



Person-to-government (P2G) payment digitisation:

Lessons from Kenya

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About this publication

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Contents

Foreword	4
Executive summary	5
Mobile Money as a driver of P2G payments	7
Global trends in person-to-government (P2G) payments digitisation via mobile money	7
Kenya's person-to-government (P2G) payments digitisation journey	8
Kenyan government spearheads P2G digitisation efforts	9
P2G payments via mobile money prior to 2013 mandate	9
Why digitise government payments via mobile money?	10
SECTION 1: Adaptable mobile money systems support different P2G payments models	13
SECTION 2: Insights on P2G payments in Kenya	15
SECTION 3: Recommendations for successfully scaling P2G via mobile money	23
Annexes	26

Foreword

“Every person has the right to administrative action that is expeditious, efficient, lawful, reasonable and procedurally fair.”

- Constitution of Kenya (2010), Article 47:1 on “Fair Administrative Action”

According to the Taskforce on Government Digital Payments, in 2014, citizens, businesses and visitors to Kenya made over six thousand daily payments to the central government for different services offered by government agencies. County governments, too, receive payments for business permits and licenses, for construction approvals, land rates and parking fees. However, challenges have historically existed, not only for citizens making payments for services but also for government agencies offering these services. For a long time, services depended on manual processes, which lacked transparency in pricing, processes and service levels. There was no central point which provided a single view of all services offered by the government agencies, with guidance on when or where to pay for them.

Lack of access to the services painted a less than rosy picture. In 2013, a study commissioned by the Kenya ICT Authority to review government services concluded that citizens could only access 100% of services provided by the central government in Nairobi, the capital city. Across the country, access to services such as birth registration, passport applications and pensions ranged from 15% in rural counties to 65% in urban towns.

eCitizen, the government digital payments platform, offers services and payments on a single platform that is accessible by citizens, businesses and visitors to Kenya from anywhere in the world. By allowing digital services and payments, the logistical challenges of managing multiple payment points, handling large volumes of cash, receipting and reconciling payments have been alleviated, streamlining service delivery for government agencies. For example, improvements in collection, settlement and reporting that previously took six months to complete are now achievable every financial day. Enhanced governance structures and accountability has led to an increase in the number of citizens served, leading to an upsurge in revenue collection and improving operations to levels never envisaged.

Citizens can track their passport application progress and can collect their passport within 10 days for new applications and four days for renewals, down from several months or weeks. They no longer have to travel long distances to access services or make multiple trips to government offices to check the progress of their applications, a situation which was sometimes marked with incidences of misplaced files and lost applications. System-generated receipts indicating exactly what service was accessed and the fees paid have increased the legitimacy of digital services – they can be presented at any agency office across the country for service delivery. Citizens can also access data held by the government and amend this information if required through the digital channels.

This report explores the various initiatives undertaken in various agencies within the Government of Kenya to digitize records, service delivery and payments. It examines the various models adopted and makes recommendations on how governments and mobile money providers can digitize their payments. Despite the challenges faced in the formative stages, the progress made so far in Kenya is remarkable and already bearing fruit. Citizens and government agencies are now fully convinced that the only way forward is to digital in a bid to enhance service delivery and provide universal access to citizens.

Harry Mwangi

Director of Government Digital Payments,
The National Treasury, Government of the Republic of Kenya

Executive summary

Digital financial services are part of the vital infrastructure of a modern economy, enabling individuals, businesses, and governments to transact cheaply and efficiently.¹ Today, a growing number of mobile money providers across emerging markets are collaborating with governments to digitise Person-to-Government (P2G) payment streams in a bid to improve fund collection, transparency, traceability and accountability. The global P2G payments landscape is vast—in 2016, it was estimated to be worth US\$ 8 trillion, of which US\$ 375 million (0.005 per cent) occur in low- and middle-income countries.² Regrettably, progress in digitising P2G payments to date has been slow, despite payment system digitisation being a well-recognised part of financial sector reform.³ The World Bank reported that, in 2012, only 16 per cent of tax payments and six per cent of other non-tax payments in low- and middle-income countries were digital, compared to 80 per cent of tax payments and 60 per cent of payments for other services in high-income countries.⁴

Mobile money providers across 19 emerging markets are already demonstrating the potential to play a key role in digitising payment streams between governments, individuals and businesses. By doing so, they are strengthening the ability of governments to mobilise domestic resources and thus helping to advance United Nations Sustainable Development Goal 17.⁵ Mobile money P2G payments are faster, more secure, less expensive and more transparent compared to traditional means like cash. McKinsey estimates that “digital finance has the potential to [...] allow governments to save US\$ 110 billion per year by reducing leakage in spending and tax collection.” Users of government services, that is to say citizens and businesses, can also benefit from P2G payment digitisation by saving on personal costs associated with making payments, including transport costs, food and accommodation costs, as well as opportunity costs related to long waits in queues. McKinsey estimates that “delivering financial services by mobile phone could benefit billions of people by spurring inclusive growth that adds US\$ 3.7 trillion to the GDP of emerging economies within a decade.”⁶

However, the use of mobile money for P2G payments is not yet widespread. The GSMA estimates that there are 34 mobile money providers⁷ with live P2G payment services across 19 markets⁸ (out of 277 providers across 92 markets), and the majority of the

services launched to date have yet to scale. Reported barriers to scale include a lack of government willingness; lack of resources or capabilities to implement a national digital payments strategy; lack of a national ID system; insufficient understanding of how to structure commercial agreements; lack of citizen awareness; as well as the relatively high cost of implementation.⁹ High costs were perceived both from the government agencies’ and mobile money providers’ perspective.

Countries including Brazil, Côte d’Ivoire, Guinea, Kenya, Mauritius, Pakistan, Rwanda, Tanzania, and Uganda have done well in driving digital P2G payments. Of these, Kenya stands out in terms of (a) the number of P2G use cases that are payable via mobile money specifically and (b) the volume of P2G payments being made using mobile money. The central e-government platform (eCitizen), reports that over 90 per cent of digital payments are via mobile money,¹⁰ while 85 per cent of Nairobi City County payment wallet re-loads (eJijiPay) are via mobile money. This study attempts to draw insights about the implementation of P2G services that might be useful for mobile money providers and governments in others markets, and to highlight the opportunity for partnerships between mobile money providers and government.

In this paper, we will consider Kenya’s journey in digitising P2G payments and the role of mobile money. In **Section 1**, we look at the different models for P2G payments that have flourished in Kenya. In **Section 2**, we explore the perspective of users of P2G services by highlighting findings from our demand side research. For more information see **annexes 2 and 3**. Finally in **Section 3**, we consider recommendations for both government and mobile money industry players.

¹ World Economic Forum (2015). The Global Financial System: Policy Recommendations for the Future. http://www3.weforum.org/docs/IP/2016/FS/WEF_AM16_FGFS_TaskForce_PolicyRecs.pdf

² Dalberg Global Development Advisors (2016). Global Landscape Study on Digitising P2G Payments. Available at: <http://www.karandaaz.com.pk/wp-content/uploads/2016/12/Karandaaz-P2G-landscape-study.pdf>

³ World Economic Forum (2015). The Global Financial System: Policy Recommendations for the Future. http://www3.weforum.org/docs/IP/2016/FS/WEF_AM16_FGFS_TaskForce_PolicyRecs.pdf

⁴ World Bank (2012) Global Payment Systems Survey (GPSS). Available at: <http://www.worldbank.org/en/topic/paymentsystemsremittances/brief/gpss>

⁵ UN SDG Goal 17i strengthen domestic resource mobilization, including through international support to developing countries to improve domestic capacity for tax and other revenue collection

⁶ Ibid

⁷ Based on 2016 GSMA Global Adoption Survey findings

⁸ GSMA Mobile Money Programme internal analysis

⁹ GSMA Mobile Money P2G internal study 2016

¹⁰ Government Digital Payments Department, 2017. eCitizen Overview Presentation to BFA.

The key findings of the study are as follows:

- When a government takes the lead in digitising government services and payments, and creates the right environment for payment providers to succeed, mobile money can be a key driver of digital P2G payment uptake. In Kenya, the push for digitisation came from the highest office: the President had direct oversight over this effort and chaired an interagency taskforce on government payments. Additionally, the government assigned a dedicated budget for digitisation.
- Mobile money systems can adapt to support a number of P2G payment models based on the needs of individual government agencies. However, there is a need for government agencies to strike a balance when offering multiple payment options to ensure that they are harmonised to increase uptake.
- Government services still remain inaccessible for a number of underserved and marginal communities, but when P2G services are digitised end-to-end (including payment), accessibility and voluntary compliance is increased. Services previously not accessible especially in rural areas are now offered through Huduma centres and cyber cafes, and payments can now be made remotely via mobile money. Therefore, providers must consider the underlying socio-economic and socio-cultural elements that determine how people interact with services and technology in order to maximise adoption and usage among the underserved - the rural, less educated and female users.
- Well streamlined processes ensure a match between the payment transaction records and the government agency database, as well as proper reconciliation and settlement into government agency accounts. Mobile money payments are real-time, generate confirmation messages and have the ability to facilitate automatic settlement and therefore can reduce this problem if properly configured with the agency's systems.
- Within reason, citizens are happy to pay the fees for P2G mobile money services because the benefits of remote mobile payment outweigh the cost of the digital transaction. Mobile money can reduce a citizen's costs by more than 75 per cent.
- For government services that have lengthy application processes, citizens still prefer having some face-to-face interaction and assistance, even if they make the payment digitally. Well-designed apps, increased smartphone penetration, lower data costs and simple streamlined customer journeys could help to change this trend.
- Services are more likely to scale when stakeholders collaborate and jointly contribute to user education and awareness on how to access and pay for government services through digital channels.
- There is a viable business case for digitising P2G payments using mobile money. The different integration options offer alternatives that government agencies can consider from simple less costly direct integration to more complex central platforms. Whatever the case, Government agencies in Kenya have reported both increased revenue collections and citizen compliance as well as reduced costs, especially in the long run when less maintenance is required and as technology evolves. For mobile money providers, equipping customers with the ability to make P2G transactions expands the digital financial ecosystem, and potentially offers revenue growth.

Mobile money as a driver of P2G payments

Global trends in person-to-government (P2G) payment digitisation via mobile money

A growing desire to achieve greater efficiency, transparency and accountability is driving a global trend in government payment digitisation. Meanwhile, mobile money providers recognise the opportunity that expanding their product offering to include person-to-government (P2G) payments represents—this can help increase the customer base, as well as bring in large and regular transaction flows.

Now live across 92 emerging markets, mobile money is an accessible payments tool that can help accelerate governments' payment digitisation efforts by offering a fast, efficient and reliable means of collecting and disbursing funds. Mobile money providers have already collaborated with governments in at least 19 markets to digitise person-to-government (P2G) payments.

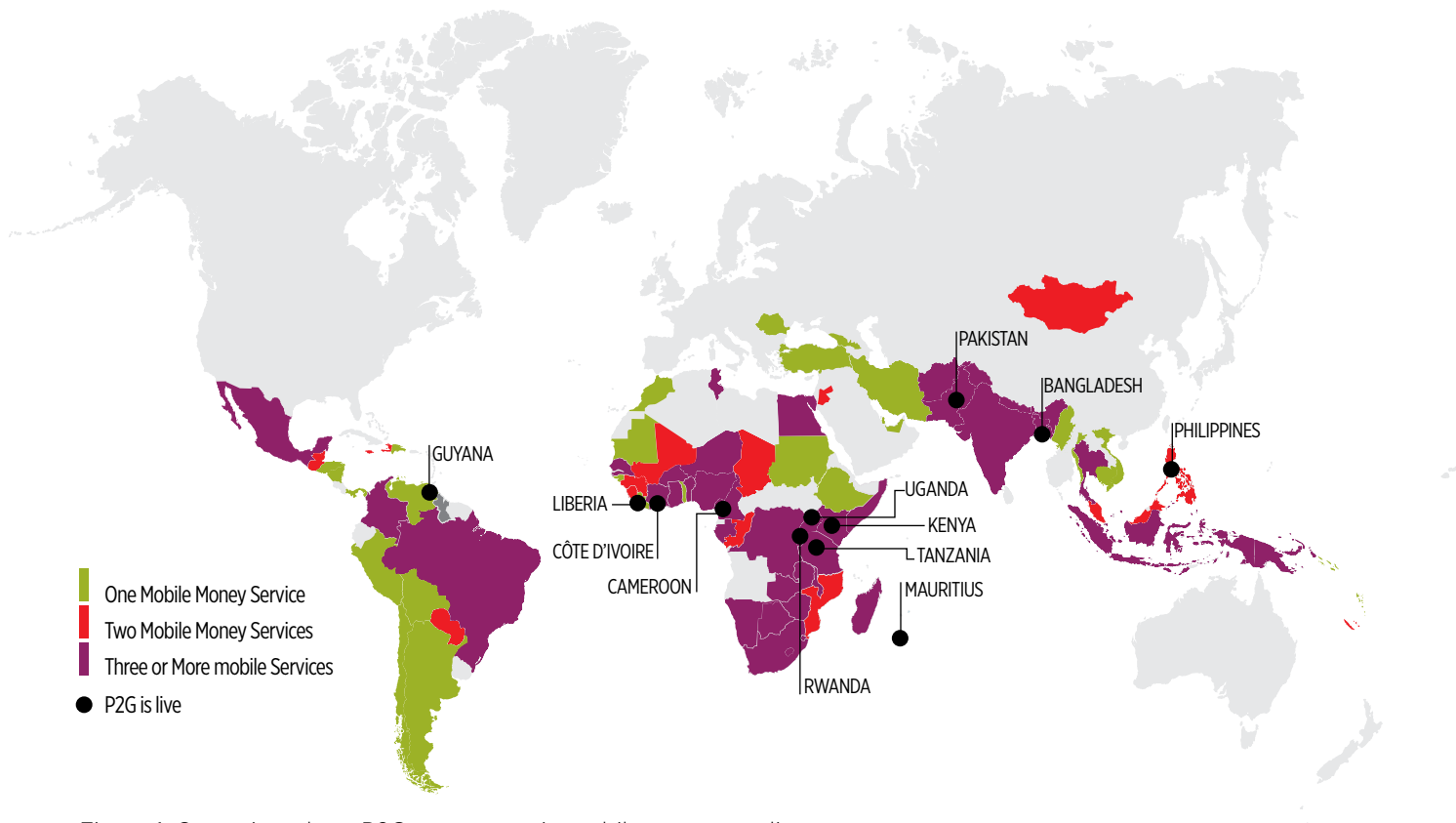


Figure 1: Countries where P2G payments via mobile money are live

Source: 2016 GSMA Global Adoption Survey

Kenya's person-to-government (P2G) payments digitisation journey

Kenya is the world's most successful mobile money market in terms of uptake and transaction volumes. In 2013, six years after mobile money first launched, 62 per cent of adults were using mobile money and services have continued to grow since.¹¹ Therefore, it is unsurprising that government agencies are already working with mobile money providers, directly or indirectly, to digitise P2G payments.

Kenya has committed to implementing digital services and to facilitating electronic payments in order to move to a 'cash-light' economy. This vision is enshrined in the country's ICT legal framework¹² and National Payments System regulations,¹³ as well as in the government's Vision 2030 plan.¹⁴ In November 2013, in a bid to implement electronic payments within government, the President of Kenya issued a directive mandating the digitisation of all government processes and payments.¹⁵

Traditionally, government services and payments have been largely manual, and paid for predominantly in cash through government-appointed banks. Until recent efforts to digitise P2G processes and payments, government fund collection was plagued by poor service quality, inefficiencies, and pilferage. By promoting digital P2G payments, the government's objective was to stop revenue leakages, and improve accountability, efficiency and transparency in public sector transactions.

¹¹ Financial Sector Deepening (FSD) Kenya (2013 & 2016), FinAccess Report. Available at: <http://fsdkenya.org/publication/finaccess2016/>

¹² Kenya Information and Communications Act (Act 2, 1998) PART VIA. Available at: https://www.unodc.org/res/cld/document/ken/1930/information-and-communications-act.html/Kenya_Information_and_Communications_Act_2_of_1998.pdf

¹³ Central Bank of Kenya (CBK), National Payment System Regulation. Available at: [https://www.centralbank.go.ke/images/docs/legislation/NATIONAL%20PAYMENT%20SYSTEM%20ACT%20\(No%2039%20of%202011\)%20\(2\).pdf](https://www.centralbank.go.ke/images/docs/legislation/NATIONAL%20PAYMENT%20SYSTEM%20ACT%20(No%2039%20of%202011)%20(2).pdf)

¹⁴ Kenya Vision 2030 is the country's development blueprint for 2008 to 2030.

¹⁵ Ministry of Information, Communications and Technology (2013). 'Ministerial Strategic Plan 2013 - 2017'. Available at: <http://www.ict.go.ke/wp-content/uploads/2016/04/MinistryStrategic.pdf>



Kenyan government spearheads P2G digitisation efforts

In 2014, following the launch of the government's Vision 2030 development plan, the Kenyan government spearheaded P2G digitisation efforts through two initiatives:¹⁶

1. **eCitizen:** In April 2014, a Government Digital Payments (GDP) Taskforce was created to implement a centralised electronic government service and payment gateway known as eCitizen.¹⁷ eCitizen is both an online portal and mobile app that citizens and businesses can use to access, apply and pay for more than 300 government services.
2. **Huduma:** In 2014, the Kenyan government established the Huduma Kenya Service Delivery Programme,¹⁸ whose main mandate was to roll out physical government service centres in all of Kenya's 47 counties to improve the accessibility of government services.¹⁹ At these centres, government agents from the respective ministries, departments and agencies provide government services to citizens, who then pay for these services using either cash or digital payment methods.

Four factors account for the success of these two initiatives in Kenya:²⁰

1. The government created a taskforce to pioneer digitisation. This taskforce reports directly to the President, and its membership includes representatives of the private sector, academia and the development community, who advise on best practice from Kenya and around the world.
2. A conducive policy framework already existed for ICT development and electronic payments, ensuring an enabling environment and fostering successful implementation of both digital services and payments.

3. A centralised government budget allocated to digitisation was increased (from 0.3 per cent to five per cent). Additional budget also came from other sources (Universal Services Fund²¹, National Research Fund²², Equalization Fund²³, development partners and various public-private partnerships).
4. An already established national ID system, pivotal for digital payment account registration, also contributed to the building of a universal single registration system for persons and companies.

P2G payments via mobile money prior to 2013 mandate

Prior to the 2013 government mandate, mobile money providers in Kenya had already identified P2G as a key opportunity and had begun working with a handful of government agencies in order to digitise specific payment streams. Mobile money providers had to engage and integrate with individual public institutions to facilitate the acceptance of mobile money payments. This was a difficult task because of the sheer number of government agencies, and the limited capacity that mobile money providers had to navigate complex institutional and structural processes. Nevertheless, several agencies, including National Hospital Insurance Fund (NHIF), Kenya University Joint Admissions Board (JAB), Kenya Power and Lighting Company, and National Social Security Fund (NSSF), became early adopters. All four enjoyed increased revenues, reduced costs and better fund visibility as a result.

¹⁶ Interview with Kenya ICT Authority

¹⁷ The National Council for Law Reporting (Kenya Law) (2014). 'Kenya Gazette No. 2177 - Establishment of Governance Structure for Huduma Kenya Service Delivery Programme'. Available at: http://kenyalaw.org/kenya_gazette/gazette/notice/143142

¹⁸ Ibid

¹⁹ Huduma Kenya (2016) 'Huduma Kenya Programme - About Us'. Available at: <http://www.hudumakenya.go.ke/about-us.html>

²⁰ Kenya ICT Authority (2014). 'Vision 2030 National ICT Master Plan 2014 - 2017'.

²¹ Universal Services Fund is administered and managed by the Communications Authority of Kenya to support widespread access to ICT services, promote capacity building and innovation in ICT services. It is based on 0.5 per cent of annual turn-over of ICT operators and service providers, including mobile operators.

²² The National Research Fund provides donations and grants to coordinate research and innovation for national development. It is allocated 2 per cent of Kenya's GDP every year.

²³ The Equalization Fund is used to provide basic services to marginalised areas in the country. It is allocated at 1.5 per cent of the annual national revenue.

Why digitise government payments via mobile money?

Digital payments can increase government revenues through improved visibility of transactions and improved financial management

When digital payments are coupled with efficient internal processes, government revenue collection can significantly increase. Government agencies attributed revenue increases to reduced pilferage, increased visibility of financial position, increased compliance (digital receipts discourage counterfeits) and overall process improvements that ease compliance. Globally, McKinsey estimates the digitisation of government payments could yield a US\$ 110 billion gain in government income over the next decade.²⁴ Furthermore, by 2016 it was estimated that the Kenyan government had made compliance cost savings of approximately US\$ 290 million through digitisation of services over a period of four years.²⁵

In Kenya, digitising payments has increased transparency and accountability, as well as traceability of funds collected, allowing government agencies to: (a) minimise fraud,²⁶ (b) perform quick and easy reconciliations between services rendered, amount paid and amount banked, (c) improve financial planning by understanding how each service contributes to the overall budget, and (d) retrieve records and settle disputes fairly. In turn, because payment records are easily available and retrievable, citizens have the confidence to make future digital payments.

Following the migration of their services to Kenya's e-Government platform, eCitizen, the Kenyan National Transportation Safety Authority (NTSA) doubled its revenue collection between July 2015 and October 2016—from an average of US\$ 1.1 million to US\$ 2 million per month.

The Nairobi City County also reported a 30 per cent revenue increase between 2014 and 2016, attributed to fund collection using digital means, the majority of which was through mobile money.²⁷ This evidence shows a virtuous cycle, whereby easier processes and payments induce more citizen adherence whilst also enabling better service delivery, leading to higher citizen engagement. Mobile money drives this cycle by making payments quick and convenient.

Citizens benefit from ease, convenience, speed, and transparency

Mobile money allows citizens to make P2G payments anytime, anywhere, and to receive a payment confirmation. Citizens have responded positively by using this payment channel over others. In our research, mobile money scored higher than all other P2G payment channels combined, with respondents reporting the key reasons for using mobile money as: ease (93 per cent), convenience (56 per cent), and speed (48 per cent). Respondents chose to use mobile money to avoid long travel times to government offices, waiting in long queues and various forms of corruption. eCitizen reports that over 90 per cent of digital payments on the platform are currently made through mobile money,²⁸ while over 90 per cent of eJijiPay wallet payments between 2014 and 2016 were made via the mobile channel (USSD and App).²⁹

²⁴ McKinsey Global Institute (2016). Digital Finance for All: Powering Inclusive Growth in Emerging Economies. Available at: <http://www.mckinsey.com/global-themes/employment-and-growth/how-digital-finance-could-boost-growth-in-emerging-economies>

²⁵ Interview and presentations by Government Digital Payments Department

²⁶ eCitizen reported that of the 4.7 million transactions processed, just 50 were fraudulent

²⁷ Interview with Jambo Pay

²⁸ Government Digital Payments Department, 2017. eCitizen Overview Presentation to BFA.

²⁹ Interview with Jambo Pay

Citizens appreciate transparency and convenience of mobile money P2G payments

“Before we used to go to the bank... so after they brought the [mobile money] pay bill it's very easy, you go to the office, they confirm that message and you are told you have already paid”

- Paul

“Let's say you are in Nairobi and the electricity is due. I don't have to go there, I can just pay in my house, it's efficient”

- James

“I don't have to get out there. I will just [pay using mobile money] when I am here, instead of going to the bank to line up until the next day”

- Michael

Source: Focus group participants in Nairobi

Short-run government investment in digitisation is required to reap long-term benefits

Coupling both payment and process digitisation within government offers a high return on investment. However, substantial investments are required, particularly in the initial stages of digitisation. These costs include both CAPEX (purchase of hardware equipment, software, servers, etc.) and OPEX (salaries, transportation, commissions, etc.). The digitisation of existing processes is also required, including the conversion of old paper records to digital format.

When asked if the cost of implementation of digital services in government was high, most government agencies agreed, but did not see it as a deterrent. In fact, those interviewed were able to demonstrate, based on the amount of additional revenue they collected during a short duration since launch, that there was indication of a high return on investment in the long term when systems are properly implemented. The Kenyan Ministry of Lands, for example, undertook a countrywide drive in 2014 to digitise millions of land records to improve processes which have historically been a big challenge and have led to non-compliance by citizens. This initiative led to a 1,125 per cent rise in revenue collections³⁰. Furthermore, the NTSA benefited from a compliance cost saving of US\$ 18.2 million on 1.6 million eCitizen transactions; costs were saved on receipts, forms, documents and personnel.

³⁰ Accenture Development Partnerships, 2013. Digitising Government Payments, Kenya Study. Available at: http://icta.go.ke/pdf/Digitizing%20Govt%20Payments%20Kenya%20Study_FINAL.pdf

Digitisation of P2G payments can support higher-skilled employment

Feedback from most government agencies in Kenya indicates that digitisation of government services has not resulted in mass public sector layoffs, but rather the upskilling of existing staff, and the employment of more skilled ICT professionals. In most government agencies, the departments that have required additional staffing include customer service, finance, accounting and IT. Some examples from this research include:³¹

- NTSA staff who were previously involved in cash collections were retrained and redeployed to other roles such as vehicle inspection centres to cater for a spike in the number of citizens requesting various services.
- At the NHIF, mobile money reduced the workload of cashiers, inspectors and other branch staff involved in cash collection. These staff now focus on facilitating new registrations, responding to customer queries, quality control (inspections at hospitals to ensure that services are up to standard) and processing claims.

- Following the launch of 'Faini chap-chap', a mobile money-based P2G collection instrument for court fines, the Judiciary reported no decrease in staffing. In fact, the process mapping undertaken to prepare for digitisation revealed staffing gaps prompting some departments (e.g. accounting) to increase staff levels.
- At the ICT Authority, the number of staff and their skill sets expanded to support the implementation and migration of government agencies to the eCitizen platform. Staff pitched the benefits of the service, managed the migration of projects and supported customer service.
- Other additional forms of employment were created at Huduma service centres and cyber cafes which offer customers support in getting online and navigating the digital payments process.

Overall, digitisation simultaneously improved customer service quality and staff motivation by raising employee skill levels. It also reduced corruption and fraud by minimising opportunities to interface with cash. When transactions are traceable, the transparency created by the real-time payment records promotes improved financial management, which in turn leads to increased revenues and reduced costs.

³¹ Source: Interviews with officials from respective government agencies.



SECTION 1

Adaptable mobile money systems support different P2G payments models

In Kenya, mobile money providers were able to adapt their platforms to meet the needs of different government agencies. In our study of the Kenyan market, we came across four distinct models in which payments via mobile money were adopted (See **Table 1** and **Annex 1** for more details on these models):

1. Direct integration between mobile money provider and government agency
2. Third-party integration through a payments aggregator
3. Centralised e-government platform connecting multiple government agencies
4. Physical service centres where government agencies provide assisted government services

It is important to note that this study demonstrated that multiple operational models are viable in terms of their ability to digitise P2G payments—in fact, some government agencies receive mobile money payments via more than one model. For example, NHIF receives payments via direct integration, via government agents accepting proximity mobile money payments, and via an aggregator. The above notwithstanding, centralised services (i.e. e-government platform and service centres) showed a higher potential to scale up both services and payments because of their ability to aggregate multiple government agencies, making it easier for citizens to access more services.



Table 1: Comparison between models used by mobile money providers for P2G

Description	1. Direct integration between mobile money provider and government agency	2. Third party integration through a payments aggregator	3. Centralised e-government platform connecting multiple government agencies	4. Service centres where government agencies provide assisted government services
	A government agency seeking to digitise P2G payments may do so by integrating directly with mobile money and other payment providers.	A third party payments aggregator acts as a bridge between a payments provider and a government agency, seamlessly collecting payments on behalf of the agency via one or more payment channels. ³²	A central government platform acts as a gateway for multiple government agencies to provide services and receive payments via different channels including mobile money, card and bank transfers. ³³	Government-owned service centres provide citizens with centralised face-to-face interaction points. These centres offer government services and facilitate payment for those services.
Set-up	<ul style="list-style-type: none"> Mobile money provider assigns government agency with unique digital 'business collections' account to facilitate collections through a 'pay bill' number. Citizens use unique 'pay bill' number to pay for specific government service using their mobile money account, which may include an additional reference account number to identify the service. Mobile money provider may give government access to online mobile money system to facilitate reporting, reconciliation and settlement. 	<ul style="list-style-type: none"> Mobile money provider assigns third party aggregator with unique digital 'business collections' account to facilitate collections through a 'pay bill' number. Citizens use unique 'pay bill' number to pay for government service using their mobile money account, which may include an additional reference account number to identify the service. Mobile money provider may give the aggregator access to online mobile money system to facilitate reporting, reconciliation and settlement. 	<ul style="list-style-type: none"> Mobile money provider assigns e-government provider with unique digital 'business collections' account to facilitate collections through a 'pay bill' number. Citizens use unique 'pay bill' number to pay for government services using their mobile money account, which may include an additional reference account number to identify both the service offered and the government agency offering it. The e-government platform automatically links to mobile money platform through APIs to aggregate the necessary information required to reporting, reconciliation and settlement. 	<ul style="list-style-type: none"> Government agents leverage existing service and payment platforms (e.g. e-government platform, or individual government agency online systems) to serve customers at physical centres. Citizens use unique 'pay bill' number to pay for government services using their mobile money account, which may include an additional reference account number to identify both the service offered and the government agency offering it. The service centre only facilitates customer interactions and does not participate in back-end reconciliations and settlements.
Reconciliation	<ul style="list-style-type: none"> Where transaction volumes are low, government may manage reconciliation manually. Alternatively, an API may be used to facilitate automatic, real-time reconciliation. 	<ul style="list-style-type: none"> Aggregators handle large volumes of transactions and therefore invest in automation. Most have APIs or build middleware to facilitate the reconciliations. 	<ul style="list-style-type: none"> Since the e-government platform facilitates collections of payments on behalf of several government agencies, each agency collection is identified by a unique invoice number. Back-end systems facilitate automatic reconciliation based on allocations made to each government agency's specific payments account. 	<ul style="list-style-type: none"> Where mobile money payments are made, the service centre does not participate in the reconciliation or settlement of funds. Such centres do not own a mobile money payments account. They simply facilitate service provision on behalf of government agencies.
Settlement	<ul style="list-style-type: none"> Once collected in the mobile money account, settlement of funds can be initiated by the government agency using the online mobile money system. Depending on capabilities, settlements can also be automated. Funds are transferred to the government agency's bank account within an agreed time period. 	<ul style="list-style-type: none"> Once collected in the mobile money account, settlement of funds can be initiated by the aggregator using the online mobile money system. Funds are settled into the government agency's assigned bank account as per agreed terms. Government agency should have full visibility of accounts and payments. 	<ul style="list-style-type: none"> Once collected in the mobile money account, settlement of funds to treasury can be initiated by the e-government provider using the online mobile money system. Funds are settled into the respective government agencies accounts in treasury. Government agencies have full visibility of their accounts and payments through the e-government platform. 	<ul style="list-style-type: none"> Once collected in the mobile money account, settlement of funds to treasury can be initiated in the back-end by the e-government provider or the agency using the online mobile money system. Funds are settled into the respective government agencies accounts in treasury. Government agencies have full visibility of their accounts and payments through the e-government or their own platform.
Advantages	<ul style="list-style-type: none"> Relatively fast, simple and easy set-up from a technical perspective because the process of setting up a mobile money collections account can take less than one week. Where APIs are used, reporting, reconciliation and settlement happen real-time. 	<ul style="list-style-type: none"> Functions such as dispute resolution and customer service can be outsourced to the aggregator. Several government services can be integrated simultaneously, reducing the need for multiple integrations. Aggregators can integrate with different payment service providers, providing a ready-set environment for government agencies to leverage. 	<ul style="list-style-type: none"> One portal convenes multiple government services from various government agencies, i.e. it's a 'one stop shop' for payments. E-government platform integrates with different payment service providers, providing this ready-set environment for government agencies to leverage. Reconciliation, reporting, settlement are all seamless and automated. 	<ul style="list-style-type: none"> Through service centres, government services are extended to more marginalised groups – including rural, women, and less literate – because of physicality of service centres. Service centres play an important role in educating users on how to use the services, including how to make mobile money payments.
Disadvantages	<ul style="list-style-type: none"> Mobile money provider needs to make individual integrations with each government agency – this may be time consuming and costly especially because government agencies have different processes. APIs require investment, time and technical expertise to put in place. Without APIs in place, manual reconciliation, reporting, settlement is error-prone and lengthy. 	<ul style="list-style-type: none"> Set-up usually takes three to six months, longer than the direct integration model. Since the aggregator is a business entity, they will usually structure their models around revenue sharing to cover their costs. This could result in high transaction fees for clients if costs are passed onto the customer.³⁴ 	<ul style="list-style-type: none"> May be a long-term project requiring a lot of coordination, time and money to set up. These costs may be passed on to the customer. The e-government system has some standardised mechanisms. Some government agencies may find it difficult to adjust processes in order to adhere to these standards. This model is most dependent on multiple stakeholder political processes to gain traction. 	<ul style="list-style-type: none"> Physical centres still accept cash payments, leaving room for leakage, and slowing down the move to a fully digital ecosystem. Government agents are reliant on third party platforms (e-government, individual government agency) and therefore have limited control, especially in cases of platform downtime.

³² CGAP (2016). 'Understanding the East African Aggregator Landscape'. Available at: <https://www.slideshare.net/CGAP/understanding-the-east-african-aggregator-landscape>

³³ e-Citizen, (2015). e-Citizen Overview. Available at: <https://www.ecitizen.go.ke/index.html>

³⁴ CGAP (2016). The Business of Aggregators: A Changing Market, <http://www.cgap.org/blog/business-aggregators-changing-market>

SECTION 2

Insights on P2G payments in Kenya

Kenyan citizens' experiences and perceptions offers critical lessons for government and providers pursuing the digitisation of P2G payments through mobile money. This section covers the key findings from demand-side research, which included qualitative interviews with users and non-users of mobile money to pay for government services. This was complemented by in-depth interviews with government agencies to understand how they use mobile money to collect payments digitally for the services. A full description of the methodology can be found in **Annex 4**.

Digitising government services end-to-end can both increase voluntary compliance and extend the reach government services to more citizens

Evidence from Kenya shows that when P2G payments are quick and easy to make, voluntary compliance increases substantially. Citizens appear to appreciate the ability to access a full range of services online, as well as to pay from anywhere, 24 hours a day, rather than having to visit a government office. For example, both NTSA and NHIF have seen citizen usage of the service steadily increase since offering online services and since accepting digital payments in 2014.



National Transport Safety Authority (NTSA): Mobile money drives increased compliance from citizens

The NTSA is charged with licensing drivers and vehicles, and collecting associated fees. The NTSA was the first government agency to use Kenya's eCitizen platform back in 2014, and now only accepts payment through the portal. Our consumer research confirmed that citizens highly appreciated the fully digital driver's license renewal process. After completing the online application process and making the payment, drivers simply print out a sticker to add to their existing license.

This simple process has led to a substantial increase in the number of vehicle inspections (appointments are now made, re-scheduled and paid for online), which jumped from 45,000 in 2014 to 150,000 in 2016. Overall, revenues for the NTSA doubled between July 2015 and October 2016, from about US\$ 1.1 million to US\$ 2 million per month.

The NTSA has saved money on compliance costs, sticker printing and teller staffing. The huge increase in citizen usage has resulted in increased funding and staffing of call centres and inspection centres. Higher revenues have resulted in better services for customers, with more correctly licensed drivers and inspected vehicles.

Time period	Automated service offering	NTSA compliance cost saving (\$US)	Number of end-to-end transactions
Aug 2014 - May 2016 (21 months)	Provisional Driving License	\$8,437,353	350,287
Aug 2014 - May 2016 (22 months)	Driving Test Booking	\$4,427,293	300,140
Aug 2014 - May 2016 (22 months)	Driving License Renewal	\$2,574,762	648,100
Aug 2014 - May 2016 (22 months)	Interim Driving License	\$2,728,860	255,009
TOTAL		\$18,168,288	1,553,536

Table 2: NTSA compliance cost savings

Source: Kenya Investment Climate Program II Impact Study 2016 35

National Health Insurance Fund (NHIF): Mobile money drives increase in voluntary contributions

NHIF is a government agency that provides health insurance to all formal sector workers (based on compulsory contributions made through employers) and also offers a voluntary payment scheme for informal sector workers. In 2009, NHIF partnered with Safaricom's M-PESA to give its voluntary payment subscriber base the opportunity to make monthly insurance contribution payments via mobile money. Since then, voluntary payment subscribers have grown from less than 440,000 to about 2.3 million as of 2017 (a 500 per cent increase).

Today, the majority of monthly voluntary payments are made via mobile money. Prior to its introduction, people had to visit NHIF branches, which was time consuming, and the entire process was cash- and paper-based. Mobile money has reduced the workload so branches can now focus on facilitating new registrations, responding to customer queries, quality control and processing claims.

Previously, after a payment was made at a branch (or collected in the field in the case of new registrations), there was a lag in flow of information and funds to NHIF central systems. The transition to mobile money has enabled NHIF to have better visibility over funds and has also reduced leakage. This helps NHIF facilitate timely pay-outs to hospitals and other service providers, which has resulted in more healthcare providers accepting NHIF customers.

P2G payments digitisation has developed at different rates and through different models, yet some degree of harmonisation of customer experience would improve uptake

Multiple P2G models have emerged in Kenya (as detailed in **Section 1**) because different government agencies must meet their own unique internal needs and those of citizens using their services. Mobile money providers need to be creative in positioning their services to complement the government agency's processes: offering a superior payment experience with minimum points of failure and resultant disputes, whilst maximizing the revenue collection potential for government agencies.

Other than potentially duplicating government costs, the main drawback of having a variety of P2G service models is that citizens must interact with P2G payments in different ways, experiencing various interfaces and several different customer journeys. In the focus groups, citizens reported that this caused confusion, and that they found it challenging to memorise multiple 'pay bill' numbers.

A balance needs to be struck between keeping the user journey simple and consistent, and designing P2G services that meet the needs of different government agencies. In Kenya, the Digital Payments Taskforce comprised representatives from multiple ministries which created the roadmap for digitisation of services down to the ministry level. This ensured faster implementation and better coordination between the ministries, payment providers and regulators. The result was the eCitizen platform which was accepted by all government agencies as the central platform for processing government services, currently with about 300 live services and a roadmap for digitising 5,000 more by 2020.

Digitised P2G services have not fully met their potential to reach the underserved

Even where P2G payments using mobile money scale, certain disparities still need to be addressed, including usage gaps based on gender, education level and employment type. Results from the telephone interviews suggest that current users of digital P2G services tend to be male, urban and educated. This in part reflects that government services are skewed towards this population (for example, more driver licenses are issued to men; employment-related services favour the urban and more educated population; and some services like NHIF are based on "head of household" registrations which are more likely to be male); nevertheless there is still a gender gap in usage of P2G payments.



Profile of the Kenyan user of government services

In our survey, about 40 per cent of adults surveyed used government services and paid directly for the services themselves, while 26 per cent used the services but some else paid for them. More than 70 per cent of those who use mobile money for government payments have a high school education (or more). They are 70 per cent male, which is higher than the proportion of men who use all government services (about 60 per cent).

Usage of mobile financial services in Kenya is 8 per cent more male than female and 19 per cent more urban than rural. The highest proportion of users are employed (93 per cent), business owners (83 per cent) and in casual employment (63 per cent).³⁶

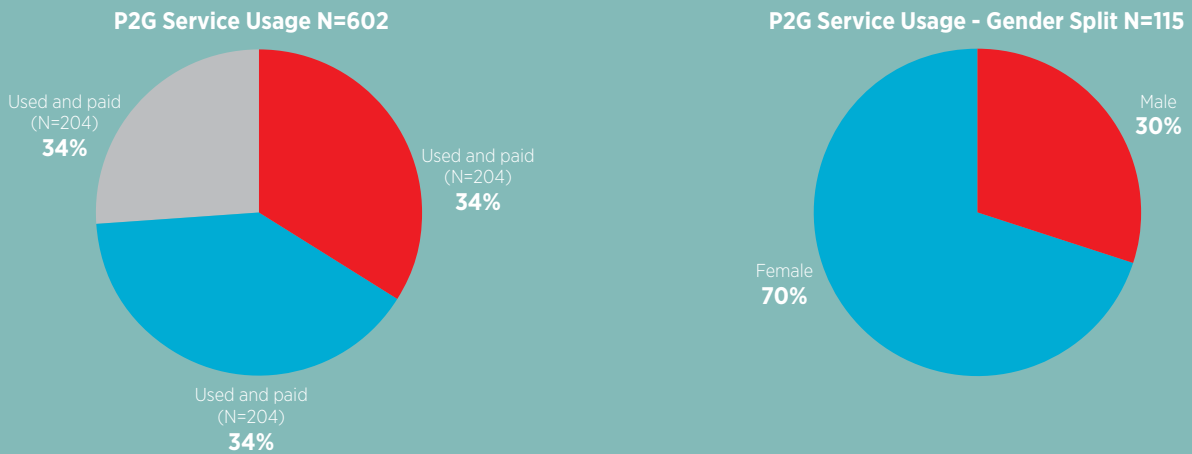


Figure 2: Users of government service making payments using mobile money

Source: Phone survey of Kenya P2G users, 2017

eCitizen registrations are still relatively low at only 10 percent of the adult population. Further to this, it presents a similar gender disparity, with twice as many male registrations than female registrations on average between December 2015 and December 2016.

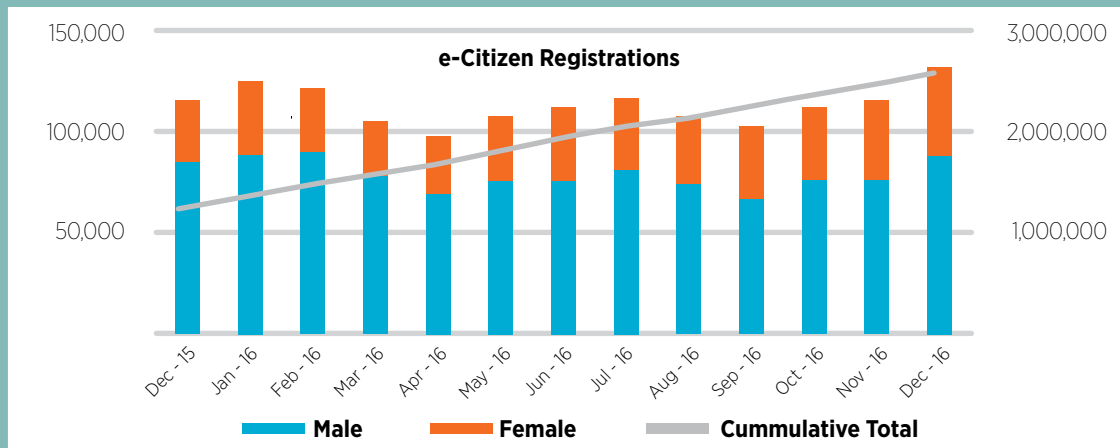


Figure 3 e-Citizen registrations until December 2016

Source: eCitizen

Thus more needs to be done to ensure women, rural and the less educated are able to benefit from digital P2G services and payments and all stakeholders (government agencies, policy makers, payment providers, etc.) must consider the underlying socio-economic and socio-cultural elements that determine how people interact with services and technology. With this information, they will be better placed to advise on and design digital processes that most citizens find easy to understand and interact with.

³⁶ FSD Kenya, 2016. 2016 FinAccess Household Survey.

Payment confirmation and reconciliation is critical and must be addressed early

Citizens expressed a loss of confidence in paying for P2G digitally when they faced payment platform issues. The main concerns arise when citizens are denied government services because payments have not been reconciled with their accounts in a timely manner, due to system or process failure on either the payment provider or government agency's side. This scenario erodes citizen trust and causes operational difficulties for the government agency trying to maintain accurate payment records. Problematic reconciliations also consume time and effort, and can sometimes be costly. Where such issues exist, it may take weeks or even months to resolve if the correct payments are not traceable, leading to service denial.

For citizens using mobile money, the confirmation message serves a critical function as a digital receipt. Yet, delays in receiving confirmation messages and delayed system updates were challenges they still faced frequently. In some cases, although a confirmation message was received, the system was not updated to reflect that the payment had been made and the service thus remained inaccessible.

Citizen frustrations with inefficient confirmation processes

"To me [the confirmation message is] very important—like there are services that I cannot pay using the [phone] ...their systems are not well synchronised... so you need that physical receipt"

- Walter

"I remember the first time I was given...a very long number... to go and pay KRA [Kenya Revenue Authority] fees. I didn't trust it because even after paying on that number, it didn't tell me I had paid to KRA. Confirmation...came through the email"

- Milkah

"Maybe some of us have also grown up where you see receipts being kept on records so you believe in them more ... so that when any day I will be told there are no records, I produce my copy."

- Rispa

Source: Focus group participants

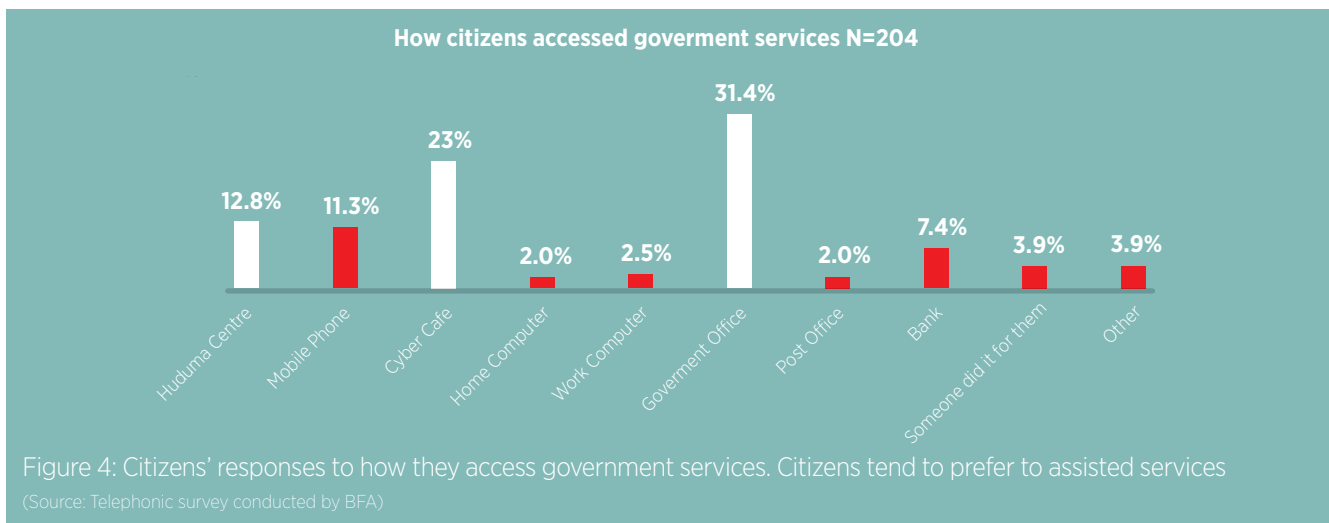
A number of preventive and detective controls need to be put in place to minimise reconciliation manipulation, which is one of the highest risks to successful P2G digitisation via mobile money. The table below shows some of the problems that might be experienced in reconciliation and recommends some mitigations:

Reconciliation issue type	Impact	Possible mitigation
Mismatches in transaction details between the mobile money transaction records and the government agency database	Internal Risks: <ul style="list-style-type: none"> Fraud may go undetected e.g. internal staff channelling funds to other accounts. Undetectable collusion in money laundering e.g. internal staff accumulate funds into an 'unclaimed funds' account. Where processes are broken, internal staff will have to deal with more frustrated customers. Incorrect tracking of payment reversals may lead to revenue losses for the government agency. Double counting of payments may lead to revenue losses for the government agency. 	<ul style="list-style-type: none"> Segregation of payment collections and management duties to reduce error or fraud in high risk procedures. Employee training on roles and responsibilities Short term investment in Instant Payment Notification (IPN)³⁷ hub can help automate some administrative functions related to payments and report them real time. The use of mobile money APIs to allow integration with the mobile money system can have built-in functionalities such as account validation. Set threshold limits to reduce risk associated with AML/CFT, e.g. not allowing any account to receive more than a certain amount. If it happens, it is flagged for investigation.
	External Risks: <ul style="list-style-type: none"> Customer pays into wrong account or pays wrong amount, leading to incorrect posting of payments and probable delay or denial of service. Clients remain wary of digital receipts, and continue to place high value on printed receipts, creating inefficiencies. 	<ul style="list-style-type: none"> Creating payment systems that only allow exact amount to be paid, and/or exact transaction number to be entered, with account validation from both system databases before service is offered. Customer awareness campaigns to increase customer education with respect to how to make payments correctly.
Issues of account settlement	Risks: <ul style="list-style-type: none"> Third party entity managing government agency fund collection is not repatriating funds to the agency's commercial bank account or to its treasury account. This may pose a challenge in accounting - e.g. if the agency has no access to or control of the trust accounts this may lead to conflict and/or revenue loss. 	<ul style="list-style-type: none"> Government agency should have full control of the revenues collected, and visibility of the trust and holding accounts. Remittance rules to ensure that a fixed time is set for settlement, determined by threshold limits and time

Table 3: Impact of reconciliation issues and possible mitigation options

For government services with lengthy application processes, citizens still prefer face-to-face interaction and assistance, even if they make the payment digitally. Well-designed apps, increased smartphone penetration, lower data costs and streamlined customer journeys could change this.

Many citizens still prefer face-to-face interactions when accessing government services, either via Huduma centres, government offices or informally at internet cafes (internet cafe staff help the citizen to access government services via the eCitizen online portal).



Twice as many people accessed government services through a cyber cafe than through a mobile phone. However, results show that for people accessing government services without assistance, mobile is significantly more popular (11.3 per cent) than a fixed work or home computer (4.5 per cent).

Physical service centres, such as Huduma centres and cyber cafes, will continue to play a very important role in government service delivery in Kenya because many citizens prefer having assistance, especially when using the more complex services, such as filing tax returns. Our demand-side research showed that citizens were happy to pay a fee to the cyber cafe attendant in order to avoid errors in the application or registration process. Offering government services has become an additional revenue stream for cyber cafes, which traditionally make revenue from internet usage, printing documents, photocopies and sometimes document storage. Despite being a crucial source of support for citizens, most cyber cafe workers stated that they had not been directly trained by government agencies. Consequently, many could not assist citizens with all of the government services available online.

Even where citizens have access to a self-service, like with parking fees through eJijiPay, although they are aware of the benefits of making the payments digitally, a large number may still make cash payments through parking attendants rather than through the mobile app. This is especially so when they are unable to access the app due to data costs, or system unavailability, perceived complex navigation, or lack of awareness. Some are only familiar with the services they most frequently use and not aware of a range of other services they could access through the same channel.

In the long term, the key to enabling uptake of fully digital P2G could be: (a) access to smartphones; (b) innovative data pricing models or downward pressure on costs; (c) easy-to-navigate mobile application software complete with in-built payment sessions; and (d) payment process integration into the service process. These factors will give citizens the confidence to complete end-to-end P2G applications and transactions, without leaving a session or memorising several account numbers for the different government agencies.

Services are more likely to scale when stakeholders collaborate and jointly contribute to education and awareness of accessing and paying for government services through digital channels

Marketing and communication of digital P2G services should have two aims: government agencies raise awareness and educate citizens on how to access the services and payment providers create awareness of how to pay for the services. A lot more effort in citizen education is particularly important where application processes are complex or must be completed on a different platform prior to a mobile money payment. Focus group participants emphasised the need for education and information to give them the confidence to use the system. Owing to their experience in mass-market communication, mobile money providers may be well placed to do this by collaborating closely with government agencies. In Kenya, Safaricom has invested heavily in the marketing and communication of government payments through M-PESA. They have used fliers and pull-up banners at government agency premises. These are also distributed and displayed in queues at government agency locations where the services are offered.

Additionally, radio and television ads, SMS blasts and print media are used (See **Annex 5** for some examples of social media campaigns). The government also invests in online social media campaigns and official websites.³⁸ The e-government portal catalogues available services and provides step-by-step instructions for how to access and pay for services. Displaying the respective cost of each service can also increase trust due to transparency.

Dedicated resources from both the payment providers' and government's side can be instrumental in initiating and closing government engagements in digitising payments. Both mobile money providers Safaricom and Airtel reported having dedicated government relations staff who manage end-to-end relations with specific sectors within government.

On the government side, there are also over 15 dedicated staff managing and supporting the implementation of eCitizen services, as well as change management within agencies. For example, in 2016 eCitizen staff trained embassy staff, border post officials, driving test centre inspectors, the Ministry of Lands and Department of Criminal Investigation (DCI) following the implementation of their services on eCitizen platform.

Citizens discussing preferred information and education channels

"Especially the elderly group need to be educated and informed well..."

- **Antony**

"In rural areas, people listen to the radio a lot"

- **Mary**

"Those vernacular radios make it so everybody can hear and understand in local languages: Inooro and Kameme [Radio Stations]"

- **John**

"In rural areas, they invite people for groups. As ladies we have a lot of groups and they try calling them and educating them. They also use churches."

- **Halima**

Source: Focus group participants

Within reason, citizens will pay fees for P2G services because the benefits outweigh the costs. Mobile money can reduce a citizen’s costs by more than 75 per cent.

Respondents attached more value to the benefits of accessing services digitally and making corresponding payments via mobile money than to the associated transaction fees. They recognise that, previously, they had to get to major administrative government towns or centres to access government services and make payments. On certain occasions, this required making the journey more than once, especially if the service was not offered in full the first time.

Many travelled long distances, incurred significant transport costs and stood in long queues as a result (see Table 3 for an estimated breakdown of these costs). Now they can access services on their mobile phone, home computer, or get assistance at a nearby cyber cafe or Huduma Centre before making the payment conveniently via mobile money, bringing down the total cost of accessing government services via digital means.

Citizens appreciate the convenience factor of making P2G payments via mobile money

“...we used to go to Thika or Nairobi, or you send someone and you have to give them money”
- John

“And when you go to Nairobi you will use bus fare and eat lunch”
- Michael

Source: Focus group participants in Murang'a – 73 km from Nairobi

Activity	Access of government service at physical office at government agency	Average cost (US\$)	Access of government services via digital means	Average cost (US\$)
Travel distance	1 - 100km	5	1 - 100km	1
Other travel / access costs	Food & accommodation	5	Internet / Cyber Cafe	0.5
Time waiting in queue, doing transaction or making return visits	Opportunity cost	2	Opportunity cost	1
Documents	Printing / photocopy	1	Printing / photocopy	0.5
Payment transaction fees	Cash	0	Mobile & Other	0.7
Assistants (goodwill)	Tip	5	Tip	0
Total		16		3.7

Table 4: Using mobile money payments is considerably cheaper (Derived from Focus Group Discussions conducted by BFA)

However, for more regular, smaller payments (such as the US\$ 5 monthly contributions to the NHIF), citizens started to perceive the fee of US\$ 0.20 to 0.70 (or 5 to 15 per cent) as excessive. To avoid this, mobile money providers should evaluate their fee structure to ensure that they are appropriate for lower value transactions in order to encourage more uptake of services. Additionally, government agencies could consider subsidising the transaction fees, given the potential for government cost savings and increased collection by using digital payments.

In order to achieve the full potential to scale digital P2G services and payments, all stakeholders should work together to ensure that digitisation does not just stop at implementation or launch of services. They should make it a series of continuous processes aimed at streamlining, increasing efficiency and continuously improving user experience both internally (staff) and externally (citizens). The benefits that come with evolution of technology such as convergence of services and cost reduction should be passed on to citizens in order to increase their compliance. There is potential to improve the smartphone/web based user-experience to support consumer uptake.

SECTION 3

Recommendations for successfully scaling P2G via mobile money

As more governments in emerging markets start to recognise the economic value and efficiency of digitising P2G payments, it is important to reiterate that the success of P2G digitisation lies in the goodwill of central governments and political leadership. Once goodwill is established and objectives are common and clear, policy makers and government agencies must introduce structural and cultural changes to create a conducive environment for digital P2G payments. Payment service providers can leverage their existing technology to facilitate the digital P2G payments. Yet reaching scale, both in terms of adoption and usage, can only work if citizens' needs and behaviours are taken into account, to ensure that they benefit from a quicker, safer, more efficient way of making payments to government entities.

As demonstrated in this Kenyan case study, mobile money providers can play a key role in digitising existing and future payment streams between governments, individuals and businesses by offering faster, more secure, less expensive, easy to use and more transparent payments. There are a number of recommendations for both governments wishing to digitise P2G payments, and mobile money providers wishing to work with government agencies to facilitate payments.

Recommendations for governments

Take the lead and empower a dedicated team

For digital P2G services to scale, a clear governance structure and implementation plan must be in place, as well as a collaborative network consisting of all participating stakeholders. In Kenya, the government created an overarching digital policy for government agencies to follow, and then set up a dedicated team to lead the integration efforts.

Allocate budget for digitising internal processes

Governments should consider allocating centralised government budget to drive a national digitisation agenda. This will accelerate digitisation, even amongst government agencies that lack the funds to implement projects themselves. In Kenya, a centralised government budget is allocated to digitisation projects. This was increased from 0.3 per cent to 5 per cent, with additional budget also coming from numerous other sources (Universal Services Fund,³⁹ National Research Fund,⁴⁰ Equalization Fund,⁴¹ and development partners and various public-private arrangements).

³⁹ Universal Services Fund is administered and managed by the Communications Authority of Kenya to support widespread access to ICT services, promote capacity building and innovation in ICT services. It is based on 0.5 per cent of annual turn-over of ICT operators and service providers, including mobile operators

⁴⁰ The National Research Fund provides donations and grants to coordinate research and innovation for national development. It is allocated 2 per cent of Kenya's GDP every year

⁴¹ The Equalization Fund is used to provide basic services to marginalised areas in the country. It is allocated at 1.5 per cent of the annual national revenue.

Understand and work to overcome internal and external resistance

Government processes are complex and all stakeholders need to be aligned to manoeuvre through these complexities to transition to digital services. Once the government takes the lead, it should also create an enabling environment for digitisation by understanding and removing any hurdles. Such hurdles may include unsupportive policies, vested interests from procurement and collection departments, external political pressures and inefficient internal processes due to deeply entrenched cultures.

Government agencies in Kenya cited entrenched manual internal procedures as a hindrance to digitisation. In some institutions, compliance officers still require a stamped receipt and some agencies are not legally able to accept electronic receipts.⁴² Performance measurement may also work against digitisation if KPIs are linked to the collection of cash at outlets.

Find a balance between simple user experience and digital platforms that meet the needs of individual government agencies

Government agencies, mobile money providers and government stakeholders need to collaborate to identify the most efficient processes and systems that will facilitate payments, taking into account the trade-offs between ease of use by citizens and efficiency of services by agencies. In Kenya, four models have emerged, each requiring citizens to access P2G services and make digital payments in different ways—citizens noted that this was confusing.

Cater to citizens who cannot complete end-to-end services online by training formal and informal ‘helpers’

Because the payment of P2G services is often linked to entering details and filling out forms online, it is more complex, and thus, governments should ensure staff or informal helpers (e.g. cyber cafe workers) are available to assist citizens. Results showed that many Kenyan citizens require assistance when paying for government services, particularly women and rural customers. A large proportion cited cyber cafes (41 per cent), government offices (29 per cent) and Huduma centres (16 per cent) as main points of help. As citizens learn about the P2G process through the helper, trust and confidence should increase. Three years since launch, eCitizen has less than 10 per cent of the adult population using its portal; meaning there is potential to both increase awareness of the portal and improve the user experience to support citizen uptake.

Continue to improve fee transparency and innovate on pricing to encourage digital P2G uptake, especially for lower-value transactions

Although accessing and paying for government services digitally is convenient, some may perceive it to be expensive, especially for lower-value transactions. Additionally, the cost of internet data may be prohibitive to certain segments of the populations attempting to access government services via a mobile phone. However, evidence suggests as demonstrated in our findings that the cost of a mobile money transaction can actually be cheaper than the alternatives—savings on both time and travel costs must be strongly highlighted and reiterated. Once the return on initial investment is achieved, government agencies may absorb some of the citizen transaction costs themselves, in order to encourage more digital payments.

Ensure that marketing campaigns cover (a) application processes for P2G services, (b) payment options, and (c) mechanisms to seek recourse

Government agencies said it was critical to organise campaigns to promote citizen awareness, but resources were a constraint. Agencies that have cooperated with mobile money providers to promote their services have seen successful uptake. Difficulties rectifying problems, such as erroneous payments, can be a major barrier for making digital payments—marketing campaigns should address these and decrease such barriers.

Get citizen feedback throughout the process

To ensure that P2G services are widely used and well-appreciated, it is important to invest in methods of soliciting citizen feedback. Feedback should be sought both during the design of the service and then regularly once the service is live. This allows a government agency to get a broad perspective of views and opinions on the usability of the service, to ultimately help to continuously improve the user experience. Some of the recommendations given in the focus group discussions revealed gaps between citizen expectations and service design.

Recommendations for mobile money providers

Identify relevant government stakeholders and work to build strong relationships

Mobile money providers should invest in building strong relationships with government stakeholders from an early stage in order to develop long-term trust. Building a dedicated internal team that manages government relations to understand their unique needs will be appreciated by government agencies and citizens alike. Once a service is successful, other government agencies will likely want to emulate such success.

Landscape P2G services in your market and focus on digitising low-complexity, high-demand and high-frequency payments first

Generally, if the complexity of a high-demand service is low (e.g. monthly health insurance contributions for NHIF), the usage barriers for citizens to adopt this service will also be low. Citizens are more likely to understand and adopt these simpler payment habits. Such services include utility payments, national insurance and social security contributions, court fines, daily parking fees and personal documents (ID, passport, birth and marriage certificates). In Kenya, NHIF and NTSA both offer services that have high demand. Both government agencies have made their services easy to access, use, and pay for, leading to high adoption rates.

Ensure platform stability to maintain uninterrupted service and strong user trust

Mobile network downtime has a negative effect on trust because it causes confusion about whether a payment has gone through or not. Providers should not only consider latency, but also availability, end-to-end efficiency and relevant functionality. It is important that mobile money providers work with government agencies to iron out more serious parts of the processes, including user experience, money flows (trust accounts and settlement accounts), reporting and reconciliation.

Simplify the user experience to increase uptake and ensure accessibility for all

Since government services are usually complex in nature, and digital processes may be hard to learn for citizens who are less literate, mobile money providers should collaborate with all stakeholders during the design and implementation phase to ensure that a simple and easy user experience is ingrained in each P2G service that accepts mobile money payments.

Collaborate with government agencies on marketing materials, which include education on (a) payment process, as well as (b) application process, and (c) recourse mechanisms

A unique advantage for mobile money providers is the use of mobile, which is ingrained in people's daily lives. Mobile money providers can play the important role of converging and propagating all messages related to education, awareness, fraud prevention and regular updates to the citizens through mobile communication channels and also through the agent network.

Annexes

Annex 1: Examples of models used by mobile money providers to facilitate P2G payments in Kenya

1. Direct integration between mobile money provider and government agency

NHIF Direct Integration with M-PESA⁴³

In 2009, prior to the government-issued 'Vision 2030' mandate, the National Health Insurance Fund (NHIF) had already understood the potential gains of digitising payment collections, and launched insurance contribution collections via mobile money.

NHIF requires its users to make frequent, small-value payment instalments. Cash payments were proving to be inefficient, costly and were resulting in high leakage. NHIF identified this as a barrier to uptake, especially for voluntary contributors discouraged by long queues at NHIF offices. Digitising these payments via mobile money has proven highly successful, with US\$ 1.79 million collected from individual voluntary contributors per month. Physical service centres still exist to provide assistance to those who are unable to use digital means.

Other government agencies such as the Kenya Revenue Authority (KRA), Kenya Power and Lighting Company and the National Social Security Fund (NSSF) adopted the same model.

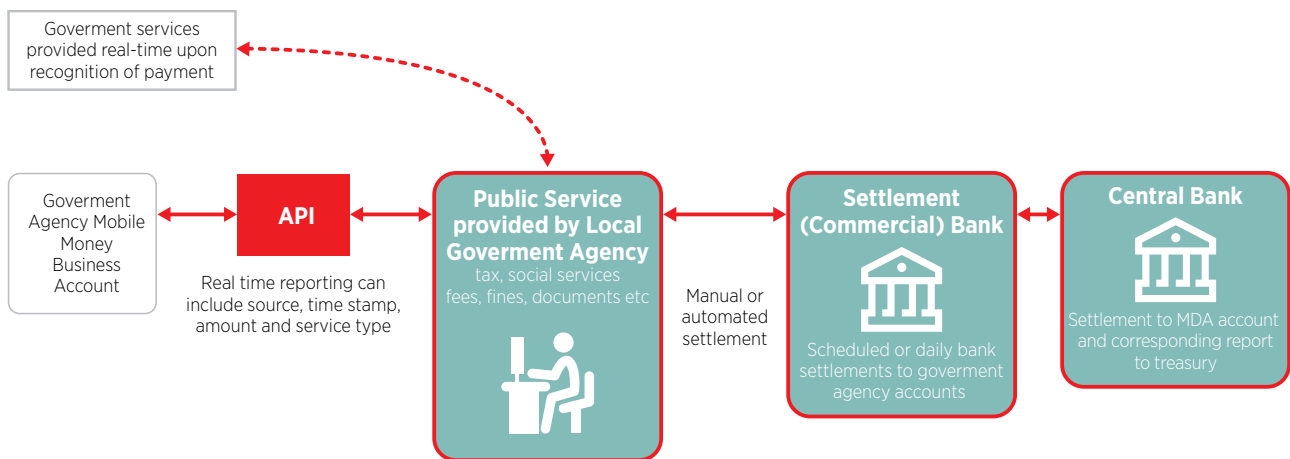


Figure 5: Schematic of direct integration between mobile money provider and government agency

⁴³ Source: interviews with NHIF

2. Integration through a third party payments aggregator

eJijiPay e-wallet – providing services on behalf of Nairobi City County (NCC)

The eJijiPay e-wallet, developed by JamboPay, launched in 2014 to facilitate digital P2G payments for NCC, including payment for business permits, parking fees, land rates, house and market stall rent and fines. The service is available via web, USSD and mobile app. The eJijiPay wallet is a separate account that must be topped up using mobile money, Visa or MasterCard. Funds in the e-wallet can be used to pay for the respective government services as required. The use of eJijiPay has led to a 30 per cent increase of revenue collections by the NCC since launch.

The system is intended to eventually eliminate cash handling and manual collections which are prone to forgery and corruption. It also enables real-time collection and reporting for effective monitoring and evaluation of collected revenue. This has resulted in a reduction in operational costs for the county work force, after ceasing to use manual receipts and printing of expensive security documents for permits. The system has enabled better data collection and analysis, which has made planning easier and more accurate. Accessibility and update of records has also been simplified.

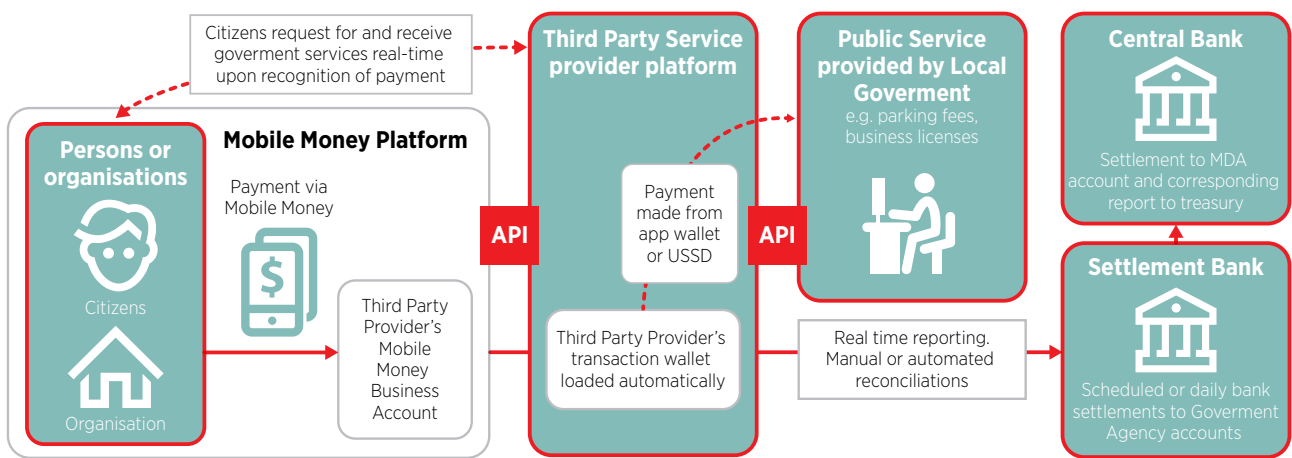


Figure 6: Schematic of integration between a mobile money provider and a third party aggregator

3. Centralised official e-government platform connecting several government agencies

eCitizen – Kenya’s central e-government services platform

eCitizen currently processes application and payment services on behalf of 26 government agencies that have integrated into the eCitizen platform. In total, over 300 unique government services are offered. The goal is to bring 5000 government services on board by 2020. The eCitizen platform is managed by the Kenya ICT Authority which sits in the Government Digital Payments department in the National Treasury and formerly the Executive Office of the President.

ICT Authority staff engage government agencies on a voluntary basis and provide integration support at no cost to those agencies that see value in digitising P2G payments via the eCitizen platform. Perhaps the strongest indication that the government is committed to drive a purely digital agenda is that no cash is accepted for services offered through the eCitizen platform.

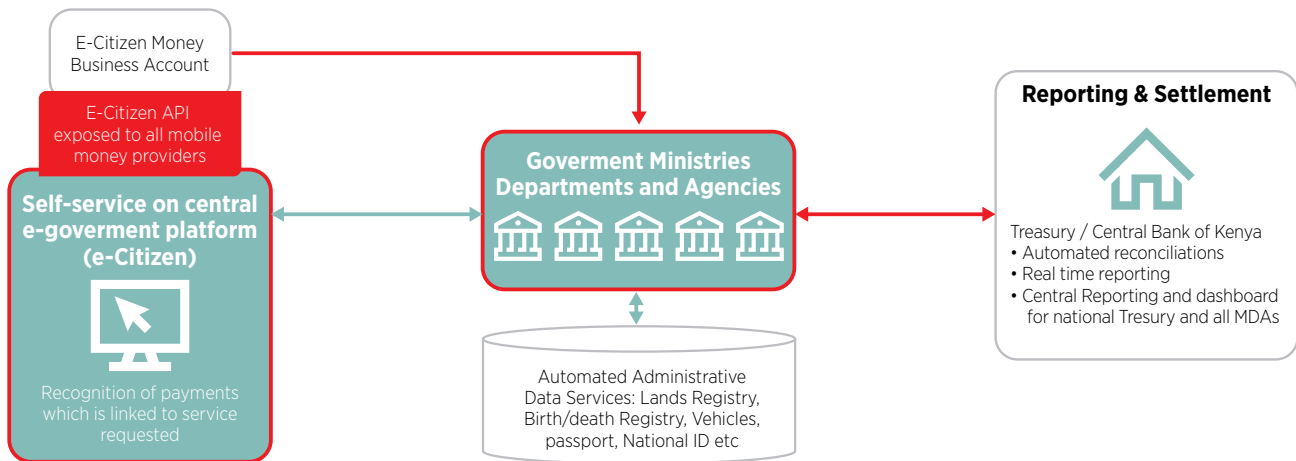


Figure 7: Schematic of a central e-government platform integration to mobile money system

4. Government agents accept cash or digital proximity payments and provide assisted government services

Huduma Service Centres

Alongside the online eCitizen platform, the government established a face-to-face service delivery programme called 'Huduma'. It aimed to bring government services closer to the citizens through the introduction of physical Huduma Centres,⁴⁴ targeting a presence in each of Kenya's 47 counties. At these centres, government agents from the respective government agencies serve citizens who pay for services using both cash and digital methods.

All services offered at Huduma Centres are administered either through the eCitizen platform (i.e. the agent uses the online eCitizen platform on behalf of the citizen) or the government agency's own digital platform (for those who have their own online systems).

Currently, 16 government agencies provide more than 45 services via the Huduma Centres where more than US\$ 12 million has been collected to date and service an average of 30,000 customers daily.⁴⁵

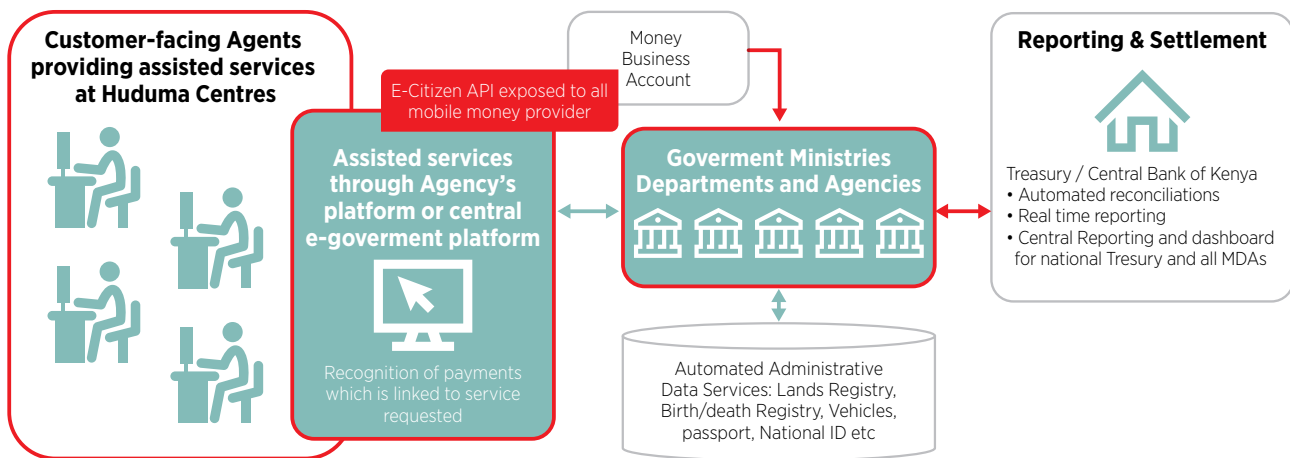


Figure 8: Schematic of back-end integrations for mobile money provider at a service centre

⁴⁴ Huduma Kenya, 2016. Huduma Kenya Services. Available at: <http://www.hudumakenyago.ke/charter.html>

⁴⁵ Huduma Kenya, 2016. Huduma Kenya Programme. Available at: <http://www.hudumakenya.go.ke/about-us.html>

Annex 2: Study objectives and approach

This market research study focused on gaining insights from Kenya on the current landscape of Person-to-Government (P2G) mobile money payments for government services. Specifically, it aimed to identify the importance, benefits, barriers and success factors of digital government payments that could apply in other contexts. This study had two approaches:

- 1. Supply-side research:** In-depth interviews were conducted with individuals directly involved in the process (from front-facing staff to department heads), as well as stakeholders from auxiliary functions such as audit, customer service and operations. Each interview was guided by a semi-structured questionnaire. In addition to interview responses, accounting data for the past few years were reviewed to substantiate the effects of mobile money payments on the government agencies' collections.

Seven government agencies and two payment integrators were interviewed to (a) estimate current costs of payments based on transaction type, including administrative and leakage costs; and (b) gather information on current digitisation initiatives and capture lessons learned by early adopters. See **Annex 1** for the full list of government agencies interviewed for this report.

- 2. Demand-side research:** This was aimed at exploring (i) P2G payment needs (value proposition), (ii) financial and non-financial benefits of making digital P2G payments, (iii) barriers to making P2G digital payments, (iv) experiences before P2G digital payments. The study consisted of three parts:
 - Telephone survey of 602 respondents, randomly selected from mobile phone users,⁴⁶
 - Focus groups and in-depth interviews with citizens and service support infrastructure (cyber cafe operators and parking attendants); and
 - Mystery shopping of eCitizen platform, direct payments and services through physical outlets like cyber cafes and designated service attendants.

⁴⁶ Random digit dialing of cellphone area codes Should be proportional to cellphone users in the country

Annex 3:

Study Methodology

Based on an initial study done by the GSMA, BFA undertook two main streams of work:

1. Stakeholder interviews and business case analysis

Seven government agencies and two payment integrators were interviewed, including individuals directly involved in the process (from tellers to department heads), as well as stakeholders from auxiliary functions such as audit, customer service and operations.

In-depth interviews with individual stakeholders followed. In addition to interview data, accounting data and annual financial reports for the past few years were reviewed to substantiate the effects of mobile money payments on the department's collections or payments. Each interview was guided by a semi-structured questionnaire. Each respondent was asked the same questions, using a mix of open-ended and codified response categories.

2. Citizen interviews and demand-side study

For this part of the study, citizens using (and not using) mobile money payments were interviewed for each of the above use cases. Using focus groups and a structured interview guide, the study sought to understand a variety of questions, including: What are the P2G needs? Why did the customer move to digital P2G from former payment methods? What is working that has successfully addressed their need for government services? What are the barriers preventing them from fully utilising digital payments? How have those making digital payments benefited?

In addition, citizens were interviewed about their costs relating to payments by mobile money and other methods, their time spent to make payments, and about the non-financial benefits they may receive from mobile money and from eCitizen services more generally. The study was done in two parts:

- A telephone survey which established some basic demographics cases, and also helped define questions for the focus groups. The phone survey was contacted to 602 respondents from 44 counties.
- A series of focus group interviews (4-6 people) to understand their demand profile and interest in using mobile money payments. The focus groups were organised in Nairobi (capital city), Nakuru (smaller city) and Muranga (rural area). In each region, two focus group discussions were carried out: one for mobile money users and another for non-mobile money users.

From the demand-side research, a customer profile—combined with general information about the overall users of digital payments from the phone survey—was created with the specific information gained in the focus groups about people's motivations, understanding and objectives regarding digital payments with government. In addition to simply understanding the as-is situation, citizens were asked to give feedback and recommendations for improvements by asking their views on how to make government agencies and payments more effective and more useful from the perspective of the user.

Annex 4: Government agencies interviewed in this study

National Hospital Insurance Fund (NHIF):

NHIF is a state parastatal with a mandate to provide medical insurance to Kenyan citizens at an affordable price. Membership is open to all Kenyans 18 years of age with a monthly income of US\$ 10 or more. NHIF is directly integrated with mobile providers, which enables members to make contributions using mobile money wallets.

National Social Security Fund (NSSF):

NSSF is a mandatory national pension scheme. Every Kenyan with an income must contribute a percentage of gross earnings to guarantee basic disability compensation, assistance to needy dependents in case of death and a retirement pension. NSSF has moved toward digitisation and citizens can now make contributions directly from mobile money wallets.

National Transport and Safety Authority (NTSA):

NTSA is a state corporation formed to harmonise operations of key road transport departments. The authority issues driver's licenses, among other functions. NTSA services can be accessed via eCitizen and payments can be made through mobile money, internet banking or debit and credit cards.

Nairobi City County:

Nairobi City County operates under the auspices of the Cities and Urban Areas Act and a host of other acts. Through third-party integration, in 2015 the Nairobi City County introduced a new cashless payment technology, eJijipay, to increase revenue collection, address leakage and enhance service delivery. Citizens can now pay for parking, penalties and other services directly from a mobile money wallet.

Judiciary of Kenya:

The Judiciary has undergone major reforms since the inauguration of the new constitution in 2010. Among them is *Faini Chap Chap*,⁴⁷ a system that allows traffic offenders to pay fines via a mobile money wallet. Faini Chap Chap replaced an older, lengthy procedure. Under that procedure, it could take two days to pay a court fine. However, the service was suspended in order to align processes whose touch points cut across the Police, NTSA and Judiciary.

eCitizen:

eCitizen is an official government digital services and payments platform that enables Kenyan citizens, residents and visitors to access and pay for a wide range of services online. A one-stop information portal, eCitizen pioneered the concept of making it more convenient to complete government transactions.

⁴⁷ "Faini Chap Chap" means "instant fines."

Annex 5: Social media campaigns by payment service providers



Source: Safaricom Limited Twitter page



Source: Airtel Kenya Twitter page



Source: Equity Bank Kenya Twitter page



Figure 9: Social media campaigns by mobile money providers: M-PESA, Equitel and Airtel Kenya
Images used with permission from respective providers



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