of the need for paper- and cash-based transactions that require more time and energy to complete.

Kenya Vision 2030 (The Vision) is the country’s development blueprint for 2008 to 2030. It aims to transform Kenya into a newly industrializing, “middle-income country providing a high quality of life to all its citizens by the year 2030”. The Vision is based on three “pillars”: the economic, the social and the political. The economic pillar aims to improve the prosperity of all Kenyans through an economic development program that covers all regions and aims to achieve an average Gross Domestic Product (GDP) growth rate of 10 percent per annum, beginning in 2012. Addressing the current inefficiency of government payments is an important step towards achieving The Vision.

This study focused on two key areas: an evaluation of the payments landscape in Kenya in 2013; and an analysis of government payment processes to identify current opportunities and challenges. Over the course of this study, more than 30 interviews were conducted with a sub-set of government ministries, departments and agencies (MDAs) to quantify current payment volumes and their monetary value by mechanism (bank transfers, checks, mobile money, other digital mechanisms, and cash), and to estimate the current costs of payments based on the transaction, administrative and leakage costs for the government, its partners, and citizens.² In addition, information on the government’s current digitization initiatives was gathered to capture lessons learned by early-adopters. This research included a stakeholder workshop with key government entities to review and discuss the study findings, and an online citizen pulse survey facilitated by the Kenya ICT Board.

The payments ecosystem in Kenya was mapped in order to understand the gaps in the current landscape. This included a high level review of the current regulatory framework in Kenya. Primary research included meetings with the Ministry of Finance, Central Bank of Kenya, Directorate of e-Government, Kenya ICT Board, selected MDAs,³ Tangaza, Equity Bank, Commercial bank of Africa, Postal Corporation of Kenya, The Cash Learning Partnership (CaLP), and Financial Sector Deepening Kenya (FSDK). Secondary research leveraged published reports, magazine and newspaper articles, online discussions and user blogs, review articles, press releases, and general business publications. In parallel, the Accenture Development Partnerships team collaborated with Accenture’s global payments research teams and subcontracted subject matter experts to review case studies and global leading practices for payments.
Chapter 1 – Kenya’s Payment Ecosystem
introduces the key payment groups in Kenya, identifying the payment service providers, payment instruments and underlying payment infrastructure.

Chapter 2 – Effective Digital Payments examines gaps in the current payments landscape. Through global examples and examples from within Kenya, this chapter demonstrates the ways in which government has the ability to address these gaps, whether directly or indirectly, through its power as an "enabler" of private sector investment or changes in public attitudes to digital payments. In this chapter we look at five key topics important for effective digital payments: security in terms of authentication, consumer and data protection; distribution in terms of geographical coverage and points of access; devices with card and online payments lagging well behind mobile payments; the back-end systems to support efficient payment processing; and integration. Interoperability, for example, has improved in recent years, allowing users of all Kenswitch, PesaPoint or Visa/MasterCard cards to use any automatic teller machine (ATMs) or point of sale (POS) device. However, the current ATM and POS network averages only 10 ATMs per 100,000 people and about 88 POS devices per 100,000 people, respectively. This is extremely low compared to the number of ATMs and POS devices in many developed nations. Of course, the success of mobile as a payments channel in Kenya should not be overlooked: M-Pesa, with more than 16 million active users and 1.8 million daily transactions, has set an example that has put Kenya on the world map. This Chapter outlines what is already in place in Kenya and highlights some key gaps or areas of opportunity.

Chapter 3 – The Potential in Digitizing looks at what can be done to support the government in its important role as an enabler of digital payments to strengthen the digital payments landscape and enable Kenya to realize the associated social benefits. This chapter takes a two pronged approach: a top-down leadership approach to change, and a more tactical approach whereby early adopters are provided with the support they require to achieve success.

Recognizing the importance of top-down leadership in modernizing government payments, we provide a "case for digitizing" which can be used to stimulate policy discussions and encourage political support for change. In Kenya today, particularly in the context of a new administration and the devolution of power to the country’s 47 county governments, there is a real opportunity to affect change if a compelling case can be made. The first part of this chapter provides a macro-economic argument for digitizing. We identify a number of transmission mechanisms through which increased usage of digital payments serves to drive economic growth with a particular focus on the potential to increase government revenues. This is by no means a detailed economic analysis but rather an indicator of the potential benefits to government (increased GDP, increased revenues, and efficiency savings) presented as a persuasive argument for "going digital".

The second part of this chapter focuses on potential ways in which government may choose to digitize payments. Over the course of this study several examples of early adopters of digital payments within the Kenyan Government were identified. The successes of some of these initiatives are impressive, ranging from increases in revenues by over 200 percent to reduction in payment times by up to 80 percent. This section highlights opportunities to sustain, increase and extend these benefits with and beyond individual MDAs. The focus is on specific initiatives currently underway in Kenya to support a discussion around the benefits of a more holistic approach to digitizing. This includes business process re-engineering; a clear change management strategy and consideration for the appropriate support structure (e.g., properly trained staff, an information technology helpdesk, and implementation support).

Importantly, many of these changes could be affected in the near term simply by providing the right support to early adopters.
A key success factor for Vision 2030 is the establishment of a strong economic system. The fast-evolving payments landscape and user interest calls for a strong, modern and efficient digital financial services system in Kenya that is capable of supporting and adapting to fast-paced change.

Countries such as Singapore, one of the world’s fastest growing economies, have payment systems which have evolved over the years, driven by technological progress, changing consumer needs, and the development of new digital financial systems. The move from paper and cash transactions to a diverse range of cashless payment instruments, as well as efficient and reliable clearing and settlement systems, has been a key factor in Singapore’s economic success. It is vital for Kenya to develop a suitable payments system that is not only safe and secure but also simple, fast, cost effective and easy to use.

Over the last decade, Kenya has made a great deal of progress in modernizing its retail payments and financial services system. It has introduced mobile money services and agency banking, and the enactment of the National Payment Systems Act. Furthermore, Kenya has taken steps towards developing a national payments infrastructure, especially with respect to wholesale payments systems such as the real time gross settlement system, Kenya Electronic Payments & Settlement System (KEPSS), the Automated Clearing House (ACH), and domestic switching systems.

Despite these developments, significant progress is yet to be made in Kenya. The Economist Intelligence Unit (EIU) recently highlighted this in their Government ePayments Adoption Rankings (GEAR) for 2011. Kenya was ranked 58th out of the 62 countries reviewed, putting it ahead of only Iran, Ukraine, Uganda and Nigeria. The areas where Kenya scored particularly poorly were in payments infrastructure (except for mobile) – i.e., the technology infrastructure and connectivity between governments, citizens and businesses. The vast majority of Kenya’s physical payment system infrastructure is in urban areas, particularly Nairobi and the Rift Valley, with rural infrastructure predominantly inadequate to serve the population in these areas. As policymakers increasingly recognize the importance of a safe and reliable payment system to the country’s economic growth and development, there needs to be greater emphasis on increasing the accessibility and reliability of payment systems throughout the country. This will assist to realize the full benefits of digital payments in terms of financial inclusion.
The Current Landscape

This section provides an overview of digital payments in Kenya, identifying payment service providers, payment instruments and the supporting payments infrastructure.

Payment Service Providers

![Payment Service Providers](Image)

- **Commercial Banks**: 43
- **Mobile Network Operators**: 4
- **Service Integrators**: 3,200
- **SACCOs**: 50
- **MFIs**: 30.4 Million Mobile Users
- **Mobile Money Users**: 19.3 Million
- **Internet Subscriptions**: 8.5 Million
- **Cards**: 10.8 Million

Payments Instruments

![Payments Instruments](Image)

- **POS**: 18,422
- **ATMs**: 2,390
- **Mobile Money Agents**: 54,409
- **Bank Branches**: 1,045
- **Bank Agents**: 14,045

Infrastructure

![Infrastructure](Image)

Figure 1: Payment System Groups in Kenya
Source: Communications Commission of Kenya, Quarterly Sector Statistics Report, Sept 2012
Central Bank of Kenya, Retail Payment Statistics, Feb 2013
Digital Payment Service Providers

Digital Payment Service Providers are typically commercial banks, mobile network operators, service integrators, and microfinance institutions.

Commercial banks

There are 43 commercial banks in Kenya offering financial services through branches, smaller agencies, ATMs, electronic POS machines, telephone call centers, and websites.

Mobile network operators (MNOs)

There are four MNOs in Kenya: Safaricom, Airtel, Orange, and Yu. All offer mobile money services. With 54,409 agents and 19.3 M customers, mobile money services have been a phenomenal success over the last six years. However, M-Pesa continues to dominate the market in Kenya.

Payment service integrators

The growth of mobile money services in Kenya has led to the emergence of a broad set of payment service ecosystem players. These integrators largely serve merchants who intend to accept any form of payment they can, such as mobile money, cards or online payment methods, but who opt to leverage the existing payments infrastructure rather than set up their own infrastructure. Some of the key players in this space include KopoKopo, iPay, JamboPay, PesaPal, M-Payer, Lipuka, Moca, Paysure and KrossPay.

Micro-finance institutions (MFIs)

While there are over 50 microfinance institutions registered with the Association of Microfinance Institutions of Kenya (AMFI), it is estimated that there are 36 active MFIs in Kenya, servicing about seven million depositors and almost 1.5 million borrowers.

Savings and credit cooperatives (SACCOs)

Provide basic savings and credit facilities to their members, and have been integrating IT solutions into their operations over the last few years. An estimated 3,280 SACCOs are active in Kenya, with 215 taking deposits via their Front Office Savings Activities (FOSA). A significant number of SACCOs provide financial services to semi-urban and rural Kenya (about 2 million customers).
Payment Instruments

Payment instruments refer to the available methods of purchasing goods and services, such as credit cards, debit cards and mobile money that facilitate the movement of funds. The table below shows the modes of payments currently available in Kenya by both transaction volume and value in 2011:

<table>
<thead>
<tr>
<th>% of Total</th>
<th>2011 Transaction Volumes</th>
<th>Mode of payment</th>
<th>2011 Transaction Value</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>10,782</td>
<td>Cash</td>
<td>52</td>
<td>17.3</td>
</tr>
<tr>
<td>0.2</td>
<td>22.7</td>
<td>Check²</td>
<td>28</td>
<td>9.4</td>
</tr>
<tr>
<td>0.0</td>
<td>1.2</td>
<td>Credit transfer via RTGS³</td>
<td>211</td>
<td>69.6</td>
</tr>
<tr>
<td>0.1</td>
<td>15.9</td>
<td>Direct debit &amp; credit transfer via ACH</td>
<td>6.4</td>
<td>2.1</td>
</tr>
<tr>
<td>0.1</td>
<td>5.8</td>
<td>Debit card</td>
<td>0.7</td>
<td>0.2</td>
</tr>
<tr>
<td>0.0</td>
<td>0.7</td>
<td>Credit card</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>1.4</td>
<td>151</td>
<td>Mobile money</td>
<td>4.5</td>
<td>1.5</td>
</tr>
<tr>
<td>0.0</td>
<td>0.1</td>
<td>Other⁴</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Paper Electronic
1. USD = KES 90  2. includes all payments through RTGS system, excludes net settlement resulting from clearing house operations  3. includes all checks converted to ACH  4. includes prepaid cards.

Figure 2: Modes of payments currently available in Kenya
Source: Kenyan Central Bank; Safaricom; Kenyan Bankers Association; Expert interviews.

From a digital payment perspective the key instruments are cards; online payments which include real time gross settlement system or RTGS; and mobile money:

Payment cards
Kenya had about 10.8¹¹ million payment cards in circulation by early 2013, of which over 98 percent were debit cards. Credit cards accounted for less than 1.5 percent of all cards. While the number of cards in circulation is slowly growing, Kenyans continue to utilize cards mostly for cash withdrawals from ATMs.

Online payments
Online payments in Kenya were slow to develop in Kenya but are finally growing, particularly as overall internet usage grows (as of Sept 2012, there were 8.5 M¹² internet subscriptions in the country). Kenya has taken steps towards a national payments infrastructure, starting with its RTGS system (KEPSS). Today, KEPSS handles ~8000¹³ transactions accounting to KES 90 B every day.

Mobile money payments
Mobile money services have experienced huge growth in Kenya, which has surpassed any other country’s efforts so far in deploying mobile money. Driving this growth is M-Pesa, which launched in 2007. Six years later, there are almost 20 million users of mobile money in Kenya, with M-Pesa alone having 16 million users and conducting over 1.8 million¹⁴ transactions every day.
Infrastructure

Payment infrastructure refers to the system of bank branches, ATMs and point of sale (POS) systems, along with bank and non-bank agents providing banking or payment or mobile money services to customers in areas which are often not served by branches or ATMs.

The branch network and many of the ATMs and POS systems are provided by the banking sector, although many ATMs and POS devices are serviced by third-parties. Additionally, the strong network of 14,168 banking agents and 54,409 mobile money agents extend their support to the payment infrastructure in Kenya.

There are three switch providers in Kenya:

**PesaPoint** is a commercial network of over 450 ATMs and 1200 POS devices across Kenya providing cash withdrawal, bill payment, airtime top-up, balance inquiry and prepaid card wage services. Set up in 2005, PesaPoint provides services to commercial banks, SACCOs, the Kenya Postbank and microfinance institutions. PesaPoint also allows for cash withdrawal from the M-Pesa and Airtel mobile money services. PesaPoint is part of Kenya’s Paynet Group, a provider of payment solutions to the financial sectors in Kenya, Uganda, Tanzania and Rwanda.

**Kenswitch** is a registered limited company that was set up in late 2002 by a consortium of small and medium-sized banks under the Central Bank of Kenya’s National Payments Systems modernization and reform process, which was done with the support of the Kenya Bankers Association. Like PesaPoint, it provides a shared network of 650 ATMs to financial institutions, offering ATM, POS, online, mobile and agency banking. There are currently over 30 financial institutions linked to the Kenswitch platform, in addition to collaboration along with PesaPoint and its partners.

**VisaNet** is the world’s largest retail electronic payments processing network. Visa was established in Kenya in 1991, and has witnessed year-on-year growth. The only banks in Kenya which provide Visa are Barclays, Equity, Kenya Commercial Bank (KCB) and I&M.
This chapter examines five elements or “pillars” which need to be addressed in order to ensure effective payments. These elements are critical to enabling fast and secure payment but other clear opportunities for improvement are also discussed.

Figure 3 depicts the five pillars along with an assessment of the extent to which each pillar is currently addressed in Kenya.

<table>
<thead>
<tr>
<th>Key Pillars</th>
<th>Security</th>
<th>Distribution</th>
<th>Devices (Front End)</th>
<th>Payment Processing (Back End)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Devices (Front End)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment Processing (Back End)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Digital Payment Systems:

- Security: High
- Distribution: High
- Devices (Front End): High
- Payment Processing (Back End): High
- Integration: High

Level of Development:

- High
- Low

Figure 3: Five key pillars to facilitate driving effective digital payment

There is room for improvement across the five pillars and all sectors have an important role to play. Using global and local examples, this section looks at the extent to which government can, directly and indirectly, play a role in addressing opportunities across these pillars to enable safe and effective digital payments.
Authentication

Today in Kenya, there are multiple citizen registries (national ID, birth certificate, driving license, marriage certificate) which may be used to validate user identity. Their technologies have been layered on top of each other over several years. There is, however, currently no trusted and complete single source that provides authentication to fully support the confirmation of user identity and allow payments to be made based on prior authorization. “Ghost” records are a common problem given an incomplete register of deaths and a lack of integration between this and other systems. This compromises the safety and security of payments and, in the context of government payments in particular, leads to increased opportunity for fraud and leakage.

In terms of government systems, the Immigration and Registrar of Persons (IPRS) System is used as the national population data registry to provide authentication. Today, the IPRS is interlinked with relevant systems of the Kenya Revenue Authority (KRA), the Teachers’ Service Commission (TSC), the National Social Security Fund (NSSF), the Public Service Commission (PSC), and the National Health Insurance Fund (NHIF), as well as with telecommunication companies and other government agencies. Certain commercial sector banks and government sector organizations have also linked their systems to the IPRS for authentication. The extent to which the IPRS is functioning effectively today was beyond the scope of this study. However, discussions with the Commercial Bank of Africa (CBA), Central Bank of Kenya and Kenya ICT Board have revealed issues with the integration with IPRS, although it is not clear whether these are related to the IPRS system or to the integration. In the longer term, complete integration across the multiple entities involved in the payment process would significantly reduce security risks. And with improved record management, the opportunities for “double dipping” will also be reduced.

Currently, over 50 percent of population data has been entered into the system with the rest expected once the new elections register and the birth and death registry are verified and put into the system. While the national ID card is currently the most widespread identification document used today, it is envisioned that the IPRS will provide a single point of truth for registered individuals residing in Kenya. Going forward, the IPRS will provide a central repository for financial institutions, law and order agencies, and employers, as well as other institutions and establishments, to store relevant data for all citizens.

International Standards: EMV Compliance

In terms of safe and secure payments, the Europay, MasterCard and Visa (EMV) standards offer a global series of specifications for inter-operation of integrated circuit cards (IC or chip cards), IC card-capable POS terminals and automated teller machines (ATMs), for authentication of credit and debit card transactions. The EMV standards support interoperability between EMV-compliant IC cards and EMV-compliant credit card payment terminals throughout the world, improving security (with associated fraud reduction), and making possible finer control of “offline” credit card transaction approvals. EMV chip card transactions offer better security against fraud than magnetic stripe card transactions that rely on the holder’s signature and visual inspection of the card to check for features such as a hologram. Virtually all cards in Kenya today are magnetic stripe (“magstripe”) cards, which provide access to account information via the magnetic stripe on the back of the card.

Kenya currently lacks EMV compliance, leaving it open to credit and debit card fraud. Citizen confidence in these payment methods therefore remains low. The government is working closely with Kenswitch and the Kenya Bankers Association to roll out chip based cards by 2014. Government’s ability to work either directly or indirectly on payment sector reforms makes it an extremely important player in the payment ecosystem.

Consumer and Data Protection

Safeguarding personal data and strong consumer protection are critical elements of a secure and effective payments landscape. It typically involves putting in place policies and mechanisms for securing data and safeguarding consumer interests. Existing consumer protection policies under the Banking Act, Capital Market Act, Insurance Act, and SASRA (SACCO Societies Regulatory Authority) provide sectorial coverage but fail to provide a holistic solution for financial services. For instance, the Banking Act provides consumer protection for banking services, including services offered though banking agents, but fails to address consumer grievances related to mobile money transactions made from and to the bank account. In particular, there is currently no regulation that specifically addresses the activities of non-bank companies that offer mobile financial services.
Financial services in Kenya are growing at an impressive rate, yet consumer confidence is still compromised by lack of comprehensive consumer and data protection policies and inadequate dispute resolution mechanisms. Unfortunately, there is no formal mechanism for money reversal in case of payment errors to an undesired recipient, and there is no guarantee that this money will be returned to the owner. Importantly, mobile money providers do not, and are not required to use systems that support effective dispute resolution. Although agents are required to enter every transaction into the daily logbook, this is a cumbersome procedure that is open to potential error.

The Kenyan Parliament is reviewing the Data Protection Bill which will govern the processing, storing, use and disclosure of information relating to individuals, whether it is automatically or manually processed. Payment and payee data is not only important to the persons or entities involved; it constitutes a valuable information asset. With suitable legislation in place, multiple government agencies can share relevant information, which can deliver real efficiencies, removing duplication and improving the citizen experience of government. The Central Bank of Kenya set up the National Payment System Act of 2011 to ensure compliance with the Bank for International Settlement core principles and give the central bank enhanced legal and regulatory powers over payment systems. It covers all electronic payment systems and instruments, including the RTGS, online and mobile money payment services, and aims to tighten consumer protection.

The government can also play a role in addressing challenges around consumer security by developing a strong mechanism to safeguard consumer interests. This is critical for the success of the digital payment sector in Kenya as it will encourage consumers to embrace electronic payment channels. The Treasury, as part of the second Medium Term Plan, is working to develop a Consumer Protection Act which is expected to establish a legal framework for the achievement and maintenance of a financial services consumers market that is fair, accessible, efficient, sustainable and responsible for the benefit of financial services consumers. Many countries (UK, Ireland, Australia, South Africa, and Sri Lanka) have set up a Financial Ombudsman to independently settle complaints between consumers and businesses providing financial services but this is not present in Kenya today.
Distribution

Distribution indicates the geographical reach of financial services in terms of points of access. This includes the extent to which physical reach is providing citizens with convenient access.

Effective coverage allows citizens and businesses to conveniently access financial services at any time. A critical point in the role of government in the context of payments and social impact is that government mandate requires it to operate with different interests to that of the private sector. Typically, commercial banks have built their branch networks to serve higher value businesses and individual customers who are located in urban areas. Government, however, has a vested interest in ensuring equal access, particularly as its new constitution aims to guarantee equality of services regardless of county.

Over the last decade, Kenya has made a great deal of progress in modernizing its retail payments and financial services system, particularly through the introduction of mobile money services, agency banking and the updating of its payment system oversight through the National Payment Systems Act. The government has also facilitated increased access to financial services to traditionally underserved communities. In 2009, the Central Bank of Kenya worked to amend the Banking Act to include provisions for agent banking. The agency model enables CBK-approved entities to be contracted by a financial institution to provide financial services on their behalf. Agency Banking was commissioned in Kenya in April 2010 with the CBK granting approval to 10 banks to roll out agency networks. Although bank branch coverage at 2.54 branches per 100,000 people is relatively low according to international standards, there is a strong network of 14,168 banking agents and 54,409 mobile money agents in Kenya. Four of the 43 banks in Kenya – Equity Bank, Kenya Commercial Bank (KCB), The Co-operative Bank of Kenya and Chase bank – have also been licensed to offer banking services through the agency banking model. The agency model has been effective in providing the additional geographical coverage required for users to access financial services. Fifty micro finance institutions and an estimated 3000+ SACCOs also offer users additional points of access.
<table>
<thead>
<tr>
<th>Banks</th>
<th>Branches</th>
<th>Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya Commercial Bank</td>
<td>165</td>
<td>3,767</td>
</tr>
<tr>
<td>Equity Bank Ltd.</td>
<td>123</td>
<td>5,300</td>
</tr>
<tr>
<td>Barclays</td>
<td>103</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Co–Operative Bank of Kenya Ltd.</td>
<td>87</td>
<td>4,100</td>
</tr>
<tr>
<td>Stanchart (K) Ltd.</td>
<td>33</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>CFC Stanbic Bank Ltd.</td>
<td>20</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>I&amp;M Bank Ltd.</td>
<td>19</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Commercial Bank of Africa</td>
<td>20</td>
<td>45,540 (a)</td>
</tr>
<tr>
<td>Jamii Bora Bank Ltd.</td>
<td>10</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>National Bank of Kenya Ltd.</td>
<td>54</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other Banks</td>
<td>411</td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1045</strong></td>
<td><strong>14,168</strong></td>
</tr>
</tbody>
</table>

*Does not include M-Pesa agents*  

Table 1: Commercial Banking Sector  
Source: KBA, CBK websites, World Bank
Devices

Devices refers to the modes of payments available, namely payment cards, including debit, credit and prepaid cards; online payments via Web portal; and mobile payments via mobile money wallet accounts, which may or may not be linked to a bank account.

A low uptake of cards and low Internet penetration presents a clear opportunity for improvement. Kenya is serviced by an ATM and POS network that averages 5.7 ATMs\(^1\) per 100,000 people, and about 44\(^2\) POS terminals per 100,000 people, respectively. While the ATM and POS networks in Kenya have grown steadily in recent years, the overall volume of use of the networks as a proportion of all payments remains low compared to that in developed economies and also to other developing regions.

This directly correlates to the number of available ATMs (see Figure 4) to service the population.

![Figure 4: ATMs Comparison\(^{19}\)](image)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATMs</td>
<td>2,091</td>
<td>2,205</td>
<td>2,390</td>
</tr>
<tr>
<td>POS</td>
<td>18,179</td>
<td>16,604</td>
<td>18,422</td>
</tr>
<tr>
<td>Cards</td>
<td>7,672,695</td>
<td>10,132,799</td>
<td>10,864,937</td>
</tr>
</tbody>
</table>

Table 1: Growth of ATMs, POS and Cards
Source: Central Bank of Kenya, Payment Statistics, Feb 2013\(^{20}\)
Payment Processing

Payment processing refers to payment support systems and their capability to process payments that support the day to day operations of government payment programs. This refers to the government’s own support systems as well as those offered by the private sector and used by the government.

A key concern for governments is the safety and surety of payments (the safe and timely transferral of funds to the intended recipient), and the ability to properly record transactions in line with international finance and accounting standards. Ensuring this can be complex and costly. However, the inability to guarantee proper safety and integrity is likely to result in a lack of trust in governments by taxpayers, recipients and beneficiaries. As such, national treasuries look for ways to effectively manage finances while minimizing the cost of this activity, typically through a robust financial management system.

Singapore, one of the world’s fastest growing economies, has payment systems which have evolved over the years, driven by technological progress, changing consumer needs and development of new digital financial systems. The move from paper and cash transactions to a diverse range of cashless payment instruments, as well as efficient and reliable clearing and settlement systems, has been a key factor in Singapore’s economic success.

Network for Electronic Transfers (NETS) is a nation-wide electronic payment platform founded in 1985 to establish Singapore’s national PIN Debit scheme, NETS Electronic Funds Transfer at Point-of-Sale (NETS EFTPOS) which propelled Singapore into the age of electronic payments. NETS is owned by Singapore’s largest banks (DBS (The Development Bank of Singapore), OCBC (Oversea-Chinese Banking Corporation) and UOB (United Overseas Bank)) and provides infrastructure, support systems and services to facilitate electronic banking, services and financial payments. The company commenced operations by offering a nationwide EFTPOS network, an online debit payment service. Over the years, NETS has evolved into a multi-service organization, providing a comprehensive range of electronic payment services such as EFTPOS, CashBack, Shared ATM service, CashCard, NETSCash and Trade Finance service.

While it’s too early to say whether it will be a complete success, India’s Aadhaar Enabled Payment System (AEPS) initiative demonstrates its government’s ambitions to use a single source of identification to facilitate payments. AEPS is a real time payment system based on a unique identification number. The system allows a person holding an Aadhaar number to carry out financial transactions, including receipt of wages, through a Micro-ATM provided by the Banking correspondent and supported by biometric identification.

In Kenya, the development of an Integrated Financial Management and Information System (IFMIS) began in 1998 whilst deployment of the system to line ministries commenced in 2003. Unfortunately, the implementation of IFMIS encountered challenges ranging from technology issues, proliferation of independent public financial management initiatives, and lack of political will, to change management challenges, capacity constraints, the existence of parallel manual systems and a disjointed and often less than optimal internal and external communication infrastructure. Then, in April 2010, the Government of Kenya initiated a project to develop a Master Plan for IT Shared Services across the 42 ministries and 175 local authorities in the Government of Kenya. This project identified eight key opportunity areas, one of which was to re-engineer the IFMIS as flagship for Shared Services application.

The Ministry of Finance is currently working to re-engineer the IFMIS to include the additional financial modules required for effective financial management; to create interfaces with external systems such as debt management, payroll, tax, and budgeting in line with industry standards; and to plan for deployment of the system across all ministries and counties. Furthermore, the Public Financial Management Act 2012 established a national Treasury Single Account (TSA). A TSA is a “unified structure [which] allows the government to have a consolidated view of its available cash resources”. The primary objective of a TSA is to ensure tighter control over government finances by providing clear end to end traceability of transactions and therefore ease of reconciliation.

This increased control is important in the context of identifying and reducing leakage, and to increase efficiency and therefore reduce the cost of effective financial management.
Integration

Observations from the current-state process assessment indicate poor IT collaboration across government, reflecting the lack of integration between systems both within and across MDAs.

This lack of integration leads to delays in the payment process and also makes the process vulnerable to errors and leakage. There is a clear opportunity to establish a more coordinated IT strategy with some guiding principles to avoid situations where new systems are procured that do not or cannot easily integrate with existing systems. At the same time, existing legacy systems cannot be neglected and there needs to be a strategy for effective utilization of the existing systems in place.

Interoperable systems enable us as consumers and merchants to confront pressing challenges such as rising electricity costs, demand for greater reliability, and concerns over security.

While there are a broad range of benefits tied to interoperability. Benefits to the financial system include:

- Financial efficiencies and savings for operations
- Lower investments for ecosystem players and transaction costs to the customer
- More options that will provide savings for users
- Greater financial security and independence for the nation
- New product and service innovation opportunities
- New product innovation opportunities for devices

In Kenya today there is some integration between the mobile money operators and the banks offering money transfer from the bank to the mobile money account and vice versa. Likewise, the mobile money and retail merchant systems are integrated, offering utility bill payments as well as payments for retail transactions via mobile money.

Interoperability between the various switch networks has improved in recent years, with the collaboration between the two primary domestic switching centers; ensure security of government information and, at the same time, promote efficiency in the management of servers across the government. This is an extremely critical element from a digital payment perspective, with government’s ownership of the GDC making it even more important to look to government as the key enabler of digitization.

The Government of Kenya, through the Directorate of e-Government, has built a Government Data Centre (GDC) for processing and storage of government applications and data. The Data Centre is connected to the Government Common Core Network (GCCN) that links government ministries, departments and agencies (MDAs). The GDC aims to provide solutions to meet the growing storage and processing needs within these MDAs' silo data and ATM networks – Kenswitch and PesaPoint – allowing users of all Kenswitch, PesaPoint or Visa/MasterCard cards to use any of the ATMs or POSs on the two networks. However, only partial interoperability has yet been achieved between switch providers, POSs, ATMs and branches. The various elements of the payment system are typically linked either through direct point-to-point links, or via switches utilized by the banks either individually or as part of a larger consortium, such as a country’s bankers’ association. In Kenya, there are many systems that do not speak to each other at all, or which lack interoperability such that customers of one system cannot access a payment point of another network, thus limiting customer convenience and preventing realization of the full benefits of having large networks. There are also some limited forms of bank connectivity with the mobile money networks, although full interoperability has not been achieved here either.

The Kenya Bankers Association (KBA), with the guidance and support of the Central Bank of Kenya, is currently working on an interoperability project specifically focused on a national switch. Although there is partial interoperability between switch providers, POSs and ATMs, full interoperability hasn’t been achieved. The government today recognizes this gap and does not want to see separate public and private national switching systems in Kenya.
Chapter 3

Driving Change through Digitization

As outlined above, the government has the opportunity to increase the effectiveness of digital payments by: introducing measures to increase citizen and consumer confidence; encouraging interoperability to increase ease, and reduce cost of payments; and by expanding access to, and uptake of digitally-based financial tools and services.

This chapter looks at some of the critical long and short term needs in order to facilitate digital government payments in Kenya. Over the course of this study and in meetings with various different stakeholders at different levels of government, three clear themes emerged:

• Top-down leadership is critical to drive the structural changes required to govern the digital payments landscape effectively. In particular, in the context of the current political situation in Kenya, a new administration and the moves to devolve power to county governments, there is a significant opportunity to build political support for a new approach which will drive the effectiveness of digital payments. The first part of this chapter supports this strategic view by presenting selected estimates of the potential economic benefits that could be achieved through digitizing.

• This study also identified that many MDAs are already making moves towards digitized payments with varied levels of success. In parallel to the top-down approach, there is an opportunity for the government to support and guide these early adopters to ensure that the benefits of digitizing can be fully realized.

• Lastly, we consider the importance of incentives to ensure that different stakeholders properly adapt to change. Understanding that what motivates people’s behaviors in the context of government payments is critical to design a future in which corruption and leakage is eliminated, allowing Kenyan society as a whole to benefit from digitizing payments.
The Case for Digitizing

The case for digitizing is demonstrated through the associated economic benefits.

These benefits are corroborated by various data sources: publicly available reports, findings from interviews with over 30 stakeholders in seven Kenya Government payment process areas, relevant MDAs and private sector representatives, as well as global case studies from developed, and developing countries.

This section outlines four ways in which increased usage of digital payments drives economic growth. The identified transmission mechanisms are: increased government revenues, efficiency gains through process improvements, putting ‘loose change’ back into circulation, and providing a potential revenue opportunity for the informal sector.

This is not a detailed economic analysis and it is important to note that in order to realize these benefits significant investment is necessary to implement the necessary process and organizational changes, supporting technology and infrastructure.

![Figure 5: The case for digitizing payments; Indicative estimates of benefit to government](image)

Note: the above figures do not take into account the time, effort and investment required to achieve benefits. The figures given are projected annual estimates but do not take into account the lead time to arrive at these benefits. In the case of the informal sector, it is unrealistic to expect that the entire informal sector could be formalized.
Increased Revenue

Inefficient procurement, budgeting and revenue reconciliation systems create a huge financial burden for governments worldwide, Kenya being no exception.

The Treasury estimates that the implementation of a newly re-engineered IFMIS, despite implementation and rollout issues, will save the country roughly KES 70 billion ($802 million) annually. In addition, better integrated financial management will mean that monetary disputes or corruption scandals, such as the KES 4.2 billion ($46 million) missing from the Ministry of Education in 2011, will be able to be identified faster and those culpable more easily traced. Beyond these Government to Government (G2G) and Government to Person (G2P) transactions managed through the IFMIS, small changes in government collections, such as automated receipting or limits on the value of cash payments, have led to significant increases in revenues.

State Law Office (SLO):

<table>
<thead>
<tr>
<th>Organization</th>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Registrar of Companies, part of The State Law Office, is charged with registration services including business names, adoptions books, newspapers, societies, companies, deeds, as well as other agreements and organizations.</td>
<td>The SLO was facing serious problems with fraudulent receipts being issued for Business Registration payments.</td>
<td>In 2007, SLO introduced a requirement for all receipts to be scanned when issued. The paper receipt can be compared to the scanned original later in the process in order to confirm payment and avoid fraudulent receipts.</td>
<td>The introduction of the new receipting mandate led to a 243% increase in revenues simply by reducing the opportunity for counterfeit receipts. Revenues increased from KES 35 million ($401,000) to KES 85 million ($974,000) from 2007.</td>
</tr>
</tbody>
</table>

City Council of Nairobi:

<table>
<thead>
<tr>
<th>Organization</th>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>The City Council of Nairobi (CCN) is the local authority governing the city of Nairobi, responsible for collecting a variety of municipal fees, including those related to land rates, markets, parking, advertising, single business permits, and health and hygiene.</td>
<td>The CCN recognized serious leakage in the collections process for daily parking, as fake receipts were being issued.</td>
<td>Introduction of digital receipting for seasonal parking, and pre-printed receipt booklets for daily parking to avoid fraud.</td>
<td>Increased monthly revenues by 121% for parking collections from KES 24 million ($275,000) in 2007 to KES 29 million ($332,000) a year later.</td>
</tr>
</tbody>
</table>

The examples show that partial digitizing of the collections process can increase revenues by an average of 182%; this equates to KES 232 billion ($2.7 billion) based on Kenya’s cash-based payment collections for 2012. Based on the current interest rates of 9.5 percent in Kenya, the opportunity cost of not collecting the additional KES 232 billion ($2.7 billion) translates yearly to KES 22 billion ($253 million) if properly invested. In summary, not collecting additional revenues as a result of a simple process change amounts to a total potential loss of KES 254 billion ($2.9 billion), or 32% of all government revenues in Kenya.

There are other indications of the increased revenues available as a result of digitizing of payments. The City Council of Nairobi’s ICT department claims that only one third of the total potential revenue from advertisement fees is currently being collected; other sources suggest that the implementation a new Ad Management System which includes an electronic payment component could increase revenues from advertisement fees by up to five times. The following sub-sections take a closer look at sources of leakage and missed opportunities to demonstrate where these increased revenues will come from.
Missed Opportunities

These are cases where a person or business does not pay because the transaction fees are too high; the process is too complex; the points of sale are not easily accessible (i.e., paying at a particular government office); or the incentive is too low. Examples include business registration, and licenses and permits where legal standing may be perceived as less convenient than remaining ‘informal’. In the case of personal tax collections, while new initiatives have been put in place by the Kenya Revenue Authority (KRA), there are many citizens who still do not pay taxes due to the difficulty of payments in terms of effort, time and cost. The same applies to parking fees at the City Council of Nairobi where long queues reportedly often deter citizens from making payments – citizens would rather take the chance of getting a fine. Similarly, loss in advertising fees due to the difficulty of payment leads to significant loss of revenues for a city council – KES 2.6 billion ($45 million) in the case of the City Council of Nairobi.

NOTE: These additional revenue opportunities are not called out as part of the larger KES 232 billion figure for increased government revenues, since they are included as part of the 36 percent of cash payments. However, these figures demonstrate that the potential impact may in fact be higher than estimated, making the increased revenues estimate low.

Leakage

Leakage refers to funds which should be collected by Government but are instead diverted at points along the payment process. Typically this occurs when people, businesses and government employees take advantage of weaknesses in the system.

In the case of the State Law Office, tightening up the receipting system – requiring all receipts to be scanned in order to avoid fraud – led to a 243 percent increase in revenues in just one year. At the Ministry of Agriculture systems and programs were also abused, with funds and materials provided to citizens used inappropriately – for example, seeds and fertilizer were sold rather than planted. This led to greater supervision by program coordinators and the introduction of stricter eligibility requirements.

Considerable anecdotal evidence exists of government employees operating multiple receipt books in order to divert funds. The City Council of Nairobi reports fake receipts issued for land rates and parking fees, with a drop off in the latter since a new receipting program was put in place.
Efficiency Savings through Process Improvements

Digital interactions save money, costing 80 percent less than non-digital interactions. In 2012, the City Council of Nairobi collected KES 45 million ($516,000) through parking fees in Nairobi alone. It estimates that 60 percent of its collections are spent on administration to collect those fees. Digitizing this payment process could lead to savings of up to KES 22 million ($248,000) for the CCN for parking alone. If this figure were to be extrapolated to all CCN revenues of 11.8 billion ($135 million), 80 percent savings on 60 percent of revenues equates to KES 5.7 billion ($65 million). With digital transactions, the additional cost of cashiers, manual reconciliation of payments, and transportation and time, are greatly reduced or eliminated, allowing government to provide the same services but at a reduced cost.

There are persuasive examples from across the globe of how government and private sector entities have achieved clear process efficiencies through digitization. The following are examples of process optimization where the cost of operating a particular process was reduced, enabling the organization to free up resources, and redeploy budget and personnel.

Service Canada:

<table>
<thead>
<tr>
<th>Organization</th>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Canada was established in 2005 to serve as a gateway for government services and information, making these available through multiple channels, including mobile outreach centers for hard-to-reach areas.</td>
<td>Surveys indicated increased citizen demand for a single access point to government information and services as opposed to the traditional approach in which citizens had to deal individually with many departments, each with its own distinct programs, delivery channels and quality of service.</td>
<td>Canada implemented a &quot;one-stop shop&quot; for government information and services to save costs and help redeploy resources to more effective government posts.</td>
<td>Cost savings of KES 25 billion ($283 million) were achieved in the first year by streamlining and automating processes, and reducing fraudulent benefit payments. Government agencies were able to focus on developing and improving policy and programs, while Service Canada was free to specialize in the delivery of those initiatives.</td>
</tr>
</tbody>
</table>

Online Business Licensing Service (OBLS):

<table>
<thead>
<tr>
<th>Organization</th>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Online Business Licensing Service (OBLS) was created in Singapore to increase process improvement and interoperability between the several government institutions from which business licenses are issued. Singapore has 130,000 SMEs and 40,000 start-ups annually.</td>
<td>Poor delivery of customer service due to existence of various licensing agencies with silo structures, processes and service standards. The process was a bureaucratic puzzle for businessmen who did not know which agency to approach, resulting in wasted time going to the wrong agency and filling out manual forms at each one.</td>
<td>The Ministry of Trade and Industry in Singapore created the OBLS as an innovative, business-friendly and comprehensive service meeting all the licensing needs of businesses in Singapore.</td>
<td>Reduction from 21 days to eight days for average license processing time after reengineering for removal of bureaucracy. License fees were reduced significantly; for example, company incorporation became a flat fee of S$300 from between S$1,200 and S$35,000 depending on company size; a liquor license decreased to S$800 from more than S$2,000. Time was reduced: employer registration went from three days to 15 minutes.</td>
</tr>
</tbody>
</table>
Adding ‘Loose Change Back Into the Economy

A recent report showed that globally, between 2008 and 2012, increased usage of electronic payments added $983 billion in economic growth.

In emerging markets, this increased use of electronic payments contributed to 0.8 percent growth in GDP.\(^{36}\)

Digital payments transactions are a means of putting ‘loose change’ back into the economy, making sure every cent is accounted for. Globally, real GDP has grown on average by 0.2 percent a year beyond what it would have without card usage. An increase in payment card usage of just 1 percent drives a 0.035 percent increase in GDP. For Kenya, 0.035 percent of GDP amounts to KES 1 billion ($11.7 million). With a greater uptake of card usage, and an increase in usage of other forms of electronic payments, we may expect this figure to be higher.

Electronic payments are cheaper and more convenient as consumers do not necessarily need to go to an ATM to withdraw cash or count cash at the point of transaction. For a merchant, cards often result in decreased labor due to ease-of-use, faster and easier reconciliation and through the use of self-service payment points. For travel, electronic payments are safer than carrying cash over long distances. Moreover, electronic payments are the primary means of global e-commerce payment. For tourism, electronic payments provide increased purchasing power to tourists when crossing boarders throughout the globe. Third highest after agriculture and manufacturing, tourism amounts to roughly 10 percent of Kenya’s GDP.\(^{37}\)

The cost of cash as a mode of payment is also worth noting. The cost of printing money, cash movement and logistics, cash processing equipment and maintenance, cash storage, and employing and managing the security and personnel to deal with cash is considerable. With KES 283 billion ($3 billion) of government payments made in cash per year, moving to digital payments could amount to a potential saving of KES 473 million ($5 million) by the government simply in terms of printing less money.\(^{38}\)

This is based on the print cost of 1,000 shilling notes so it does not factor the reality that most payments are made in lower denominations.
The Economic Value of the Informal Sector

The informal sector, in Kenya is currently valued at KES 275 billion ($3.2 billion) in terms of potential tax revenues.\(^{39}\)

With the right structural and process changes, there is an opportunity to harness the economic value of this sector by removing some of the barriers which discourage formal business activity (bureaucratic processes and red tape; complexity and opacity of fee which enables abuse by collectors). Removal of these barriers could encourage businesses to formalize their activities and in turn obtain greater access financial services such as lines of credit to support expansion.

Kenya’s Vision 2030 has given priority to the informal sector. It seeks to deal with the informal sector through measures aimed at raising productivity and increasing jobs, owner’s incomes and public revenues.

The expected outcome would then contribute to a rise of national savings from 17 percent in 2006 to about 40 percent in 2030. In order for the sector to achieve this objective, it is crucial that measures be taken to streamline the administrative barriers through digitization of government processes.

The potential benefit outlined here does not take into account the challenges associated with formalizing processes, particularly in the context of digitization. This issue is by no means purely a question of payments; it requires a far more holistic approach to labor market reform. However, processes can be enhanced to provide checks and balances in the business sector that could give the government a more transparent view of monetary transactions and the ability to identify the parties involved.

Digitizing payment processes is just one step on the road to harnessing the potential value of dynamic, efficient and ambitious entrepreneurs who are currently constrained by lack of access to information, financial services, land and infrastructure, skills and technology, licensing and other trade, labor laws, and forward and backward linkages.
Supporting Early Adopters

Over the course of this study several examples of early adopters of digital payments were identified. The successes of some of these initiatives are impressive, ranging from increases in revenues by almost 250 percent to reduction in payment times by up to 80 percent.

While specific recommendations were beyond the scope of this final study, this section highlights opportunities to sustain, increase and extend these benefits with and beyond individual MDAs. This section highlights specific initiatives currently underway in Kenya, providing insight into lessons learned. In all cases, clearer guidance and support for the early adopters would help them to realize the full potential benefits of digitizing. This includes proper direction on business process re-engineering, change management strategy and implementation of an appropriate support structure (e.g., properly trained staff, IT helpdesk; and a call center).

Faini Chap Chap (Judiciary of Kenya):

**Faini Chap Chap** is an initiative to enable offenders to pay court fines via mobile money. Pilots are currently taking place in Milimani and Kibera Law Courts in Nairobi for traffic offenses.

<table>
<thead>
<tr>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
<th>The Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to decrease heavy time burden on citizens – from queuing to time spent by family or friends depositing funds in a bank and returning with a deposit slip as proof of payment for an offender to be released. This applies to all fines greater than KES 500 ($6), which is about 98 percent of fines.</td>
<td>Implementation of a mobile payments platform whereby payments can be made immediately after a fine is given, in person at the courts. If the offender does not have enough funds in their mobile money account, they have the ability to collect payments from multiple parties. Transactions are automatically recorded in the system, leading to reduced costs in reconciliation and decreased monetary leakages.</td>
<td>Eighty percent reduction in payment wait time – the process is simplified from taking a couple of days, to hours and now just minutes. Besides increasing revenues, this process change allowed for a minimum of 83 percent of workers focused on payment reconciliation to be redeployed to more effective functions across the judiciary, a savings of at least KES 362 million ($4 million) per year.</td>
<td>Unfortunately, the Faini Chap Chap program has not been sustainable due to a lack of support in terms of IT skills and capabilities. There is no centralized IT helpdesk or call center. The program lacks suitably qualified resources to own and manage the end-to-end process.</td>
</tr>
</tbody>
</table>

**eConstruction Permits System** (City Council of Nairobi):

The City Council of Nairobi implemented an eConstruction Permits System enabling application and issuing of receipts for construction permits.

<table>
<thead>
<tr>
<th>The Situation</th>
<th>The Intervention</th>
<th>The Impact</th>
<th>The Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need to decrease the time and resources required for the manual processing of construction permits. Also needed to better facilitate businesses through cost and time reduction.</td>
<td>Online eConstruction Permits System set up by CCN. System entails a three-step process for a business: create an account, await verification and make application. eConstruction Permits are now available via an online portal, which has decreased the time and effort required for application and approval. Now only the payment part of the process needs to be done in person. Additionally, there is a Help Center to support the citizen.</td>
<td></td>
<td>Lack of integration with the CCN’s financial management system (LAIFOMS) mean that payments must be made in person at CCN and payment records transferred manually between systems. Lack of in-house skills and IT knowledge to properly define integration (and other) requirements could have prevented this. In part this is a legacy issue from the fact that LAIFOMS is custom-developed. However, similar mistakes may be made with the implementation of a new custom-developed parking management system.</td>
</tr>
</tbody>
</table>
In the case of the CCN, interoperability issues surrounding the eConstruction Permit System stem from the LAIFOMS system, which was custom developed by a group from the Local Authorities which has now disbanded, posing a challenge regarding development of the system. Even so, shortly after developing the eConstruction Permits System, the CCN began piloting an eParking portal. eParking is another custom-developed system that, although still under development, is facing similar issues with integration and payments. Guidance and support from government leadership would help guide decision making in terms of ICT procurement and implementation, especially with regard to interoperability, retention and development of in-house knowledge and skills, and appropriate support contracts.

Channeling the right support to early adopters is critical. Allowing them to fail is detrimental to the success of future initiatives whereas supporting them will pave the way for future successes. The types of challenges faced by early adopters could be addressed early on with the right government support. In the case of Kenya, there are institutions which, to some extent at least, are mandated to provide this kind of support:

The Directorate of eGovernment aims to:
- Provide advice and policy frameworks
- Manage shared security infrastructure, networks, servers and services
- Facilitate access to eGovernment services (online, e-mail, Web services, data warehousing and domain name administration)
- Develop and enforce ICT standards for interoperability and cost-effective ICT infrastructure and services
- Manage ICT projects (implementation; monitoring and evaluation)
- Monitor emerging technologies and assess their potential value to government, and
- Design and implement Government of Kenya ICT capacity building initiatives

In addition, the Kenya ICT Board is focused on rapidly and innovatively transforming Kenya through promotion of ICT for socio-economic enrichment of society. Its mandate is four-fold:

- Marketing: positioning and promoting Kenya as an ICT destination (locally and internationally), especially promoting Business Process Outsourcing (BPO) and Offshoring
- Advisory: advise the government on all relevant matters pertaining to the development and promotion of ICT industries in the country
- Capacity Building: providing government and other stakeholders with skills, capacity and funding for anchor implementation of ICT projects for development, and
- Project Management: coordinating, directing and implementing anchor ICT projects in development

These organizations are already playing key roles in modernizing government. However, there is an opportunity, particularly in the context of the current political restructuring, to strengthen the government’s ability to provide the required IT support and guidance to ministries, departments and agencies. A clearer strategy and roadmap for digitizing government payments is required to ensure that the organization(s) guiding this have the responsibility, authority and capacity to optimally perform this role.

From a process perspective, a new Business Process Re-Engineering (BPR) Office has been created to support all other reform initiatives by focusing on redesigning processes based on customer needs and global competitiveness for better service delivery and sustainable results.

Currently, Kenya is ranked at position 126 out of 138 in the World Bank Doing Business Index (WBDBI). This ranking is mainly due to the lengthy processes and procedures inherent in delivery of services. A reduction in the time it takes to set up a business of just 10 days can lead a 0.3 percentage point increase in the investment rate and a 0.36 percent increase in the GDP growth rate in relatively poor and well-governed economies. BPR is essential given the potential for generation of significant returns through sustainable improvements – e.g., 20-50 percent reduction in turnaround time to citizens, 10-45 percent increase in capacity, a 5-20 percent improvement in productivity, and 30-75 percent reduction in setup time and machine downtime.

Simple automation of an inefficient process is more likely to embed associated process inefficiencies further than to yield desired results. In theory, business decisions should drive IT decisions. However in this day and age, business managers are often unaware of the options available to them with new technologies. As such, business process reengineering and process automation should go hand in hand. The government BPR system and the ICT initiatives work in isolation today; a more holistic approach would ensure that the government is able to realize the benefits of digitizing.
Incentivizing Change

A review of digital payments would be incomplete without a discussion of the behavioral changes required to ensure uptake. One of the main challenges at present is that citizens and businesses are often incentivized to by-pass lengthy and inefficient processes while poorly paid government employees are happy to take advantage of the holes in the system.

It is often the case that citizens prefer paying these middlemen rather than following the official process as they often provide a quicker, cheaper option. Proper incentives must be identified to address this issue or governments risk failure of costly digitization initiatives. The incentives will be different for different stakeholders.

Moreover, government’s ability to interact with the private sector and promote behavioral change through incentives makes it an extremely important enabler for payment digitization. Leading practice examples demonstrate the potential for Government to take clear measures to encourage changes in behavior and increase adoption of digital payments.

In South Korea, the government instituted incentive programs to encourage use and acceptance of payment cards through discounts on VAT to merchants; in turn the merchants would become champions of e-payment. This has made South Korea the second most active country in terms of card usage per capita, after the United States. This is a good example of a government deliberately instituting an incentive program that saw all merchants, even small one-man stores, speedily requesting banks to provide them with a PoS terminal. Another interesting initiative to encourage adoption of digital payment instruments during the Asian financial crises in the 1990s was through a monthly lottery for around $1 million. People were automatically entered simply by making a Visa or MasterCard transaction. Any future steps with regards to policies must recognize the importance of offering financial products that encourage change in user behavior and boost adoption of digital payment services.

A government also has the power to set mandates around the use of specific payments methods. One such example is the Kenyan Judiciary. In 2005, the Judiciary mandated that all traffic fines greater than KES 500 ($6) be paid at the bank. For a fine that is less than or equal to KES 500 ($6), the offender can pay cash directly at the courts. Revenues for the Judiciary went up by 160 percent from 2005 to 2009 because of this initiative.

Making processes easier, more accessible and affordable will help to deter the payers from taking advantage of loopholes. In parallel, more serious consequences for those who continue to abuse the system, in addition to a restructuring of the performance model to better align with government objectives, would help to ensure government employees enforce the agreed processes.
Full List of Sources

The research for this study was drawn primarily from in-person interviews with a range of government and non-government stakeholders. This has been supplemented with input from secondary research materials ranging from published journals to news articles and blogs, and an online citizen questionnaire facilitated by the Kenya ICT Board.


Central Bank of Kenya, Presentation at Digitizing Government payments workshop (Kenya School of Monetary Studies), February 2013.


Foo, Sebastian. “Singapore’s G2B Success Story.”


“Interview with City Council of Nairobi Department of ICT.” Personal interview with Eric Muhati and Paul Kiuru. January 2013. (Kusini Offshore Limited Study).

“Interview with Judiciary of Kenya.” Personal interviews with Mr. Wanga and Mr. Atak (ICT and Accounting Departments). 5 February 2013.


References


5. Agency Banking: An agency model works through a banking agent. A Banking agent is a retail outlet contracted by a financial institution to process clients’ transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, or receive government benefits from a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more.

6. KEPPSS: Kenya Electronic Payments & Settlement System: Very high value transfers, typically bank to bank, must be routed through Kenya’s real time gross settlement system (RTGS); www.centralbank.go.ke/index.php/keppss

7. ACH: Automated Clearing House is an electronic network for financial transactions that processes large volumes of credit and debit transactions in batches.


18. These are M-Pesa agents and not CBA banking agents. Launched in Nov, 2012; M-Shwari is Safaricom’s virtual banking platform (in collaboration with the Commercial bank of Africa) that allows Safaricom subscribers to operate savings account, earn interest on deposits, and borrow loan through M-Pesa using their mobile phones. These agents currently do not provide any banking services support to CBA customers.


24. For The National Rural Employment Guarantee Act (NREGA), wages are disbursed through AEPS.


28. Accenture. “Kenya Payments Research: Findings from a sub-set of seven government payment areas”. (Study found 36% of government collections to be cash-based transactions (PSE / GSP / B2G / G2B). Calculation is the difference between 36% of Kenya’s 2012 government revenue’s and 182% of them that percentage).


34. Online Business Licensing Service (OBLS). “Computerworld Honors Program.”


41. “Interview with Judiciary of Kenya.” Personal interviews with Mr. Wanga and Mr. Atak (ICT and Accounting Departments). 5 February 2013.


About Accenture

Accenture Development Partnerships collaborates with organizations working in the international development sector to help deliver innovative solutions that truly change the way people work and live. Its award-winning business model enables Accenture’s core capabilities—its best people and strategic business, technology and project management expertise—to be made available to clients in the international development sector on a not-for-profit basis.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 261,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$27.9 billion for the fiscal year ended Aug. 31, 2012. Its home page is www.accenture.com.