

Digitizing Payments for USAID Beneficiaries in Uganda

Pilot Report



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List of Acronyms

API	Application Programming Interface
B2P	Business-to-Person
BRD	Business Requirements Document
EFT	Electronic Fund Transfer
IP	Implementing Partner
KYC	Know your Customer
MFS	Mobile Financial Services
MNO	Mobile Network Operator
NU-HITES	Northern Uganda – Health Integration to Enhance Services
POS	Point of Sale
RTGS	Real Time Gross Settlements
RTI	Research Triangle Institute
SDS	Strengthening Decentralization for Sustainability
STAR-EC	Strengthening TB and HIV & AIDS Responses in East-Central Uganda
UAT	User Acceptance Testing
UGX	Ugandan Shillings
UHMG	Uganda Health and Marketing Group
USAID	United States Agency for International Development

1. Executive Summary

The objective of this report is to demonstrate the feasibility of digital payments for USAID implementing partner programs in Uganda by presenting the results of a proof-of-concept Digitizing Payments Project conducted in Uganda from June 2013 to February 2014.

In 2012, USAID Uganda spent \$218.5 million on in-country development activities. Of that amount, an estimated 10% of implementing partner budgets (\$3.6 million per month) is spent on beneficiary cash payments, totalling \$43 million per year. The total volume of cash payments rises with the inclusion of staff travel advances and vendor payments. Transferring such a large volume of funds on a cash basis presents consistent operational and security challenges for implementing partners, namely:

- **Security** – Staff carrying large amount of cash in the field are targets for theft. The real human risk of cash was made very clear in mid-October when one of the USAID implementing partners was the target of an armed robbery outside a bank in Jinja. The driver was shot in both arms and USD \$8,000 was stolen.
- **Transparency and accountability** – Cash cannot be tracked, making it difficult to document its disappearance. USAID implementing partners all complained about the unease associated with carrying cash into the field to make payments, as it is so difficult to confirm that money is actually reaching those it is supposed to.
- **Transportation and staff costs** – Hiring cars, buying fuel and sending finance staff into the field to monitor the distribution of funds is time-consuming and costly.

With these challenges in mind, the Bill and Melinda Gates Foundation engaged Vital Wave, Inc. to undertake a Digitizing Payments Project, which sought to assist USAID's implementing partners in their transition from cash to digital payments. Moving away from a cash-based to a digital payment system can yield a number of positive results for organizations and their beneficiaries. Digitizing payments helps to lower the risk of theft and fraud, increases accountability and auditability of funds through accurate record keeping and real-time reconciliation of funds, reduces costs associated with transporting cash, and centralizes financial operations for the organization. Digital payments also help beneficiaries who no longer have to wait long hours to collect their payments. Finally, research suggests that households are able to increase their access to financial services through mobile money, thus allowing them to better manage financial shocks. This is especially pertinent in Uganda, where only 43% of the population, and only 34% of the poor, live within 5 kilometers of a financial access point.¹

The project included research and implementation stages. Vital Wave conducted extensive research in Kenya, Tanzania, and Uganda to map the stakeholder landscape and analyze how mobile money systems have been successfully utilized by organizations to make payments to their beneficiaries. In Uganda, a cross section of local stakeholders were identified and interviewed in order to understand the challenges and opportunities of using mobile money to make bulk payments. During the implementation stage, Vital Wave provided support to six USAID implementing partners looking to

¹ GSMA, State of the Industry 2013: Mobile Financial Services for the Unbanked, 24 February 2014

transition from cash to digital payments, and to mobile money stakeholders aiming to improve their payments service in Uganda.

Research in Uganda showed that working directly with Mobile Network Operators (MNOs) to make bulk payments restricted implementing partners from performing many needed functions due to limitations of the MNO platforms. As a result of these inherent limitations, Vital Wave promoted an alternative approach – working with an intermediary known as an aggregator to simplify operations and lower costs.

The project found the prospects of digitizing payments in Uganda to be positive. Over the course of five months, digital payment processes were established and 122 bulk payments were made to beneficiaries on MTN and Airtel networks utilizing aggregators, with a success rate of 95%. 1,392(thirteen hundred ninety two) beneficiaries were successfully paid a total of USD \$198,875. Currently, implementing partners are working directly with aggregators to gradually increase the number of payments made to staff and beneficiaries, and some are looking at how to use digital payments with partner organizations and other donors. Other USAID implementing partners have also expressed interest in the model. The project illustrated the benefits of moving away from cash to digital payments, and highlighted opportunities for mobile money players to tighten operational, technical, and financial aspects of their businesses, and develop other value added services in the payment space.

During the implementation stage, technical, operational, and financial limitations of mobile money stakeholders in Uganda were brought to light. The major challenges were operational, due largely to the manual nature of processes and the lack of escalation and communication procedures. The project also identified technical challenges, including a lack of interoperability and the rigidity of MNO technical platforms. Finally, challenges associated with the mobile finance services (MFS) ecosystem included the lack of merchant participation in mobile money services countrywide, which places a heavy burden on agent networks and liquidity.

To address these challenges, a number of recommendations have been made. These include:

- **Develop partnerships with aggregators** - Aggregators provide superior functionality, better security controls, and the ability to make cross-network payments directly to beneficiaries' e-wallets, increasing transparency throughout the entire payments value chain.
- **Seek better pricing structures** - Fixed bulk payment price structures and high withdrawal costs are pain points. Addressing them will advance digital payment systems.
- **Improve planning and account management** - A decision to transition to digital payments requires careful change management for all stakeholders, and good planning is crucial.
- **Improve Aggregator Model agility** - Streamlining account funding processes and raising account limits are a high priority if the Aggregator Model is to be more efficient.
- **Streamline and automate MNO processes** - Improve MNO operations and service levels for a more efficient customer experience.

- **Build aggregator capacity** - The capacity of aggregators to provide timely support to implementing partners is constrained due to limited human and financial resources, necessitating an increase in personnel for various operational roles.
- **Engage with banks and regulators** - Policies at the central bank, MNOs, and local banks can stifle growth due to imposed limits and risk management. Engaging these institutions will help to improve processes and allow the mobile money ecosystem to flourish.
- **Enhance interoperability** - Intra-banking solutions are lacking and cause delays. Developing better solutions for faster banking will require the mobilizing of financial ecosystem stakeholders.
- **Open platforms** – Stakeholders should be encouraged to create open platforms that will allow multiple players to integrate easily with their service, thus promoting innovation and the spread of mobile money services.
- **Support the business case for merchant acquisition** – An increase in merchant acceptance through point of sale (POS) devices that accept mobile money in supermarkets and petrol stations represents a major opportunity to expand the digital payments ecosystem.

These recommended actions would significantly advance digital payment systems for organizations making bulk payments by making digital payments more reliable and efficient. While key mobile money stakeholders are still developing and learning how to improve the bulk payment process for their clients, the ecosystem is changing fast. As players mature and technologies expand, innovation and growth all along the value chain will continue to improve the reliability and efficiency of mobile money. ■

2. Introduction

Vital Wave worked with six USAID implementing partners to assist them in making the transition to digital payments for their beneficiaries. Participation in the project provided implementing partners with support and guidance for moving away from cash payments in the field to bulk payments via mobile money. The project duration was nine months. It engaged key stakeholders, including USAID implementing partners and their beneficiaries, USAID Uganda Mission, Uganda Mobile Network Operators (MNOs) and Ugandan payment aggregators. Despite challenges posed by the Ugandan mobile money ecosystem, the project illustrated the great potential for digital payments in Uganda and attracted much enthusiasm from the stakeholders involved. This project has the potential to change the way implementing partners make bulk payments to their beneficiaries in Uganda and beyond.

2.1 Report Focus

This report provides a comprehensive overview of the nine-month project and presents key findings and recommendations.

2.2 Objectives and Outcomes

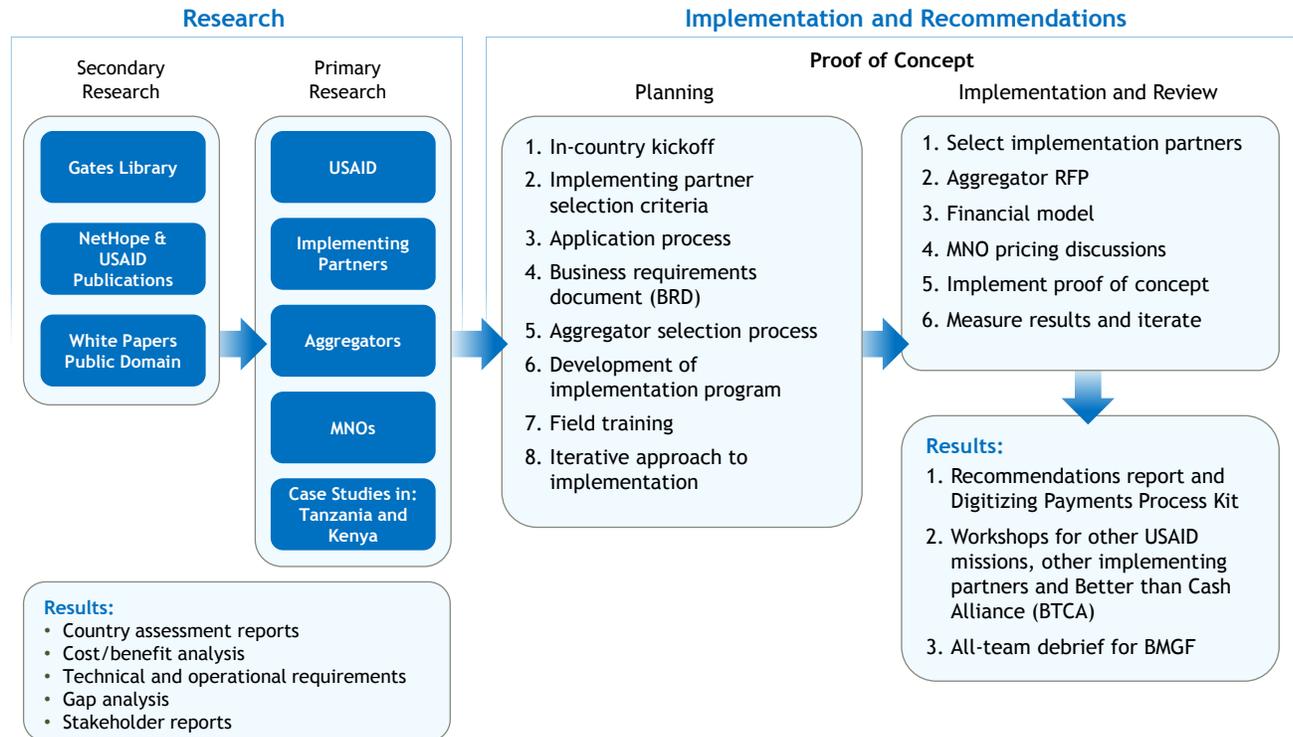
The objective of this project was to create and validate a roadmap to assist USAID's implementing partners in their transition from processing cash payments to digital payments for program beneficiaries. This process is intended to increase program efficiency and introduce beneficiaries to the digital financial system. The project was designed to identify key challenges and lessons that can be incorporated into future operating procedures. Another objective was to develop a scalable and transferable model for the transition to digital payments that can be applied by other implementing partners in Uganda and in other East African countries.

Why digitize payments?

- Lower risk of theft and/or fraud, unlike cash which can be lost or stolen
- More security for the beneficiaries and staff who do not have to travel with cash
- Accurate record keeping and real-time reconciliation, even with large volumes of payments to multiple recipients
- Reduced paper work
- Centralized financial operations and a streamlined electronic banking platform
- Reduced travel for accounts staff, who don't need to travel to the field to distribute payments
- Greater convenience and timely payments to beneficiaries, who don't have to wait for staff to arrive and distribute cash
- Reduction in transportation costs, driver and vehicle rental, couriers and fuel
- Increased accountability and transparency
- More accurate financial records for donors

2.3 Engagement Model

The engagement model involved both a research component and an implementation component. The findings from both components are captured in this report.



- MNO pricing structures are unfavorable and a consolidated effort to improve bulk payment pricing has been lacking, resulting in high fees. As volumes increase over time, an opportunity exists to renegotiate contractual relations and pricing with MNOs to shift away from fixed pricing structures in favor of a sliding scale price structure for bulk payments.
- While mobile money players still have much work ahead to develop a more reliable and streamlined bulk payment service, the Ugandan ecosystem is developing fast. As technologies and mobile payment systems expand and stakeholders mature, clients and end users can expect to see innovation aimed at reducing costs and inconveniences. Expected developments include technology-driven data collection and verification tools, tighter integration between aggregators and MNOs, and more streamlined operational and escalation processes.
- Mobile money is already being used by individuals to pay for services like transport on a small scale. This suggests significant potential for the continued uptake of mobile money by service providers. Aggregators are in talks with MNOs and are looking into merchant acquisition strategies. The installation of POS devices that support mobile payments is also being considered by supermarkets and petrol stations. This would in turn lighten the burden on agents and reduce costs for implementing partners who cover withdrawal fees.
- Intra-banking solutions are lacking and cause delays. There is a need to mobilize financial ecosystem stakeholders including MNOs, banks, and regulators to improve interoperability.
- Aggregators can offer enhancements and additional services to suit the needs of IPs. These include Bulk SMS solutions and an on-site beneficiary registration system for training participants. The latter would greatly improve the efficiency of beneficiary data collection, reduce risks, and ease the burden on program and finance staff. ■

3. In-country Research and Landscape Analysis

Extensive research was conducted in Kenya, Tanzania, and Uganda to understand the stakeholder landscape and how mobile money systems have been and can be used by organizations to make payments to their beneficiaries.

3.1 Kenya and Tanzania Country Assessment Key Learnings

In July 2013, Vital Wave conducted country-level investigations of bulk payment systems in Kenya and Tanzania. As a mature mobile payments market, Kenya offered important insights into creating workable mobile payments solutions for organizations and beneficiaries in Uganda. With a relatively young, less-established mobile money market, Tanzania exposed the challenges and opportunities likely to be faced when digitizing payments in Uganda. The country assessments, accompanied by cases studies of Pathfinder and Concern Worldwide, highlighted a number of key insights that helped guide and inform the Uganda project. These were:

- **Digital payments have many benefits** – Organizations that have undergone the transition to digital payments report reductions of cash ‘leakage’ and corruption, increased operating efficiencies, more transparency and accountability, the ability to track funds in real time, a reduction of operating costs, improved security, and better utilization of staff.
- **Internal buy-in is essential and can be challenging** – Clarity of information among staff and beneficiaries can help to reduce resistance.
- **Incorrect data provided by beneficiaries is a major challenge** – Developing a system that simplifies the data collection process will significantly improve operational efficiencies.
- **Solid partnerships with bulk payment partners are crucial** – Due diligence on bulk payment partners is integral to launching digital payments, and good relations between implementing partners and bulk payment partners need to be developed and nurtured.
- **Risk is the most important concern for organizations** – Non-financial benefits can sometimes outweigh financial benefits, suggesting that cost is not a major pain point for organizations that implement digital payments.
- **Fear of fraud is real** – Reliable regulation is needed to avoid fraud and to instill confidence in mobile money systems. Robust systems that help organizations to counter fraud are needed.
- **Beneficiaries may require support when using mobile money** – Adequate and ongoing training for first-time users of mobile money would be beneficial and help to increase buy-in.

3.2 Uganda Country Assessment

In Uganda, in close collaboration with USAID, Vital Wave interviewed all local stakeholders to understand the challenges and opportunities of using mobile money in their projects.

3.2.1 Key Learnings

A country assessment in Uganda uncovered a number of key learnings that helped guide and inform the Uganda project. These were:

Risk of cash	<ul style="list-style-type: none">▪ A number of implementing partners have experiences fraud and risks to staff security while handling cash in the field.
Money mobile ecosystem	<ul style="list-style-type: none">▪ Mobile money infrastructure has considerable weaknesses and MNO capacity to provide support is modest, but high levels of competition and innovation have encouraged new players like aggregators to enter the ecosystem.
Aggregators	<ul style="list-style-type: none">▪ Aggregators are working to develop more robust payment systems and can serve as intermediaries for organizations looking to implement mobile payment systems.▪ Partnerships with aggregators are a potentially viable solution to payment digitization as MNO capabilities evolve.
Pricing	<ul style="list-style-type: none">▪ MNO contractual relations are unfavorable and a consolidated effort to improve bulk payment pricing has been lacking, resulting in high tariffs.▪ An opportunity exists to renegotiate contractual relations and pricing with MNOs to shift away from fixed pricing structures in favor of a sliding scale price structure for bulk payments.
Capacity	<ul style="list-style-type: none">▪ Stakeholders throughout the mobile money ecosystem lack capacity to manage the technical, operational, and financial aspects of digitizing beneficiary payments.▪ A multifaceted training, support, and change management process for all stakeholders is a necessary part of any successful transition to digital payments.

3.2.2 Use of Cash among USAID Implementing Partners

Prior to the Digitizing Payments Project, USAID implementing partners used cash for operating costs in the field, per diems, and transportation for workshop participants. Risk could be very high and theft and fraud were been widely reported. Implementing partners participating in the project handle between USD \$80,000 to USD \$1.5 million annually. An estimated 10% of their annual budget is spent on beneficiary cash payments. The total volume of cash payments rises with the inclusion of staff travel advances and vendor payments.

3.2.3 Political Considerations and Regulation

Based on the Kenya model, regulators in Uganda have allowed innovations in mobile money to develop before establishing regulatory frameworks. This pro-liberalization stance and has encouraged competition and innovation in the telecom and mobile money sector.

Anti-fraud regulation remains weak, but in 2013 the Bank of Uganda released Guidelines for Mobile Money, which is a positive step forward. A tax on cash transfers has been suggested, and the Ugandan Revenue Authority has even started to register mobile money agents in order to tax their businesses. Taxation may inhibit growth and hit low-income users disproportionately.

3.2.4 Mobile Landscape

In Uganda, the number of agents and SIM penetration is similar to Tanzania, suggesting a less mature but rapidly growing mobile money ecosystem. There is a high potential for growth in mobile transfer and payment services due to demand for sending and receiving money and high SIM penetration and network coverage. Mobile money use is increasing with the total value of mobile money transactions being equivalent to 20% of Uganda's GDP.²

3.2.5 Mobile Network Operators (MNOs)

Uganda is a highly competitive market with four MNOs offering mobile money services (MTN, Airtel/Warid, Orange, and UTL).

Beneficiary data collected over the project period revealed that the majority of mobile money users are registered on MTN, with 95% of implementing partner payments in and around Kampala, being made on MTN networks. Outside Kampala, in more rural areas, the number of Airtel/Warid-registered beneficiaries rises slightly, but MTN remains dominant. While UTL and Orange do not currently have bulk payment systems, initial beneficiary data collection and aggregator experience point to a limited number of Orange Money and UTL M-Sente users. Those with a UTL or Orange SIM are often also registered on Airtel/Warid or MTN.

Key Mobile Statistics, Uganda

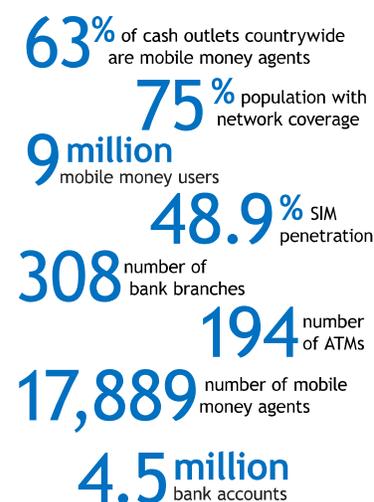


Table 1. Ugandan MNO Comparative

MNO	Market Share	Bulk Payment Transaction Cost	Banking Partner	Strengths	Challenges
MTN	44.8%	390 UGX (USD \$0.15) per beneficiary paid	Stanbic	<ul style="list-style-type: none"> Leading mobile operator Wide coverage Biggest agent network 	<ul style="list-style-type: none"> Allegations of fraud creating unease amongst NGOs High fees Undeveloped B2P platform Frequent network outages Poor customer service Unwilling to negotiate flexible fee structure for B2P clients Marginal interoperability
Airtel/Warid	39%	300 UGX (USD \$0.12) per beneficiary paid	Equity	<ul style="list-style-type: none"> Best B2P platform Lower cost tariffs Across network payments 	<ul style="list-style-type: none"> Agent network and liquidity management Less network coverage than MTN Marginal interoperability
Orange	2.4%	N/A	DFCU	<ul style="list-style-type: none"> Data Low Cost 	<ul style="list-style-type: none"> Marginal mobile money player
UTL	13.8%	N/A	Post Bank and Price Microfinance	<ul style="list-style-type: none"> Data Low Cost 	<ul style="list-style-type: none"> Marginal mobile money player

² GSMA, GSMA Global Mobile Money Adoption Survey Identifies 30 Million Active Mobile Money Customers Globally in 2012. www.gsma.com/newsroom/gsma-global-mobile-money-adoption-survey-identifies-30-million-active-mobile-money-customers-globally-in-2012/

Currently, the majority of organizations are attempting to distribute bulk payments by working directly with MNOs (see Figure 1). As of March 2014, MTN and Airtel/Warid are the only two MNOs offering bulk payment Business-to-Person (B2P) services. However, MNO bulk payment systems have a reputation for modest levels of customer service, limited functionality, and lack of innovation. Implementing partners are not able to perform many needed functions due to the limitations of the MNO platforms.

3.2.6 Aggregators

Lack of innovation and customization by MNOs has allowed new players like aggregators to enter the mobile money ecosystem and provide B2P services to clients. Aggregators provide an alternative for organizations using B2P services by acting as intermediaries between clients and MNOs. Through the aggregator payment model (see Figure 2), aggregators allow organizations to send multiple payments across networks and offer a variety of other services that MNOs do not. In this way aggregators are working to fill the gap left by MNOs by building a more robust B2P system and creating a bulk payment channel for clients free of MNO engagement.

Users can report payment problems directly to aggregators, who then work with MNOs to audit the transaction and resolve the issue. Accountability for delivery of funds to beneficiaries remains solely with the MNOs. Fee structures are generally fixed and include the MNO rate.

Despite the benefits, aggregator capacity is still low and their ability to provide reporting on payment processes and 24/7 customer services remains limited.

Figure 1. Direct to MNO Payment Model

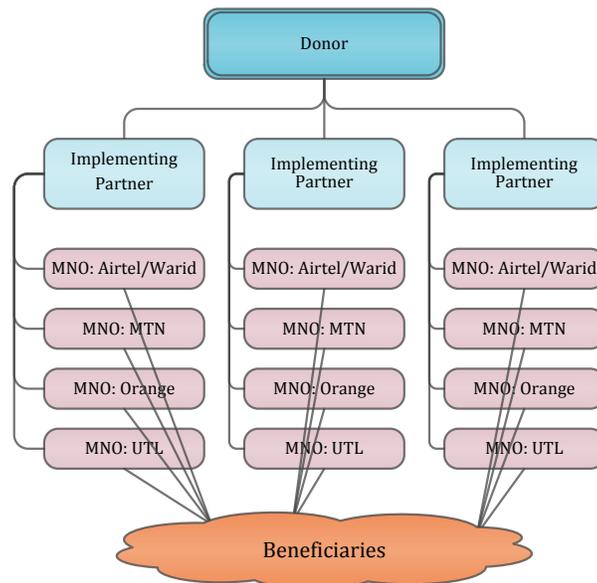
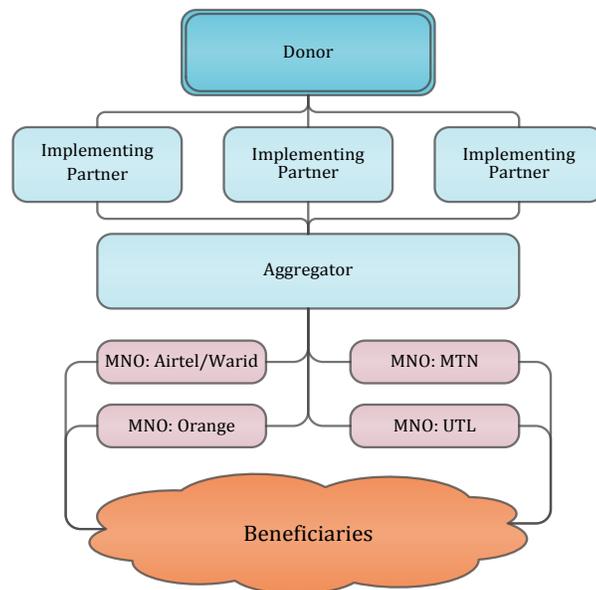


Figure 2. Aggregator Payment Model



Benefits of using aggregators:

- Increased security and reduced risk of internal fraud through multiple authorization levels
- Cross-network payments reduce the problem of making payments to beneficiaries on different networks
- Cross-network transactions mean that aggregators can distribute payments to beneficiaries more quickly than if clients were to develop separate payment integrations with each MNO
- Clients of aggregators are trained on how to use the system in their own offices. MNOs require client staff to travel, sometimes for long distances, to attend training in Kampala
- Real-time reporting improves accountability and allows for immediate reconciliation
- Payments can be gradually rolled out through a scheduling system
- Additional functionality to increase beneficiary database and customizable reporting

3.2.7 Headwinds and tailwinds for digitizing payments in Uganda

In Uganda, there are number of supportive forces that facilitate digitizing payments, as well as headwinds that work to slow down adoption.

Headwinds	Tailwinds
<ul style="list-style-type: none">▪ Mobile money systems have significant infrastructural weakness, particularly with regard to operational processes and escalation mechanisms▪ Aggregator platform features limited by MNO APIs▪ Aggregator maturity and capacity restricted by limited human resources▪ Inflexible and unfavorable contractual relationships characterize MNOs bulk payment offerings, particularly with regard to B2P fixed fee structure	<ul style="list-style-type: none">▪ Regulatory environment conducive to mobile money growth▪ MNOs are encouraging third party integration to expand service offering▪ Aggregators are creating robust bulk payment platforms▪ Widespread use of mobile money▪ SIM penetration is high and mobile network covers 75% of population▪ Increased use of mobile money by service providers and interest in further spread▪ Good agent network in urban areas

3.2.8 Key insights

The Uganda country assessment led to a number of key insights related to the policy environment, infrastructure, and stakeholders' strengths, weaknesses and opportunities. These include:

- MNO capacity to provide support is modest, but high levels of competition and innovation have encouraged new players like aggregators to enter the ecosystem.
- Partnerships with aggregators are a viable solution to organizations seeking payment digitization.
- A multifaceted training, support, and change management process for stakeholders, including implementing partner's staff and beneficiaries, is necessary for a successful transition to digital payments.
- Stakeholders throughout the mobile money ecosystem lack capacity to manage the technical, operational, and financial aspects of digitizing beneficiary payments. ■

4. Implementation kickoff

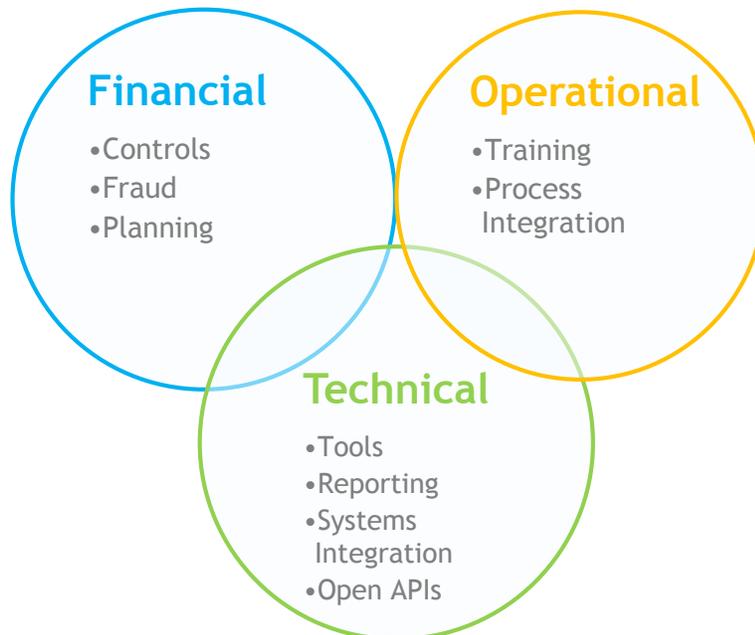
4.1 Project Dependencies

MNO Capacity	Aggregator Capacity	Pricing	Mobile Money Infrastructure	Regulatory Environment
<ul style="list-style-type: none"> Ability of MNOs to accept bulk payment requests Ability of MNOs to distribute bulk payments to subscribers Ability and willingness of MNOs to expose APIs to payment aggregators Effective escalation mechanisms 	<ul style="list-style-type: none"> Ability to make timely payments for clients Ability to work effectively with MNOs to solve problems Capacity to handle multiple requests from numerous clients 	<ul style="list-style-type: none"> Pricing and tariff schedules that are cost competitive with cash payments Model is cost effective for aggregators 	<ul style="list-style-type: none"> Mobile network availability and reliability Agent liquidity and ubiquity Service provider (merchants, utilities and schools) adoption of mobile payments 	<ul style="list-style-type: none"> A regulatory environment that allows growth of mobile money systems and mobile phone tools while managing risk

4.2 Key Vectors of Digital Payments Transition

Supporting organizations in digitizing payments requires strategy components that address the financial, operational, and technical realities of the Ugandan mobile money market. The financial and operational aspects of digitizing payments are as significant as the technical aspects. Comprehensive strategies are needed for all three vectors.

Figure 3. Key Vectors for Digital Payment Transition



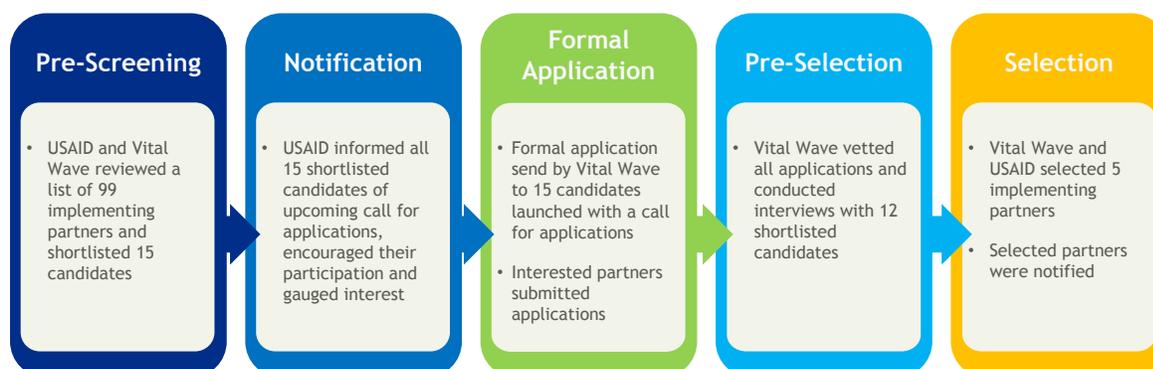
4.3 Partnerships

4.3.1 Implementing Partners

Following an application process and consultation with the USAID Mission in Uganda, Vital Wave selected six USAID implementing partners to participate in the project. The selected organizations were provided with support and guidance to transition from cash payments for beneficiaries to bulk payments via mobile money. Implementing partners' primary reason for transitioning to a digital system is the potential risk to staff and the possibility of theft or fraud when travelling in the field with cash. The second main concern is the convenience of centralized payments.

4.3.1.1 Selection Process

The selection process was developed in close consultation with the USAID Uganda Mission. It followed five steps: Pre-screening, Notification, Formal Application, Pre-Selection, and Selection.



Selection Criteria

Weighted selection criteria were developed, informed by research conducted in Kenya, Tanzania, and Uganda, and by consultations with USAID. Exposure to risk was the most important criterion for involvement in the project, followed by the frequency and volume of payments made to beneficiaries. The criteria were applied to candidate applications. Applicants could score between 1-5 on each criterion, leaving the candidates with a maximum of 500 and a minimum of 100 points.

<i>Implementing Partner Selection Criteria</i>	<i>Weight</i>
Implementing Partner demonstrates elevated levels of risk or previous difficulties with cash disbursement	20
Implementing Partner makes bulk payments to beneficiaries currently	15
Implementing Partner has relatively high average transaction amounts and high frequency of bulk payments	15
Implementing Partner has shown an interest in implementing digital payments for making beneficiary payments and for the purpose of addressing risk associated with cash payments	10
Implementing Partner has a productive relationship with USAID Uganda	10
Implementing Partner maintains adequate service delivery controls pertaining to disbursements	10
Implementing Partner has more than 2 years left in their project/activity	10
Preferred: Implementing Partner has a country office or partner in another country (or a member of staff) that has already undergone the transition to mobile payments	5
Preferred: Implementing Partner beneficiaries are in close proximity to functioning agent	5
Total	100

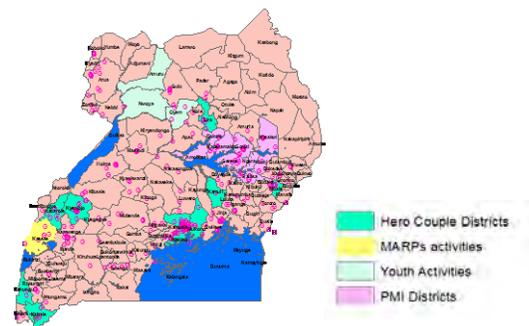
Partner 1: NU-HITES - PLAN International
Sector: Health

Plan International’s NU-HITES activity works in 15 districts in Northern Uganda on developing community-owned health services and systems. NU-HITES conducts trainings for district- and community-level partners to build the capacity of health care workers and health systems. Trainings can draw anywhere between 40-150 participants. The high frequency and high number of participants who attend trainings has made it extremely challenging for NU-HITES to use cash. Approximately USD \$1.15 million is made in cash payments to beneficiaries annually.



Partner 2: Uganda Health and Marketing Group (UHMG), Ltd
Sector: Health

Uganda Health Marketing Group (UHMG) is a local NGO with a presence in 90 districts. It runs about 20 trainings every month for a number of USAID-funded activities. During trainings cash disbursements are frequently made to cover per diems and transport costs for 30-100 trainees as well as to vendors that provide services during the training. Bulk payments made using cash average 15 million UX (USD \$6,000) per activity. UHMG is highly exposed to risk due to the amount and frequency of cash payments it makes each month. UHMG hopes to use a digital payments platform for not only staff and beneficiaries, but also vendors and eventually other donors.

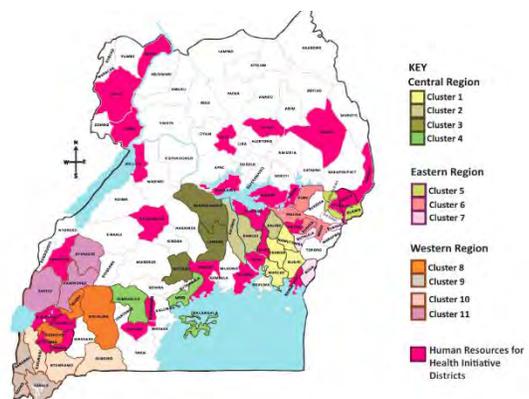


Partner 3: Strengthening Decentralization for Sustainability (SDS) - Cardno Emerging Markets
Sector: Governance and capacity building

SDS works in 35 districts in Eastern, Western, and Central Uganda. It provides capacity-building support to local governments, particularly in the areas of health, education, and services for orphans and vulnerable children. SDS conducts numerous trainings and workshops for district-level participants every month, paying travel expenses and per diems averaging 100,000 UGX (USD \$39.79) per person daily. It also makes larger payments to staff for costs associated with organization of trainings and travel advances. SDS currently makes an estimated 100-200 transactions per month using cash. It makes about USD \$720,000 in payments annually.

SDS Programme

Strengthening Decentralisation for Sustainability



**Partner 4: Commodity Production and Marketing -
Chemonics International, Ltd
Sector: Agriculture**

Chemonics' Commodity Production and Marketing activity works in 35 districts to improve the productivity of maize, bean and coffee farmers and to link farmers to traders. The program conducts trainings which can run for several days or weeks. Cash payments are made to participants for per diems and transport costs. The new program aims to be a completely cashless operation.



**Partner 5: School Health and Reading Program (SHRP) -
Research Triangle Institute (RTI)
Sector: Education and health**

RTI's SHRP activity works to improve early-grade reading and transition to English for primary students, and to improve health and HIV/AIDS education. SHRP conducts training for teachers at grassroots and sub-county levels. It has been using cash payments, averaging 20,000 – 100,000 UGX (USD \$7.95-\$39.76) per participant, to cover per diems and transport costs for participants. Trainings are conducted countrywide, each drawing 50-500 beneficiaries. Bi-annual trainings drawing 3,000 teachers are organized requiring significant volumes of payments to be made and creating high risk for cash.



**Partner 6: STAR-EC - John Snow, Inc.
Sector: Health**

STAR-EC aims to increase access to, coverage of, and utilization of quality and comprehensive HIV&AIDS and TB prevention, care and treatment services within east-central district health facilities. STAR-EC was the target of an armed robbery outside a bank in mid-October; a staff member was shot and USD \$8,000 was stolen. Following this incident, STAR-EC has worked hard to reduce the amount of cash used. It makes over USD \$80,000 payments to beneficiaries annually.



4.3.2 Mobile Money Stakeholders

Mobile money stakeholders are actively supporting the project. MNOs established dedicated teams to provide support and aggregators have worked on improving their service offering.

Mobile Network Operators (MNOs)

Due to the Ugandan market dynamics, Vital Wave approached the two largest MNOs, which control over 80% of the market, to partner in the project. Each MNO has pre-existing contractual arrangements with the selected aggregators, who handle the settlement process of cash to e-value transfers.



Vital Wave negotiated support from the MNOs in terms of expedited beneficiary registration and agent liquidity support.

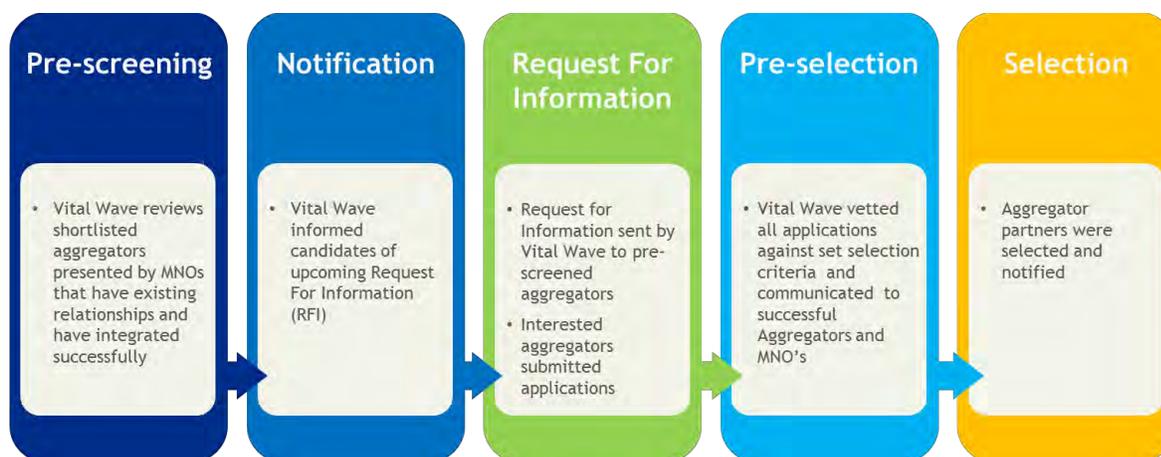
UTL and Orange were not approached, as they are still marginal mobile money players lacking a bulk payments platform.

Aggregators

Due to the limitations of working independently with MNOs in Uganda through an MNO Model, this project made use of an Aggregator Model to make bulk payments. Implementing partners worked with an aggregator to schedule and facilitate bulk payments to their beneficiaries.

Selection Process

The aggregator selection process followed five steps: Pre-screening, Notification, Request for Information, and Pre-Selection and Selection.



Selection Criteria

The aggregator selection criteria were informed by the Business Requirements Document (BRD), which synthesized implementing partner requirements and the results of research carried out by Vital Wave. Five aggregators were approached and asked to apply to the Request for Information (RFI). The aggregators were Yo! Payments, Pegasus, PESAPAL, Cellulant and Intel-World. Aggregators were evaluated according to the weighted criteria listed below.

<i>Aggregator Selection Criteria</i>	<i>Weight</i>
Aggregator has an existing connection with the two largest MNOs	15
Aggregator has an existing bulk payments solution	15
Aggregator is currently servicing clients on the bulk payments solution	15
Aggregator meets all the BRD requirements	15
Aggregator shows capacity to handle the transaction volume	5
Aggregator is a Limited Liability Company (LLC)	5
Aggregator has been in operations for over two years	5
Aggregator has adequate business continuity management	5
Aggregator has adequate staff	5
Aggregator is financially stable	5
Aggregator has a flexible pricing arrangement	5
Aggregator has a good relationship with a top-tier bank	5
Aggregator has other services that may be beneficial to the project (SMS, USSD, WAP)	5
Total	105

Selected Aggregators

Yo! Payments, Pegasus and Cellulant were all selected as aggregators for this project. Yo! Payments and Pegasus immediately started working on system enhancements in response to the BRD at no cost to the project. UHMG, Chemonics (Commodity Production and Marketing) and SHRP (RTI) partnered with YO! Payments. SDS, NU-HITES and STAR-EC partnered with Pegasus.

Cellulant lagged behind the others in developing enhancements, delaying in the delivery of a draft contract and failing to fully integrate with MTN and Airtel. As a result, Cellulant was not paired with any implementing partners and ceased to be considered as a project aggregator. ■



5. Digitizing Payments in Uganda: Project Overview

5.1 Overall Progress

Implementing partners have signed contracts with their aggregators, undergone training at their office locations, communicated the new payment policy to program staff and made payments to MTN- and Airtel-registered users through both Pegasus and Yo! Payments platforms.

Table 2. Summary of Digital Payments

Digital Payments Summary					
# of beneficiaries paid	# of total bulk payments made	Success rate of payments	Amount transacted	% MTN	% Airtel
1,392	122	95%	USD \$198,875	95%	5%

5.2 Key Achievements

- ✓ Implementing partners signed contracts, received trainings, had their user accounts set up and amended internal operational and financial processes to accommodate a digital system.
- ✓ 122 successful bulk payments to beneficiaries were made on both MTN and Airtel networks utilizing aggregators, with a success rate of 95%. 1,392 beneficiaries were successfully paid.
- ✓ Implementing partners are gradually increasing the number of payments made to staff and beneficiaries using aggregator platforms, and some are looking at how to use digital payments with partner organizations and other donors.
- ✓ Aggregator system enhancements were identified, developed and tested with implementing partners and found to meet their needs and requirements.
- ✓ Limitations for both MNOs and aggregators have been identified throughout the project and progress has been made in the streamlining of technical and functional processes for both stakeholders.
- ✓ Successful negotiation with aggregators for a free 3-month trial period and customized software development at no extra cost.
- ✓ Opened discussions with MNOs regarding the creation of a bulk discount system.
- ✓ Registration for unregistered mobile money implementing partner beneficiaries is underway in preparation for a larger internal roll out by participating implementing partners.

5.3 Key Challenges

A number of challenges have been faced throughout the project (see Table 3, below). These challenges underscore the strengths and weaknesses of project stakeholders and the Ugandan mobile money infrastructure in general.

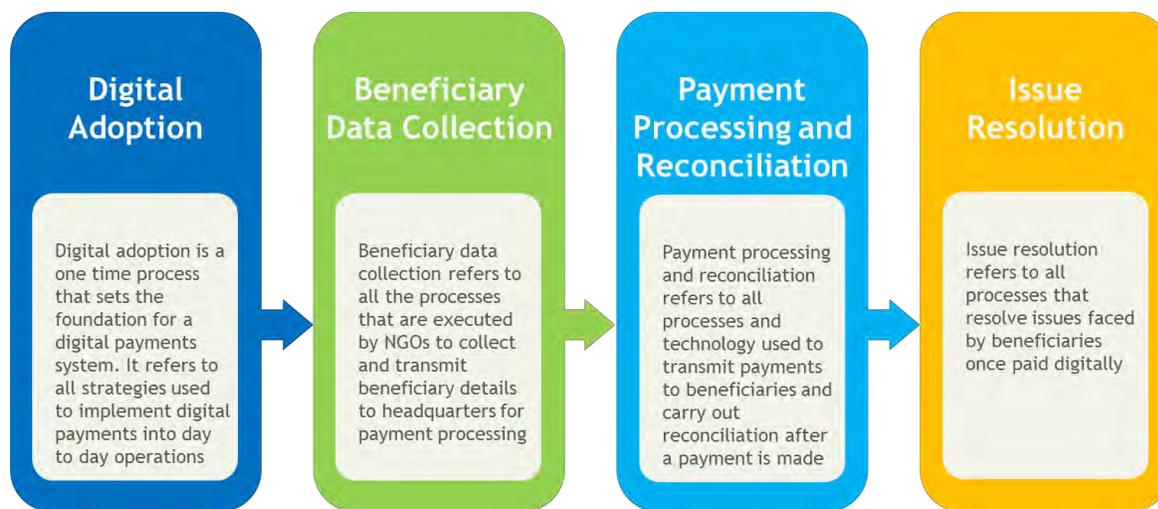
Table 3. Challenges to Digitizing Payments in Uganda and Mitigating Strategies

Challenges to Digitizing Payments	Mitigation
<p>Challenge 1: Digital adoption – Contracts will take long to be signed and staff may have a number of questions about the transition that will need to be addressed before moving forward.</p>	<p>Mitigation: Implementing partners should communicate with home office, key decision makers and accounting staff of decision to transition to digital payments early. A minimum of four weeks should be set aside to allow contracts to be signed and finalized and staff to be informed and have their questions answered. In case of significant delay, arrange with aggregators for training to take place before final signing.</p>
<p>Challenge 2: Internal resistance – Implementing partner staff may resist a digital payment system due to a perceived risk in changing operational and financial processes. Implementing partners may also resist the Aggregator Model due to unfamiliarity with the concept.</p>	<p>Mitigation: Identify sources of resistance, hold meetings with finance and project staff to further clarify the benefits of a digital payment system and to explain the digitization process. Hold meetings with aggregators and implementing partners to help them understand the Aggregator Model better.</p>
<p>Challenge 3: Aggregator capacity – Aggregators’ capacity to deal with multiple clients is sometimes compromised due to limited human resources, lack of experience in dealing with implementing partner operating models and their reliance on MNO technical and operational processes for their functioning. This is especially the case with emergency requests.</p>	<p>Mitigation: Improve communication and planning between aggregators and implementing partners. Work with MNOs and aggregators to streamline processes and build capacity so as to allow aggregators to function relatively independently of MNOs.</p>
<p>Challenge 4: MNO processes – Some MNO processes are highly manual and turnaround times are unpredictable. Processes like aggregator account funding often cause delays, escalation processes, particularly over the weekend, are weak and aggregator account limits are low. A proposed shift away from the current mobile money platform being used by MTN, Fundamo, to Ericsson in May could cause further challenges.</p>	<p>Mitigation: Maintain good and open communication with MNO and aggregator and work with aggregators and MNOs to improve and streamline operational processes and internal controls. Aggregator client relationship managers are essential links between their clients and MNOs and should inform implementing partners of any foreseen delays in advance.</p>
<p>Challenge 5: Beneficiary data collection and verification - Incorrect data provided by beneficiaries or incorrectly entered into the platform by project staff will be an ongoing challenge that is both time-consuming and expensive.</p>	<p>Mitigation: Improving data collection systems and reducing the amount of time and human resources spent on beneficiaries. Until then implementing partners will collect numbers of beneficiaries prior to training and register them onto a database. These numbers will then be verified once training has begun.</p>
<p>Challenge 6: Unregistered beneficiaries - It is currently not possible to make payments to those not registered for mobile money, otherwise known as ‘off-net’ transactions. This is because MTN doesn’t allow off-net transactions on its bulk payment platform citing fear of fraud as primary reason.</p> <p>While Airtel allows ‘off-net’ transactions it charges a different (higher) rate. Aggregators are currently unable to apply different charges to unregistered numbers.</p>	<p>Mitigation:</p> <ol style="list-style-type: none"> 1. Alert beneficiaries selected to make their first payments to sign up for mobile money. 2. Field officers initially carry petty cash to pay unregistered beneficiaries, while encouraging them to register. 3. When possible, inform participants prior to the training to register for the service in order to get paid. 4. MTN and Airtel send teams to training sites to register users.
<p>Challenge 7: Lack of interoperability – Banks can take up to 3 days to process a transfer if it is made to a different bank using internet banking. Real Time Gross Settlement (RTGS) can take up to 1 day.</p>	<p>Mitigation: Implementing partners have been advised to send funds at least 3 days in advance of a planned activity.</p>
<p>Challenge 8: Emergency requests – Modest levels of planning on the part of implementing partners sometimes require ‘emergency requests’ that aggregators may not attend to immediately.</p>	<p>Mitigation: Implementing partners are encouraged to improve the planning of their activities and, when possible, to maintain a balance on their account to cater for last-minute payments.</p>
<p>Challenge 9: Managing agent liquidity - Trainings held in rural areas may be a challenge for beneficiaries who want to withdraw their funds immediately due to a lack of agent liquidity.</p>	<p>Mitigation: Implementing partners are to alert aggregators of trainings who will then notify MTN and Airtel to ensure agents have enough liquidity.</p>

6. Digitizing Payments: The Four Pillars

Research in Kenya and Tanzania revealed four pillars that make up the process for transitioning to digital payments (Figure 4, below). Each pillar represents a critical part of any digital payments policy. Digital adoption is the foundational pillar and represents a one-time process that provides the basis for switching to a digital payment system. All other pillars are ongoing processes that are used every time a payment is made. This section describes each of these pillars in detail, as well as the challenges and potential solutions implementing partners have experienced during each step.

Figure 4. The Four Pillars of the Transition to Digital Payments



6.1 Digital Adoption

Digital adoption is a time-consuming but critical one-time process that requires careful change management.

Digital adoption is the foundation of a viable digital payment system. Digital adoption involves the technical, operational, and financial adjustments made by implementing partners and mobile money stakeholders, such as aggregators and MNOs. It also concerns internal buy-in among implementing partner staff, and the building good relationships between partners. Successful digital adoption requires that all partners involved in the transition are committed to following a clear road map and a shared vision.

6.1.1 Internal Buy-in

A decision to transition to digital payments requires the support and commitment of key members in an organization, including board members, home office staff, local finance staff, program staff in the field, and beneficiaries. Internal buy-in is essential and can be challenging. Commitment from the Directors of Finance and Operations is crucial to driving the process internally, and a dedicated team of finance staff helps to move the process forward. Early engagement of the organization's home office and, if necessary, the governing board is advisable, since concerns about the new policy can slow the transition.

Internal buy-in takes time. Start early and involve the home office, board members, and field personnel.

Initially it was expected that field staff would resist digital payments. However, many have actually embraced it. As one commented: 'I am glad there will be no more grilling us over accountabilities.'

6.1.2 Procurement and Contracts and Know Your Customer (KYC) Documentation

Implementing partners were initially assigned an aggregator. However, some implementing partners preferred to select their own. Procurement of an aggregator, negotiating contracts, and KYC documentation can be time-consuming. Implementing partners strongly prefer an aggregator that can do same-day bank transfers and that have a platform with a database of beneficiaries and reporting facilities. Once implementing partners and aggregators were paired, contracts were distributed and signed and documentation required to open an account was provided.

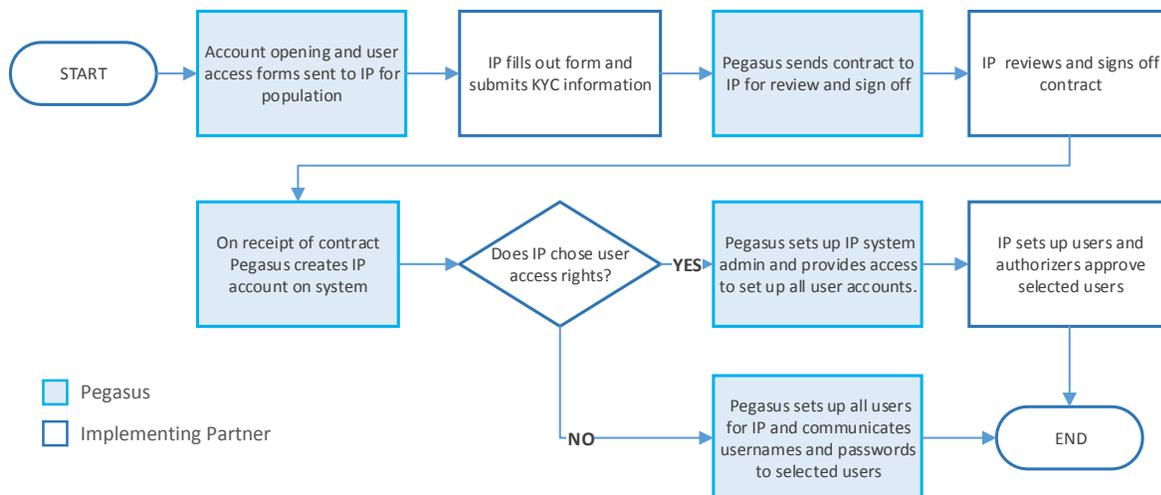
6.1.3 Technical Requirements

Digital adoption has necessitated few new technical requirements. Aggregator software is accessible online and does not have to be installed onto a user's computer. This means it can be accessed from anywhere, including on mobile phones. To become oriented with the system, staff required four hours of training, provided at no cost by both Pegasus and Yo! Payments at the office of the implementing partner. Staff taking part in the pre-test were also required to register for mobile money so that they could receive small test payments worth 1,000 UGX (USD \$0.39) during the training. Once training was complete, accounts were set up for authorizer, verifier, and filer users of the system. The account opening process differs for each of the aggregators and is illustrated in Figures 5 and 6, below.

Opening an Account - Pegasus

Prior to making any payments, the implementing partner will be required to open an account with Pegasus, as described in Figure 5. The implementing partner will also be required to submit KYC documentation and fill out a user access form, which will enable Pegasus to configure the various user access levels and authorizers. The implementing partner can also choose to set up and manage its own users.

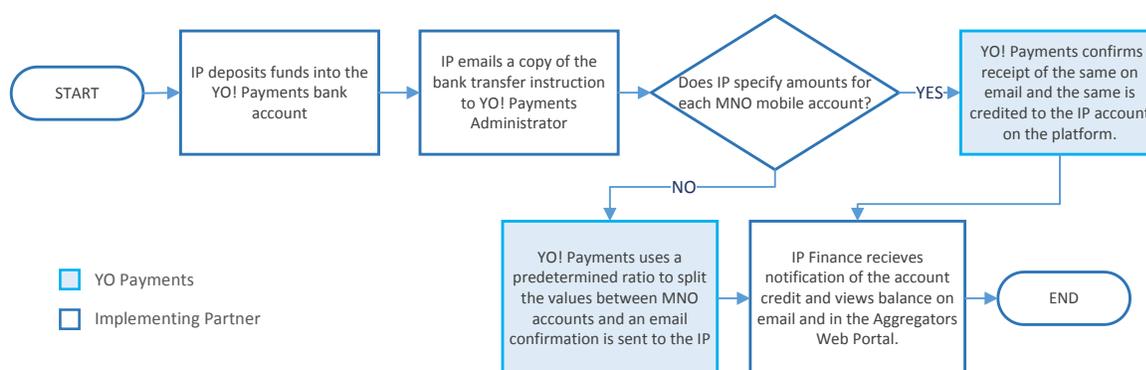
Figure 5. Pegasus Account Opening Process Flow



Opening an Account - Yo! Payments

Yo! Payments web portal offers a feature that allows the implementing partner to apply for a business account and upload required KYC documentation directly, expediting the registration process. However the implementing partner will still have to manually fill out a form outlining requested authorization levels for staff, which is then activated by Yo! Payments. The flow chart in Figure 6 describes the process further.

Figure 6. Yo! Payments Process Flow



6.1.4 Operational Requirements

An important part of creating a good foundation for digital adoption involves the planning and design of processes and internal policies related to the other three pillars of transitioning to digital payments (beneficiary data collection, payment processing, and issue resolution). New procedures have had to be designed by all implementing partners for making digital payments. These will be discussed in more detail below. Implementing partners have also started to

Digital payments help to organically improve implementing partner planning and internal communication.

improve planning and internal communication between finance and program staff to support a more streamlined operational process that is necessary for the transition to mobile payments.

6.1.5 Financial Requirements

It is important to note that while costs are important to implementing partners, non-financial benefits like increased safety and reduction of risk are the most commonly cited non-quantifiable benefits for implementing partners that have made the switch. The costs associated with using cash depend heavily on the organization in questions. While some implementing partners take extra precautions when handling large amounts of cash in the field (such as sending a member of finance staff when payments are made), others do not. In this way, the costs associated with a cash-based system (unless clear in terms of loss, theft or miscalculations when handing out payments by program staff) are not always quantifiable. They may concern safety or “perceived fraud” – measures to prevent the registration of ghost participants at trainings, for example.

Non-financial benefits of the transitions to digital payments are the main priority for implementing partners.

As the Finance Director from a pilot implementing partner noted: “The benefits outweigh the risks/uncertainty of carrying cash”

Nonetheless, a financial model has been developed to capture the financial costs and savings of implementing and utilizing digital payments. Due to the limited number of large payments made by implementing partners, it is still too early to present a comprehensive cost-savings analysis. However, it is possible to assess data on costs associated with cash bulk payment systems.

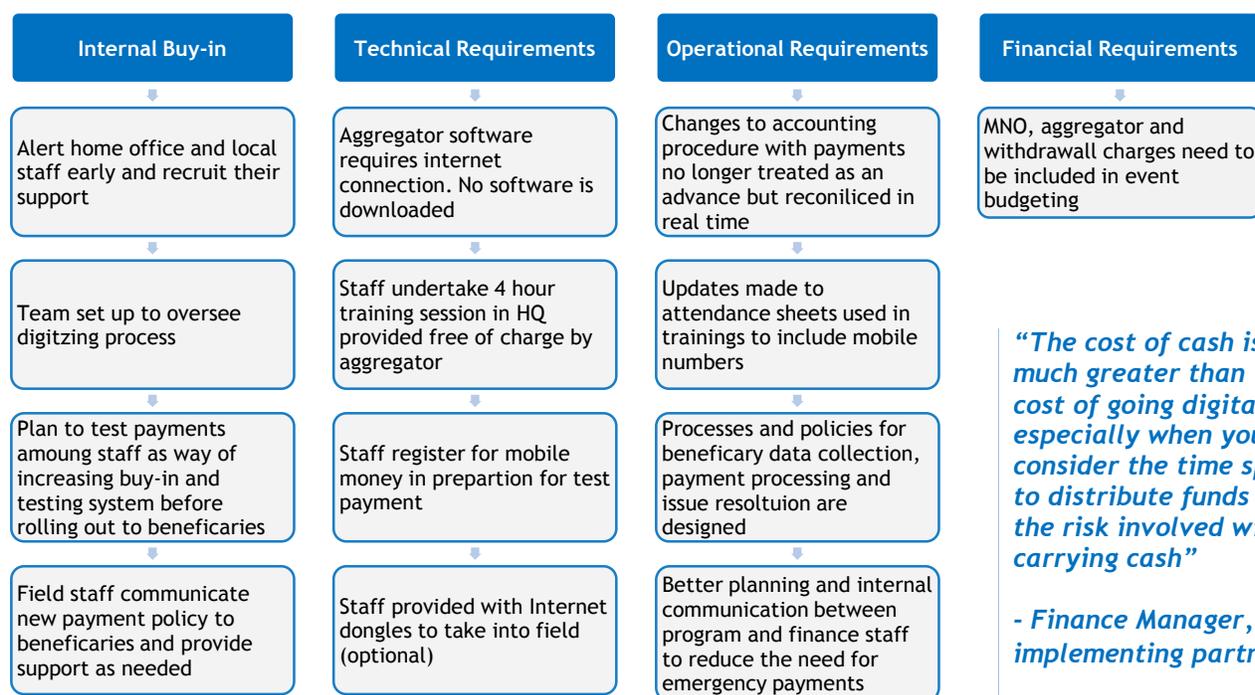
Table 4. Actual Cost of Digital Payment of 100,000 UGX (USD \$37.79) per beneficiary

Type	Cost per Transaction UGX/USD	Number of Transactions	Amount for first test payments to 26 beneficiaries UGX/USD
Bank transfer fee (Electronic Fund Transfer)	2,500 UGX (USD \$3.93)	1	2,500 UGX (USD \$3.93)
Aggregator charge (Yo! Payments)	120 UGX (USD \$0.04)	26	3,120 UGX (USD \$1.23)
MNO charge (MTN)	390 UGX (USD \$0.15)	24	9,360 UGX (USD \$3.71)
MNO charge (Airtel)	300 UGX (USD \$0.11)	2	600 UGX (USD \$0.23)
Withdrawal charge (MTN) for 100,000 UGX	1,750 UGX (USD \$0.69)	24	41,999 UGX (USD \$16.67)
Withdrawal charge (Airtel) for 100,000 UGX	1,750 UGX (USD \$0.69)	2	3,499 UGX (USD \$1.38)
Total cost for first transaction of 2,600,000 UGX (USD \$1,032.15)			61,078 UGX (USD \$24.24)
Charges as percentage of total amount paid			2.3%
Aggregator charge as percentage of total amount paid			0.12%

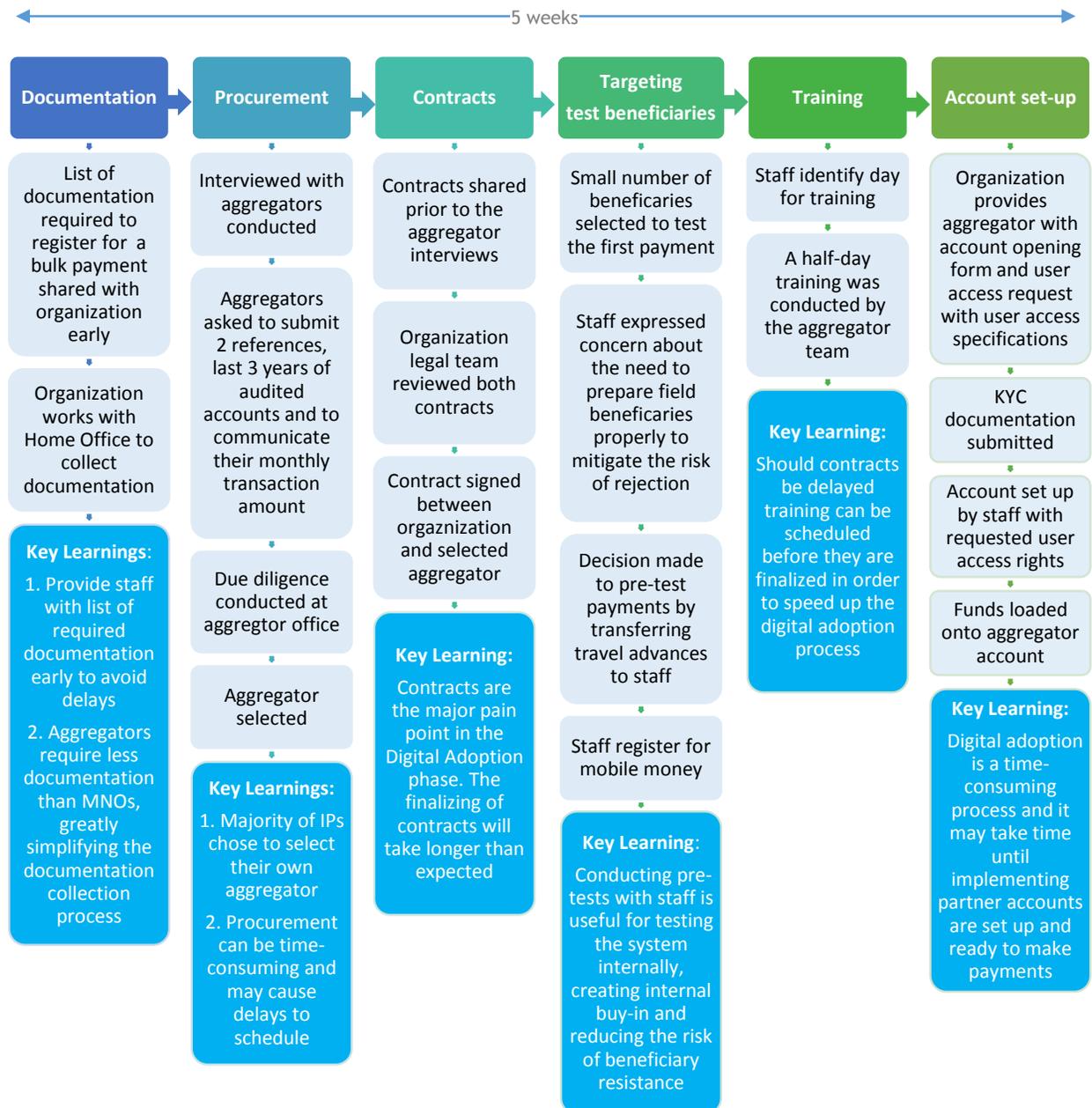
* Conversion rate 2,519 UGX = USD \$1

Total charges amount to 2.3% of the transaction, with aggregator charges representing 0.12% of this. While some implementing partners initially expressed concern over the cost of transitioning to digital payments, finance staff now maintain that the cost of cash in terms of risk is far greater. USAID has confirmed that all charges are covered by USAID funds as direct costs of doing business, under bank charges.

Figure 7. Summary of Digital Adoption Requirements



6.1.6 Summary of Digital Adoption Process



6.2 Beneficiary Data Collection

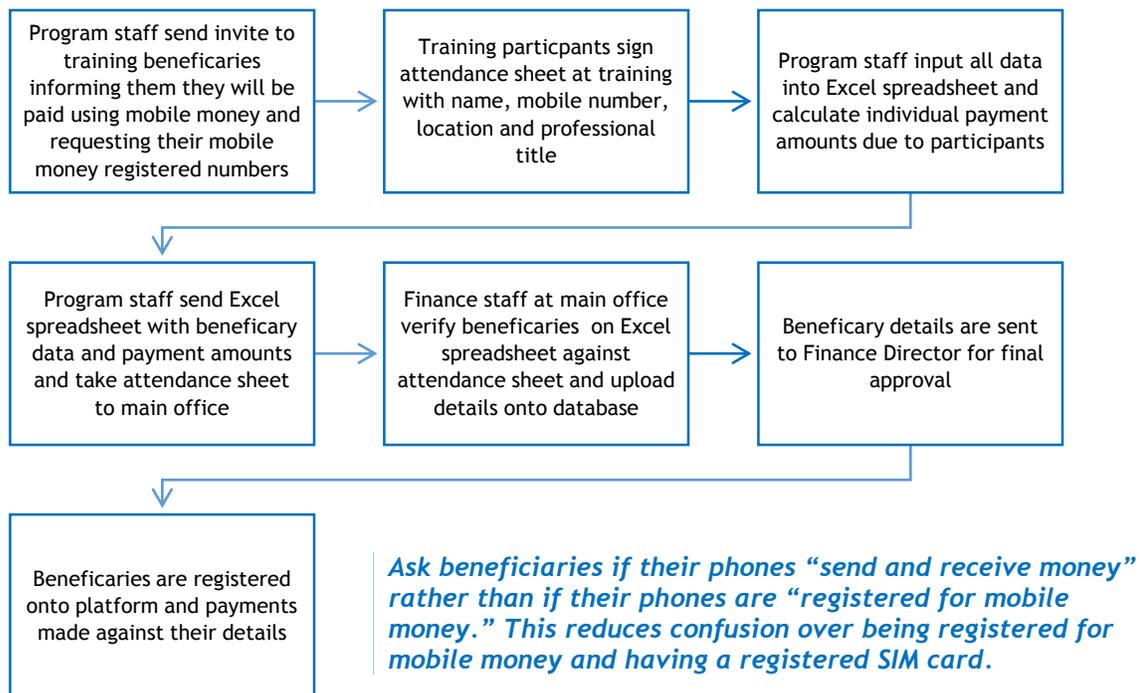
Beneficiary data collection refers to all the processes that are executed by the implementing partner to collect and transmit beneficiary details to headquarters for payment processing. An efficient and robust beneficiary data collection process is crucial to the successful operation of a digital payment system. The data collection process differs depending on the beneficiaries in question.

6.2.1 Training Participants

For organizations that want to pay training participants, beneficiary data is collected by program staff in advance of the training. An invitation is sent to all participants informing them of the training and detailing the new digital payment method. Participants are asked to send program staff to register for mobile money (if they are not already registered) and to provide staff with their numbers in advance of the training. The numbers and names are then sent to finance staff for pre-verification.

On the first day of training, participants sign an attendance sheet with their name, mobile number, district location, and title. During the training program, staff input data into an Excel spreadsheet and add the amount each participant is to be paid. This payment sheet is then sent to the organization's main office to be verified against the attendance sheet and the pre-populated list. The length of time it takes for this information to reach the main office depends on the training location and on Internet connectivity. On average, the entire process takes one day, and payments can be made on the same day. Some implementing partners prefer finance staff to create payment sheets, in which case program staff must send attendance sheets directly to the main office. To ensure that beneficiaries have attended all days of the training for which they will be paid, training participants must sign a daily attendance sheet which is sent to finance staff for verification.

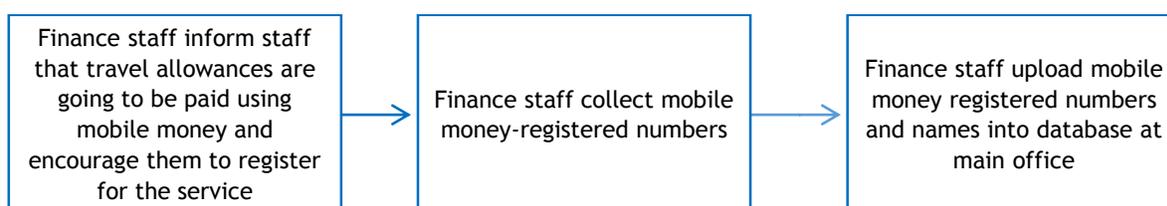
Figure 8. Training Beneficiary Data Collection Process



Permanent Staff

Travel advances (per diems and transport) for staff travelling into the field are common and many organizations have chosen to use mobile money to make such payments. For staff, the beneficiary data collection process is more straightforward. Staff details are collected once and registered on a database. Once registered, payments can be made to them as required.

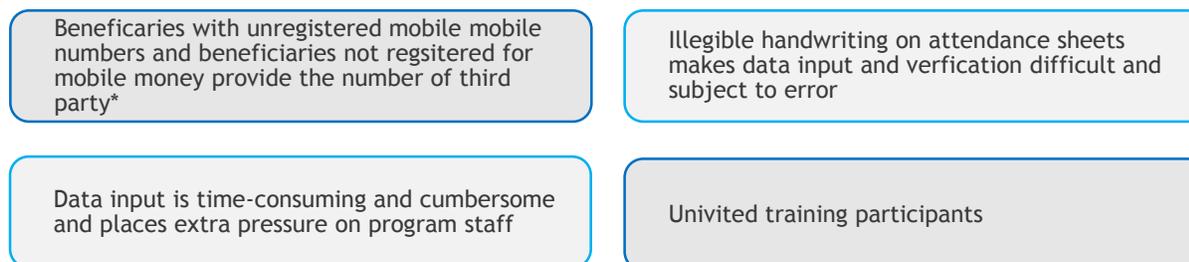
Figure 9. Permanent Staff Beneficiary Data Collection Process



Challenges and Solutions

Beneficiary data collection is a crucial step in the digital payments process, but one that is also very time-consuming and susceptible to error. Figure 10 highlights the main challenges that organizations have encountered when collecting beneficiary details.

Figure 10. Main Challenges of Beneficiary Data Collection



The Database

For many organizations, a number of individuals being paid are repeat beneficiaries. For this reason, the availability of a beneficiary database will help organizations to collect data on beneficiaries once and verify data collected in the field against this data at the time of payment. This will help eliminate the need to re-enter data collected from the field and reduce both the time spent on data collection and the potential for error. Both aggregators have a beneficiary database and Yo! Payments even has the added function of being able to upload beneficiaries using SMS.

Uninvited Participants

Trainings are sometimes attended by uninvited individuals who come in order to get paid. In a cash-based system, it is not always easy to realize this. However, digital payments add a layer of verification by requiring the individual to provide their mobile number, and for that number and

* This can lead to conflicting data on the same beneficiary and problems at later stages as the recipient may not relinquish funds

individual to be verified by finance staff at the main office before being paid. Staff need to pay close attention to such participants and, when in doubt, call to verify their identity so as to avoid making unnecessary payments. A beneficiary data collection system that requires beneficiaries to provide their names, titles, and district locations can help staff identify uninvited participants.

Beyond Attendance Sheets

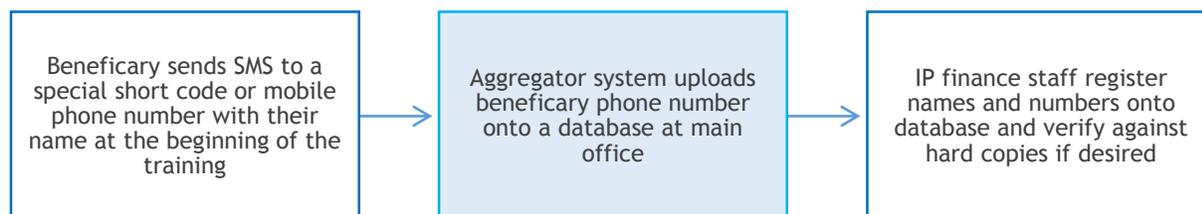
Developing a system that simplifies and streamlines the data collection process will be beneficial in terms of reducing risk and minimizing the time-consuming process of data input and verification for program and finance staff. Implementing partners are already thinking of ways to input participant details into the system using mobile technology.

The majority of implementing partners have asked their aggregators if a system that collects beneficiaries' details and transfers them directly to a database can be designed. Aggregators have indicated that such a system is possible. This would also help to ensure that beneficiaries

Incorrect data provided by beneficiaries is a challenge. A system that improves data collection and verification would greatly improve the payment process and reduce the labor intensity and risk associated with it.

provide their own mobile numbers, not that of third party, and encourage them to register for mobile money. Yo! Payments has already started working toward this by adding a basic feature on its platform that allows beneficiary details to be uploaded onto the database via SMS.

Figure 11. Proposed Automated Beneficiary Data Collection Process



6.3 Payment Processing and Reconciliation

Payment processing and reconciliation refers to all processes and technology used to transmit payments to beneficiaries and reconcile those payments internally.

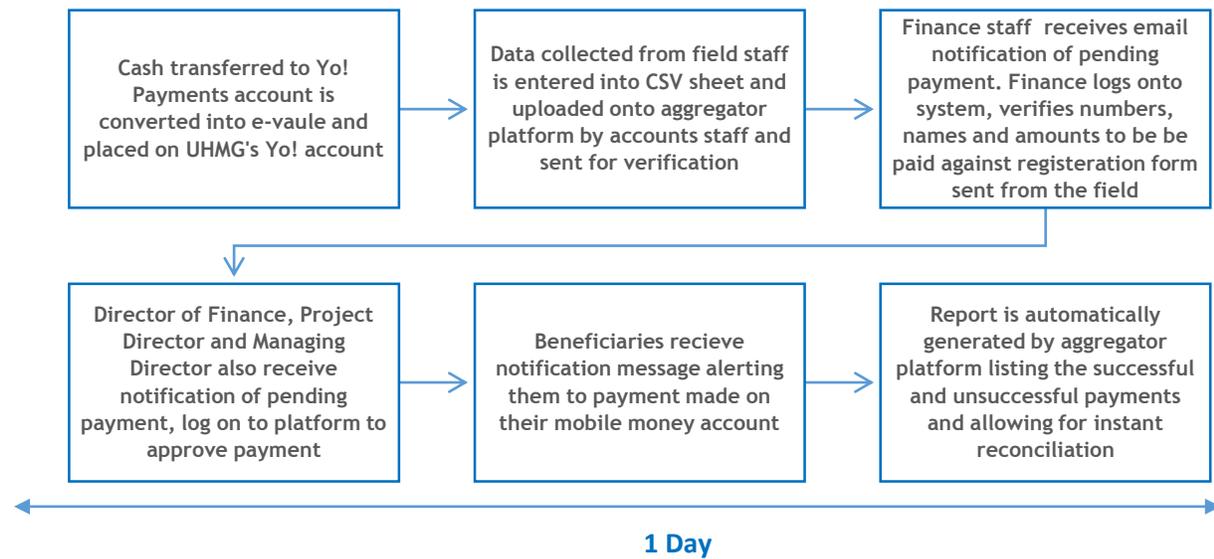
6.3.1 Making Payments

As of March 2014, 1354 successful payments to beneficiaries have been made by implementing partners. Payments have been executed on both MTN and Airtel networks utilizing aggregators with a success rate of 95%. The majority of payments have been made to MTN numbers (95%). Only around 5% of payments have been made through Airtel/Warid. The process is described in more detail in Figure 12 on the next page.

“There is now more assurance that funds reach the final recipients. We will not be going back to using cash”

- Finance Director, implementing partner

Figure 12. Implementing Partner Digital Payment Disbursement Process

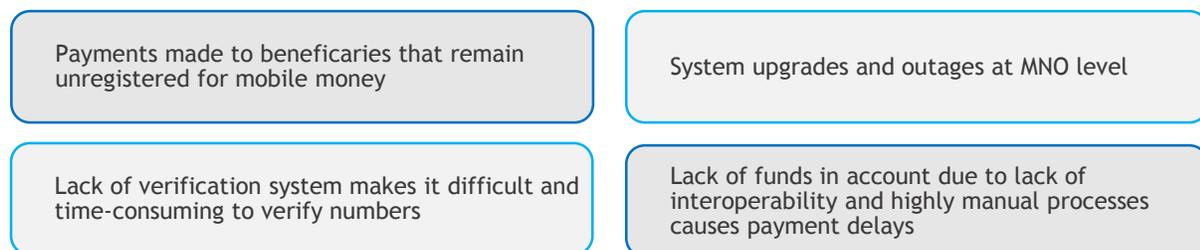


Due to a fuel shortage in Uganda, an SDS driver was unable to use a pre-loaded Total card to pay for fuel at a Total station. After contacting the head office in Kampala, the accounts team quickly sent funds to the driver using mobile money, allowing him to withdraw funds from an agent and pay for fuel at a different station.

Challenges and Solutions

Payment processing is highly dependent on the quality of data collected and on the timely availability of funds. Figure 13 highlights the main challenges faced when making payments.

Figure 13. Main challenges of payment processing



Raising Awareness and Asking Specific Questions

Despite being told that phone numbers must be registered for mobile money in order to receive funds, some beneficiaries still provide unregistered numbers at trainings, resulting in unsuccessful payments. There are three main reasons why this persists:

1. **Confusion** - Multiple SIMs are common in Uganda. Beneficiaries might forget which SIM is registered for the service and which is not.
2. **Misunderstanding** – Beneficiaries might mistake SIM registration for mobile money registration.

3. **Fear** - Some beneficiaries provide their unregistered mobile number out of fear of not being paid otherwise.

In order to address these challenges, program staff are working to inform participants well in advance that they will be paid with mobile money. At trainings, the information is being repeated to remind beneficiaries to register for mobile money, and MNO teams are often present to register people on site. Staff still carry small amounts of cash to trainings to pay those who are not registered. Asking people whether their phones send or receive money is a good way of checking if phones are registered and avoiding confusion with SIM registration.

Development of Verification System

Despite widespread SIM registration, there is currently no way of electronically verifying that a number belongs to a particular individual, as MNOs have not allowed this on their own platforms or on their Application Programming Interfaces (APIs) with aggregators. The development of a verification system on the platform would add significant value, mitigate against fraud and reduce time spent on issue resolution as the number of payments increase.

Improve Planning

The decision to adopt a digital payments system will require better planning on the part of implementing partners if last-minute emergency actions are to be avoided. This includes managing funds in the aggregator account. Improved planning should develop organically out of necessity.

System Outages and Upgrades

System outages and upgrades can seriously disrupt payments to beneficiaries. This is exacerbated by the fact that most service providers upgrade software over the weekend. Until systems are more reliable it is best to avoid making payments on a Friday.

Account Funding

Account funding is a major pain point for implementing partners. Lack of funds in aggregator accounts causes payment delays. Delays in account funding are a result of bank transfer times, MNO processing times, and the presence of the aggregator as an intermediary in the crediting process. Account funding processes are outlined in the MNO and Aggregator sections in the next section of this report.

One Friday, both SHRP (RTI) and Commodity Production and Marketing (Chemonics) experienced severe disruptions with their payments that resulted in training participants being stranded in Kampala over the weekend. Yo! Payments' MTN account limit had been exceeded and suspended. Yo! and MTN worked to solve the problem, but it persisted into Saturday, revealing the lack of escalation mechanisms during weekends.

Intra-bank Interoperability

Intra-bank transfers are problematic due to a lack of interoperability. When transferring funds between banks, IPs using Electronic Fund Transfer (EFT) need to transfer funds up to three days in advance. While RTGS does exist in Uganda and is meant to be 'real time,' actual processing times are unpredictable and can take up 24 hours.

6.3.2 Reconciliation

Once a payment is made, finance staff can instantly view, download and print a payment report detailing successful and unsuccessful payments from the aggregator platform, allowing for real-time reconciliation. However, implementing partners do not treat aggregator accounts as they would bank accounts. Instead, excess funds held in aggregator accounts are treated as an advance that must be reconciled.

“This has been one of the best things that has happened to us. Even though we were reluctant at the beginning, now we are comfortably able to account for every person that has worked or is being trained by us. It is becoming an institutionalized system that our organization has embraced”

- Managing Director, implementing partner

At the start of the project, implementing partners often requested a reversal of funds in the event that not all funds are used in one payment. This, however, proved to be a time-consuming, costly, and inefficient process. The majority of implementing partners have now agreed to keep a balance in the aggregator account and add funds as required. This also makes funds available in the event of an unplanned payment.

6.4 Issue Resolution

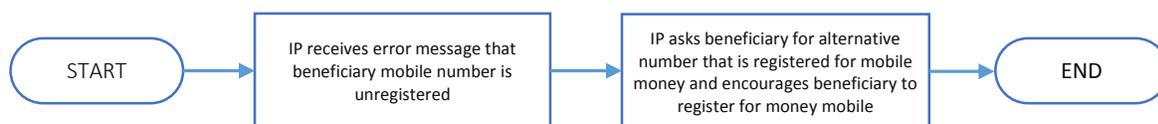
Once digital payments are made, there are a number of issues that may arise which will require quick resolution. The processes below have been mapped out following consultation with aggregators, MNOs and implementing partners.

The availability and timely communication of a dedicated relationship manager is indispensable to the smooth running of a digital payment system.

Issue 1: Payment unsuccessful due to unregistered mobile money number

The most common problem is that a beneficiary is not registered for mobile money resulting in an unsuccessful payment. An alternative number must be used in order for the individual to be paid.

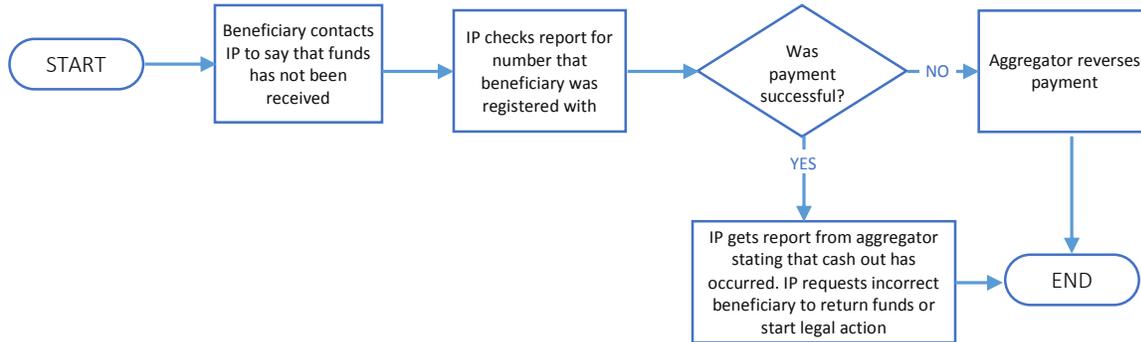
Payment declined – unregistered for mobile money beneficiary



Issue 2: Payment made to wrong number

In the event that a payment is made to an incorrect number, internal controls remain rather weak to retrieve funds. In most cases MNOs and aggregators advise that implementing partners deal directly with the wrong recipient to return the funds.

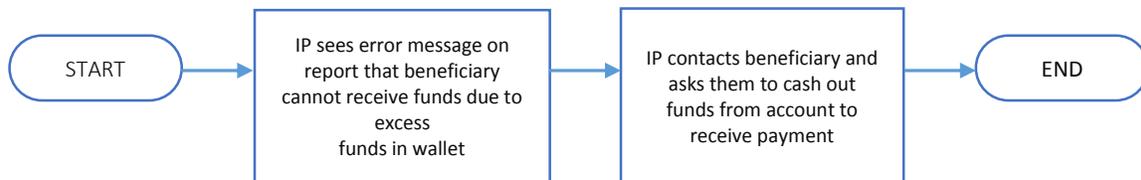
Payment is made to wrong number



Issue 3: Excess funds in e-wallet

Beneficiaries can hold up to 5 million UGX (USD \$1,984) in their e-wallets. Should this amount be reached, beneficiaries will need to withdraw to receive additional funds.

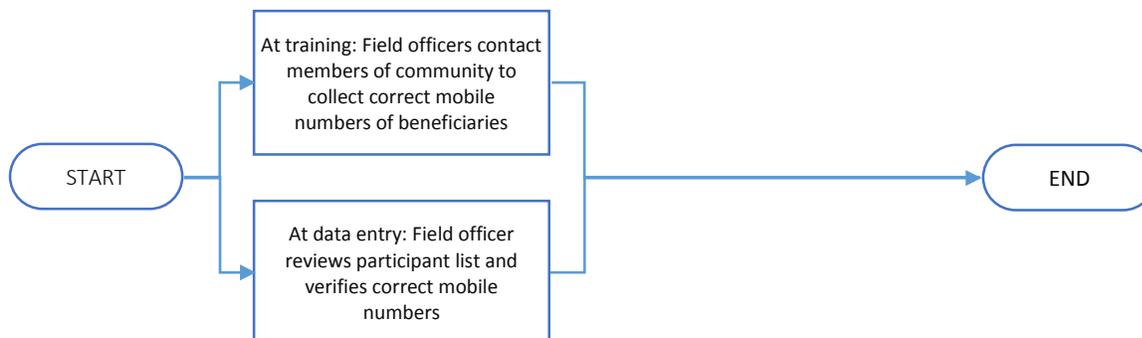
Payment to beneficiary declined due to excess funds in e-wallet



Issue 4: Payment unsuccessful due to non-existent number

In the event of a non-existent number being provided by the beneficiary, the payment will be unsuccessful. Getting the right number will depend on the source of the error, whether it was from the beneficiary or during data entry. In the event that the correct number cannot be found, the beneficiary will have to remain unpaid or, if the beneficiary is known, paid in cash.

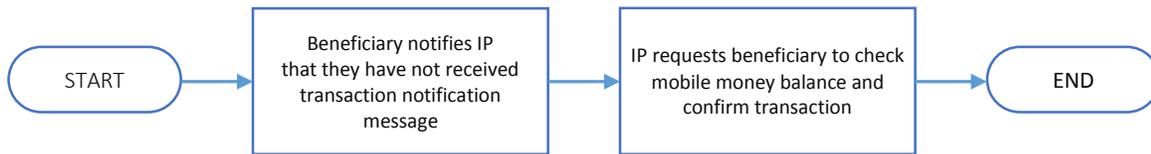
Payment to beneficiary declined due to non-existent number



Issue 5: No notification of payment made due to network outage or phone turned off for over 24 hours

In the event of a network outage or of a phone being turned off for over 24 hours, a notification message may not be delivered to the beneficiary. Part of the solution to this is behavioral change. Beneficiaries should be encouraged to check their mobile money accounts if they are expecting to receive a payment, even without a notification.

No notification due to network outage or phone turned off for over 24 hours



Issue 6: Payment failure over weekend

There are currently gaps in the escalation process if issues occur on a Friday afternoon or over the weekend. While MNOs have staff on call for issue resolution, there are some problems, particularly those that require funds transfers or high-level authorizations, which have to wait until Monday to be resolved. This gap has been discussed with Airtel and MTN and escalation mechanisms are being designed. Until then, it is advisable that implementing partners planning to make payments on Friday inform aggregators in advance or plan to finalize payments by Thursday.

The number of challenges that may arise after a payment has been processed point to the importance of having a dedicated aggregator support system in place. A customer relationship manager appointed to each implementing partner is indispensable for troubleshooting. ■

Summary Insights for Digital Payments Implementation

- Reduction of risk to staff and funds and greater accountability are the main priorities for implementing partners looking to transition, not financial cost.
- Beneficiary data collection is a fundamental step in the digital payment process. The quality of data that is collected and the efficiency with which it is transferred to an implementing partner's main office for payment processing is crucial to a successful digital payment system.
- Conducting pre-tests with staff can be useful for testing the system internally, creating internal-buy in, and reducing the risk of beneficiary resistance.
- Current financial and planning procedures need updating to accommodate a digital payment system. This is particularly necessary due to the constant need to reverse funds after a payment is made for reconciliation, and to the lack of communication between program and finance staff. Once aggregator accounts start to leave a float that can be managed in aggregator accounts, the need for last-minute emergency transfers and requests will decrease and the payment process will become more streamlined.
- Bank transfers and delays with crediting accounts have been cited as the most common challenge for implementing partners when making payments. Due to inefficiencies in the interbank clearance and settlement processes, implementing partners may need to hold a balance in their bulk payments account or select payment aggregators that use the same bank for payment facilitation to manage high-frequency transactions.
- Until systems are more reliable and escalation procedures better equipped to handle issue resolution over the weekend, implementing partners should try to avoid making large urgent payments at the end of the week. Paying participants the day before a training ends gives all stakeholders time to resolve an issue before the weekend.
- In spite of the challenges faced while transitioning to digital payments, implementing partners prefer it to cash and will not be going back to a cash based system.

7. Mobile Money Stakeholders: MNOs and Aggregators

A successful digital payments system requires that all stakeholders involved in the transition have the technical, operational, and financial capacity to serve the needs and requirements of implementing partners. This section looks at aggregators and MNOs – the key mobile money stakeholders involved in a viable digital transition.

7.1 Roles and Responsibilities

Despite use of the Aggregator Model, it is important to encourage partnership among MNOs and aggregators and to maintain dialogue between all partners.

As a result of the decision to go directly to aggregators, as opposed to developing a tripartite contract between MNOs, aggregators and implementing partners, there has been a need to clarify the roles and responsibilities for specific functions pertaining to maintaining agent liquidity and the registration of training beneficiaries for mobile money. Due to the lack of a direct relationship between implementing partners and MNOs,

aggregators will serve as the intermediary, alerting MNOs of the need for their services.

7.1.1 Agent Liquidity Management

Maintaining agent liquidity remains the responsibility of the MNO. If a training event is to be held in a remote or rural location where agent liquidity might be a challenge, implementing partners are to alert aggregators. Aggregators will then notify the MTN Regional Officer directly in the case of MTN, and Airtel headquarters in Kampala in the case of Airtel. These parties will ensure that agents have sufficient cash to meet the withdrawal needs of beneficiaries. Some implementing partners have opted to go directly to the MNO for this.

7.1.2 Mobile Money Registration for Beneficiaries

The responsibility for registering beneficiaries for mobile money at



trainings will fall to the MNO. In a similar process to the one outlined above for agent liquidity, implementing partners will alert aggregators of an upcoming training that the MNOs would attend. MTN and Airtel will then send staff to the training site to register beneficiary SIMs for the service and collect KYC documentation.

A risk of fraud exists at registration as a national ID system is not in place. It is therefore difficult to verify the true identity of the individual being registered.

SIM Card and Mobile Money Registration

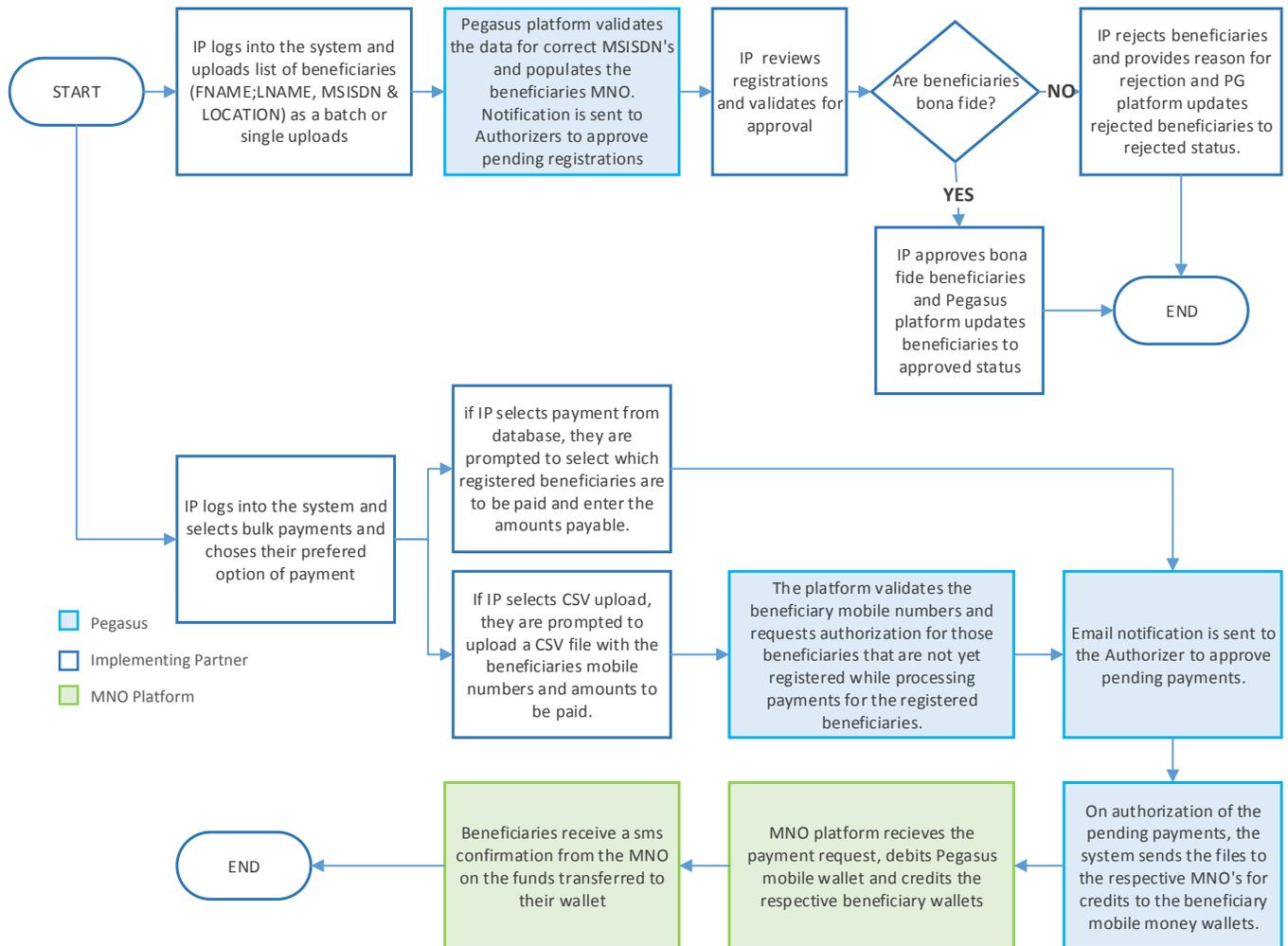
Delays and mistakes have been recorded with SIM cards that have been distributed by Airtel and registered on site, resulting in beneficiaries not being paid and staff being harassed by training participants. Beneficiaries can also easily lose these 'new' SIM cards more easily. Consequently, it is preferable to register beneficiaries' existing SIM cards for mobile money rather than provide them with new SIMs.

7.2 The Payments Ecosystem

7.2.1 Making Payments - Pegasus

In the Pegasus system, the implementing partner may pre-register beneficiaries prior to making payments, or directly enter a payment file, which subsequently calls up the registration function in the system. Registered beneficiaries are updated in the database and can be divided into categories such as beneficiaries, vendors, and staff. The high-level process below describes the Pegasus bulk payment process.

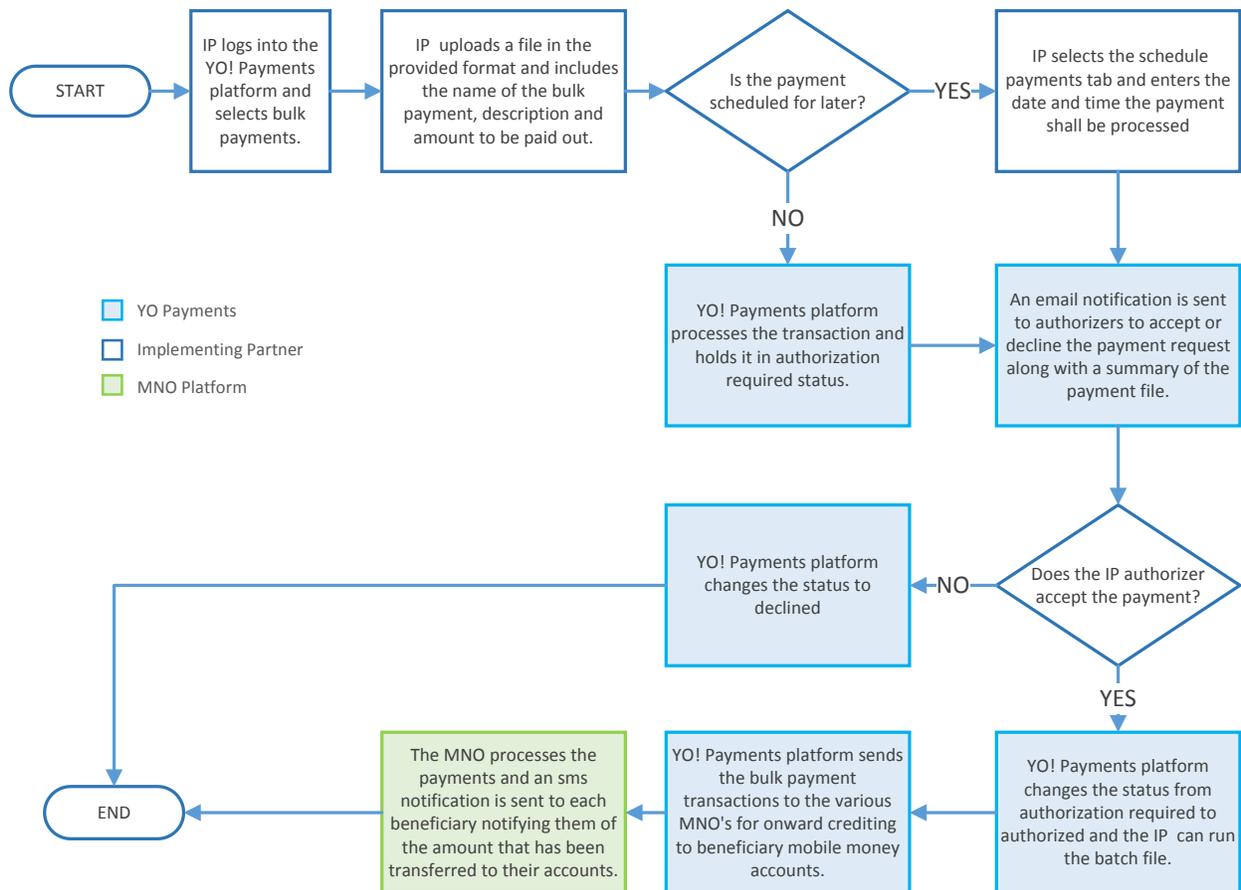
Figure 14. Pegasus Bulk Payment Process Flow



7.2.2 Making Bulk Payments - Yo! Payments

In the Yo! Payments batch processing system the implementing partner may directly upload a payments file onto the system or entering the amount to paid out against the beneficiary details on the database. The high-level process below describes the Yo! Payments bulk payment process.

Figure 15. Yo! Payments Bulk Payment Process



7.3 MNOs

7.3.1 MNO Capacity

The Digitizing Payments Project has illustrated the feasibility and capacity of MNOs to work with aggregators to make payments for implementing partners. To date, 122 successful bulk payments have been made to 1,392 beneficiaries via MTN and Airtel with Yo! Payments and Pegasus valuing USD \$198,875 in total. The project has also helped bring to light certain technical, operational and financial limitations with respect to MNO capacity in Uganda. These limitations are discussed below.



Technical Capacity

A key dependency for the successful uptake of a digital payment system is the ability of MNOs to accept bulk payment requests on behalf of aggregators, distribute bulk payments to subscribers, and share APIs with payment aggregators. These criteria have largely been met and technical systems have worked as they should. The majority of payments have been made successfully and instantly. However, this ability was temporarily compromised twice during the five-month project.

Account Crediting and Freeze on Payments

In November and December 2013, MTN experienced trouble crediting aggregator accounts and placed a freeze on all aggregator payments until the problem was solved. The issue had to do with allowing aggregator wallets to go into negative balance once funds had been depleted, thus allowing the aggregator a ‘credit’ e-value. Resolution came after three weeks, causing a number of scheduled payments to be cancelled until the issue was fixed. These events revealed a delay in MNO response times and suggested that internal controls pertaining to aggregators could be improved. Since bulk digital payments and the Aggregator Model are relatively new in Uganda, all stakeholders are learning as they go. No similar problems have been reported with Airtel. However, to date, only 5% of payments have been made by aggregators via Airtel, so technical capacity has not been truly tested.

Payment Controls

Another limitation raised during the project was the lack of controls that prevent the making of double payments and the ability to reverse payments through the aggregator platform. A recent problem with one aggregator’s client (not a project implementing partner) has resulted in an accidental double payment being made on MTN’s system of 1.4 million UGX (USD \$563.50). The technical problem was quickly resolved by MTN’s operations and technical team and the necessary checks have been put in place to ensure that the error is not repeated.

Data Verification

There is currently no way to verify that a name corresponds to a particular number using a bulk payment platform. However, in 2013 the Bank of Uganda released Mobile Money Guidelines that require the mobile money provider to establish a “mechanism for the customer to verify the name and number of the funds’ recipient for confirmation before a transaction is completed.” In light of this, MNOs are likely to make this function available.

Operational Capacity

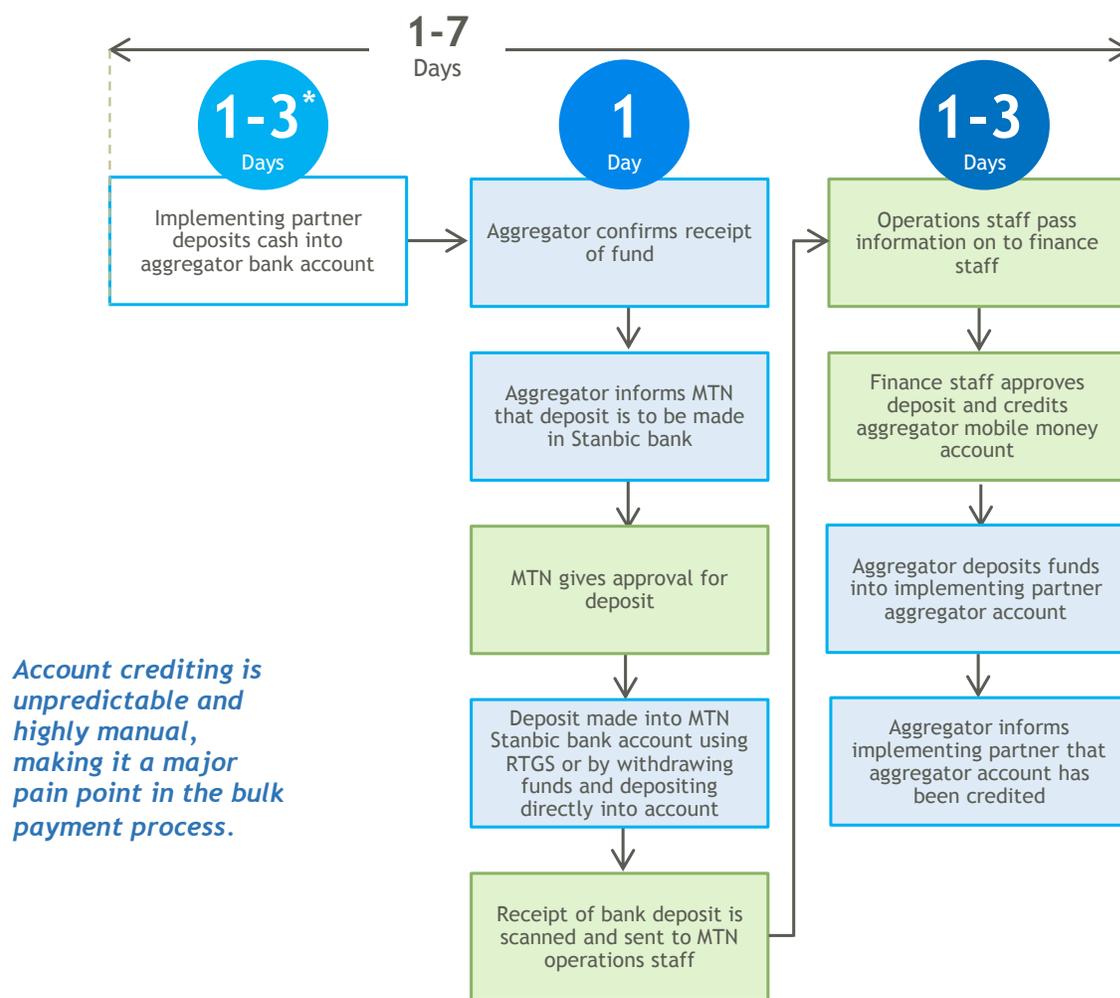
The most pressing issues were operational. The majority of these have occurred with MTN, but this could be because the majority of payments were made through MTN. The operational team has been responsive when possible, and a meeting was held with aggregators and MTN to discuss some of the issues below. Improvements in operational procedures are pending.

MNO operational processes are highly manual, creating delays for aggregators and their clients.

Crediting Aggregator Accounts

Account funding processes available to aggregators for both MTN and Airtel are tedious and labor intensive, as detailed in Figure 16. The same is true for the reversal of funds, which is sometimes requested by implementing partners for reconciliation purposes.

Figure 16. MTN Aggregator Account Crediting Process



* 1 day for RTGS; 1-3 days for EFT

There is no guaranteed timeline for aggregator accounts to be credited and, as a result, aggregators have complained that MTN’s turnaround time is long and unpredictable. This causes aggregators to disappoint many of their customers because of slow processing times. MTN is highly aware of the problem and is working to streamline the process by removing human intervention and ensuring aggregator accounts will be credited with e-value 15 minutes after crediting MTN’s account. In addition to the inefficiency, there is also a risk involved for aggregators that withdraw implementing partner funds to deposit them into the MNO bank account. Account crediting on Airtel follows a similar process, but due to the low number of Airtel users, it needs to be done much less frequently.

Escalation

Making bulk payments through the Aggregator Model is relatively new in Uganda. MNOs have few partners that need funds immediately, and most partners can wait a day (or a weekend) to resolve problems. During the weekend, customer service is empowered to handle only low-level functions like changes of pin codes. To avoid risk, transferring funds is not allowed, but this is a gap in customer support for aggregators, as implementing partners and beneficiaries expecting timely payments.

Financial Capacity

The total costs for MNO-delivered payment systems are unfavorably high, and a consolidated effort to improve bulk payment pricing has been lacking. In addition to high costs, there are a number of financial issues to be addressed by MNOs and their partners.

Aggregator Account Limits

Aggregator account limits imposed by MNOs and banks pose another challenge to the Aggregator Model. Both MNOs have granted aggregators account limits of 200 million UGX (USD \$81,000). Once this limit is passed, aggregator accounts are automatically suspended, causing payments to stall. To raise account limits aggregators must present a case for the need. The request is handled by MNO partner banks.

MNOs, by contrast, have given their clients account limits of 4 billion UGX (USD \$1.5 million). If aggregators are to be able to take on more implementing partners, this limit needs to be raised to be comparable to MNOs.

Table 5. Account Limits for Mobile Money Stakeholders

Stakeholder	Account limit (MTN)	Account Limit (Airtel)
Yo! Payments	<ul style="list-style-type: none"> ▪ 200 million UGX (USD \$81,000) total ▪ Plans to raise to 5 billion UGX ▪ (USD \$2 million) 	200 million UGX
Pegasus	<ul style="list-style-type: none"> ▪ 200 million UGX (USD \$81,000) total ▪ Plans to raise to 5 billion UGX ▪ (USD \$2 million) 	200 million UGX
Airtel		4 billion UGX (USD\$ 1.5 million) per client
MTN	<ul style="list-style-type: none"> ▪ 4 billion UGX (USD \$1.5 million) per client 	

Yo! Payments' MTN account for the project was erroneously given an account limit of 50 million UGX (USD \$19,849). Once this limit was passed, due to multiple payments occurring on a Friday, the Yo! Payments account became automatically suspended, raising awareness of the error. Payments that were scheduled during this time experienced slow processing times resulting in beneficiaries not receiving their funds until the issue was resolved 2 days later.

Aggregators have since been given a new limit of 200 million UGX (USD \$81,000). They are advocating an increased limit of 5 billion UGX (USD \$2 million).

Pricing

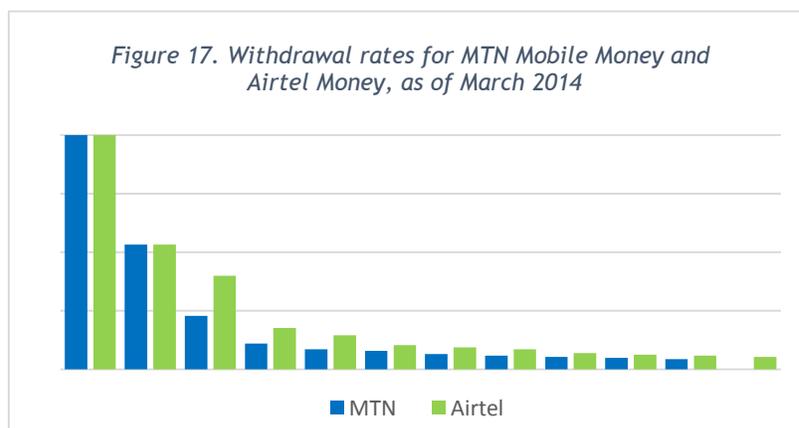
A consolidated effort to improve MNO pricing has been lacking, resulting in high bulk payment and withdrawal fees. These are discussed below.

Withdrawal Charges

Costs are especially high at the agent point, with withdrawal charges being relatively high.

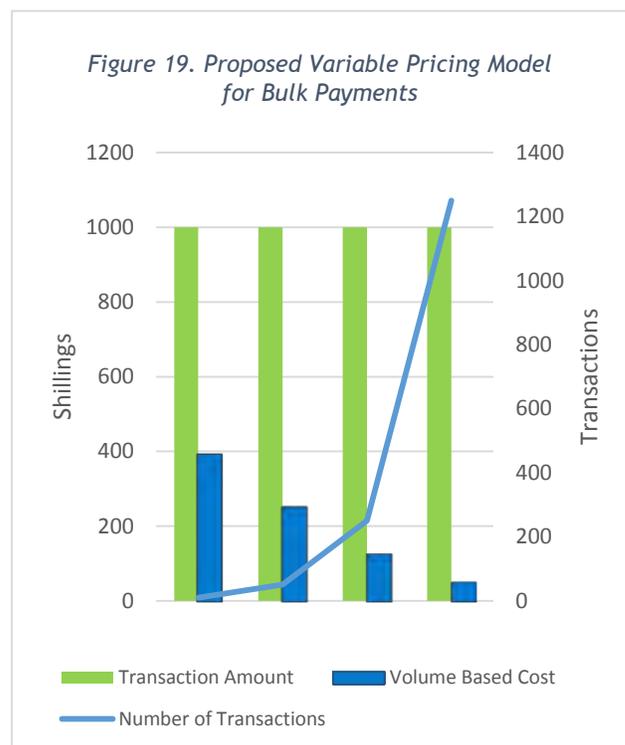
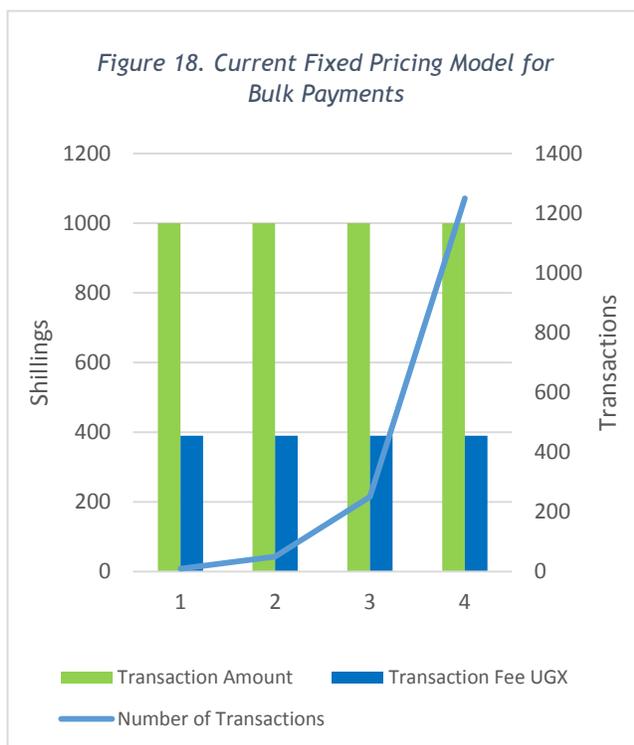
MTN Mobile Money		Airtel Money	
Transaction Tiers (UGX)	Withdrawing costs from agent	Transaction Tiers (UGX)	Withdrawing costs from agent
500 - 2,500	300	500 - 2,500	300
2,501 - 5,000	400	2,501 - 5,000	400
5,001 - 15,000	800	5,001 - 30,000	800
15,001 - 30,000	800	30,001 - 60,000	1,100
30,001 - 45,000	1,100	60,001 - 125,000	1,750
45,001 - 60,000	1,100	125,001 - 250,000	3,250
60,001 - 125,000	1,750	250,001 - 500,000	5,250
125,001 - 250,000	3,250	500,001 - 1,000,000	9,500
250,001 - 500,000	5,250	1,000,001 - 2,000,000	18,000
500,001 - 1,000,000	9,500	2,000,001 - 3,000,000	32,000
1,000,001 - 2,000,000	18,000	3,000,001 - 4,000,000	33,000
2,000,001 - 4,000,000	32,000	4,000,001 - 5,000,000	45,000

Transaction fees (as a percentage) are highest for those withdrawing the smallest amount, meaning that beneficiaries withdrawing the least are hit hardest (Figure 17). Implementing partners have opted to include withdrawal charges when making payments to beneficiaries as a way of encouraging buy-in, but have raised concerns over the amount.



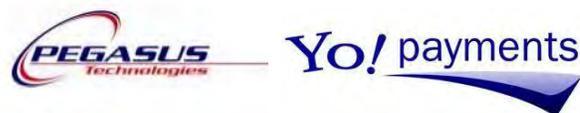
Bulk Payment Charges

As of March 2014, bulk payments still do not benefit from volume discounts. Each transaction costs 390 UGX (USD \$0.15) for MTN and 300 UGX (USD \$0.12) for Airtel. Fixed bulk payment charges (Figure 18) are a major pain point in the Ugandan mobile money market. Addressing them through a variable pricing model (Figure 19), will help the expansion of digital payment systems.



7.4 Aggregators

The Digitizing Payments Project highlighted the benefits of using aggregators. Primary benefits include additional and customizable functionality, the ability to make cross-network payments directly to beneficiaries' e-wallets, and superior security controls. The project also brought to light some of the technical, operational, and financial capacity limitations of aggregators in Uganda.



7.4.1 Technical Capacity

Two key dependencies for the successful uptake of a digital payment system are the availability of an efficient and user-friendly aggregator platform that makes timely payments, and the ability of aggregators to work with MNOs to solve technical problems. Generally, these needs were met for the purposes of the pilot, but deficiencies in technical capacity remain, as described in part below.

Open APIs

A key requirement is that MNOs share APIs with payment aggregators. This has worked well, with both Yo! Payments and Pegasus being fully integrated into both MNO platforms and able to make payments on both MTN and Airtel platforms. There is potential for further integration through the sharing of KYC information to allow aggregators to validate names and registration status of beneficiaries.

Aggregator Platforms

Web portal functions	Reporting	Data Security	Mobile portal functions based on appropriate level of access	User Security
<ul style="list-style-type: none">• Payment scheduling should generate unique IDs for single and bulk payments• Must be possible to directly entry recipient information into portal• Upload of data file either CSV or other mutually agreed upon format• Maintenance of portal must be done by aggregator	<ul style="list-style-type: none">• Provision of payment activity summary must include successful and undelivered payments, as well as transaction number• Report must be organized by time and date, date range, beneficiary, beneficiary range and others as may be specified from time to time	<ul style="list-style-type: none">• Encryption methods must be the industry standard and compliant with Ugandan regulations on privacy and security• Physical storage of data must be compliant with Ugandan regulations and only accessible by authorized personnel	<ul style="list-style-type: none">• Must have the ability to view payment status by entering scheduled payment ID• Ability to modify (pause, cancel, and release) scheduled payments for use by field personnel at the conclusion of project is also required	<ul style="list-style-type: none">• Master ID must be issued for use in managing authentication and access by implementing partner employees or contractors• Payment portal must provide at least three levels of access with multiple layers of authentication to limit access to features and functions

Enhancements

Following their selection, Vital Wave met with all selected aggregators to review their bulk payment systems. Aggregators immediately began to enhance their software solutions to meet the needs of implementing partners as stipulated in the BRD, and based on feedback from meetings with selected implementing partners. As the project progressed, features continued to be developed in line with implementing partner feedback. This customization highlights the value of using an Aggregator Model.

The importance of a beneficiary database has become increasingly clear, with all implementing partners expressing the need and added value of the feature. After receiving this feedback, Yo! Payments initiated development and released the feature. Both aggregators have been open to further enhancements that meet one implementing partner's needs, provided they also suit the needs of other implementing partners. A summary of enhancements can be seen in Figure 20.

Figure 20. Summary of Software Developed by Aggregators

Database Management

- Database to capture beneficiary data, including: first name, last name, mobile number, title, carrier and location
- Provision for download of database for use by implementing partner
- Yo! Payments developed a feature that allows upload of beneficiary details to database via SMS

Payment Processing

- Provision of scheduling payments at future dates
- Provision for naming payment files and including descriptions
- Provision for multiple user access and transaction authorization
- Provision of transaction costs by various cost centers to facilitate financial analysis

Reporting

- Additional report search filters including search by beneficiary range or payment file range
- Reporting on transaction errors to facilitate issue resolution
- Additional report search filters including search by beneficiary title
- Reporting on transaction errors to facilitate issue resolution

Controls

- Authorizers log in before authorizing a bulk payment

Feedback on Platform

Initial feedback on aggregator platforms by implementing partners is positive. Finance staff have stated that both Yo! Payments' and Pegasus' systems meet their overall needs and requirements, particularly with regards to the ability to make cross-network payments, the existence of a database, superior reporting functions, and authorization levels and controls. Implementing partners have also described the systems as “quick, easy, and user-friendly.”

Criticism has focused on the fact that the platforms do not run on all Internet search engines (only on Chrome and Mozilla). Yo! Payments does not work on Internet Explorer, despite this being the default browser used by implementing partners. SHRP (RTI) has also complained of the Yo! Payments platform being very slow to use, but this issue has not been raised by other implementing partners. This could be due to the large number of uploads being made by SHRP (RTI).

Feedback on platforms has been positive. As technologies and mobile payment systems expand, implementing partners and beneficiaries can expect to see innovation aimed at reducing costs.

Implementing partners have also suggested that aggregators could offer additional services beyond payments. These include bulk SMS solutions and a beneficiary registration system for training participants. The latter would greatly improve the efficiency of beneficiary data collection and reduce the potential for risk.

Training

Training sessions were conducted for all implementing partners by their chosen aggregator. Sessions lasted up to four hours and took place at the implementing partner's location of choice. They were held for key users of the system; any users who were missing were trained in turn by those who attended. After the training, aggregators provided a user manual describing all functions of the aggregator system, including step-by-step instructions with screen shots. Trainings were divided in two parts. Part one saw the trainer take staff through the aggregator platform. In part two, staff user accounts were set up and small payments of 1,000 UGX (USD \$0.39) were sent to staff being trained.



Pegasus conducted trainings for SDS in Kampala, STAR-EC in Jinja and NU-HITES in Gulu. Accommodation was provided for Pegasus in Gulu by NU-HITES, but all other costs were borne by Pegasus. Feedback for training was positive.



Yo! Payments conducted all trainings at UHMG, SHRP (RTI) and Commodity Production and Marketing (Chemonics) offices in Kampala. Feedback for training was positive.

For beneficiaries, MTN and Airtel have started to attend trainings for some implementing partners in order to give presentations and answer any questions on mobile money. They are also using this opportunity to register those who wish to be registered for the service.

Yo! Payments and Pegasus have provided continuous support to implementing partners. In addition to payment training and support, aggregators have also offered to demonstrate new features that have been created in line with feedback. Written materials continue to be refined by aggregators based on feedback from participants and newly added features.

7.4.2 Operational Capacity

As with MNOs, the most pressing issues for aggregators were operational. Aggregators have few clients that need funds immediately. Implementing partners represent a new type of client for aggregators, as requests and payments are usually urgent and delays can be troublesome. Implementing partner needs were almost always met, but some limitations in operational capacity remain. These are discussed below.

Capacity Building and Operations Support

On the whole, aggregator support to implementing partners was good and greatly improved as the project progressed. Aggregators provided implementing partners with plenty of support in the weeks leading up to payments. Aggregators met with finance staff in their offices to set up accounts, help with payment sheet compilation, and provide support when initial payments were made. In addition, implementing partners were also assigned a relationship manager who maintains good communication with clients. Yo! Payments offered to be present at the first five payments in order to ensure that all users are confident and comfortable with the system.

However, the capacity of aggregators to provide timely support to implementing partners could be improved further. Aggregators have limited human resources to deal with requests, and follow up can sometimes be slow. This has been exacerbated by issues related to account funding on the part of MTN, which has required Pegasus to hire an additional accountant to handle account funding. Expanding the digital payments system with more implementing partners would likely require an increase of capacity at Pegasus and Yo! Payments, or a renewed search for additional aggregators.

Account Funding

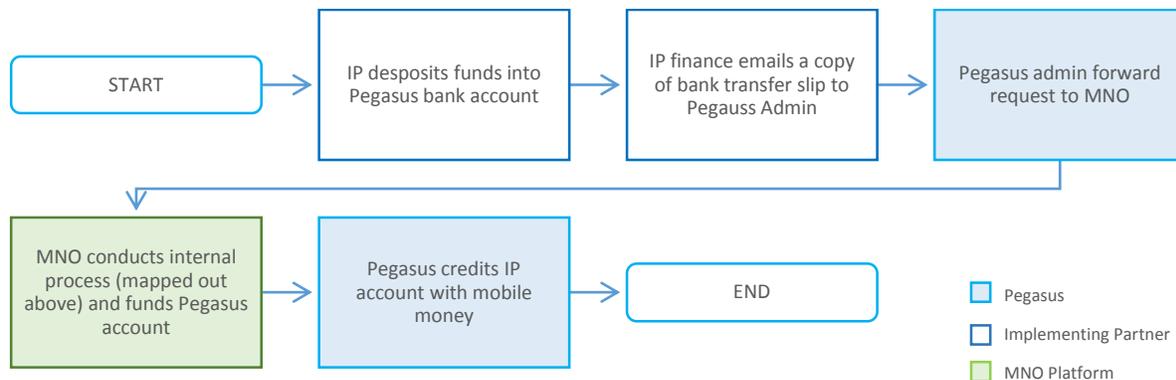
As explained in the MNO section, account funding processes available to aggregators for both MTN and Airtel are unpredictable and sometimes subject to delays. Aggregators have different policies on how to manage account funding. Both are described below.

Account Funding - Pegasus

The Pegasus account will have to be funded by the implementing partner, requiring a deposit in any of the banks/branches where the Pegasus holding account is located. These funds are then forwarded to the various MNO escrow accounts for conversion into mobile money value. This process is time-consuming and prone to delays. Pegasus buys their e-float live when implementing partners transfer funds. This makes the aggregator highly reliant on MNO processing times, which are unpredictable.

Even when aggregators do not have to wait for MTN to process a payment, bank processes may still cause delays. Even using RTGS, a real-time transfer may take up to one day to arrive in the aggregator's bank account.

Figure 21. Pegasus Account Funding Process Flow

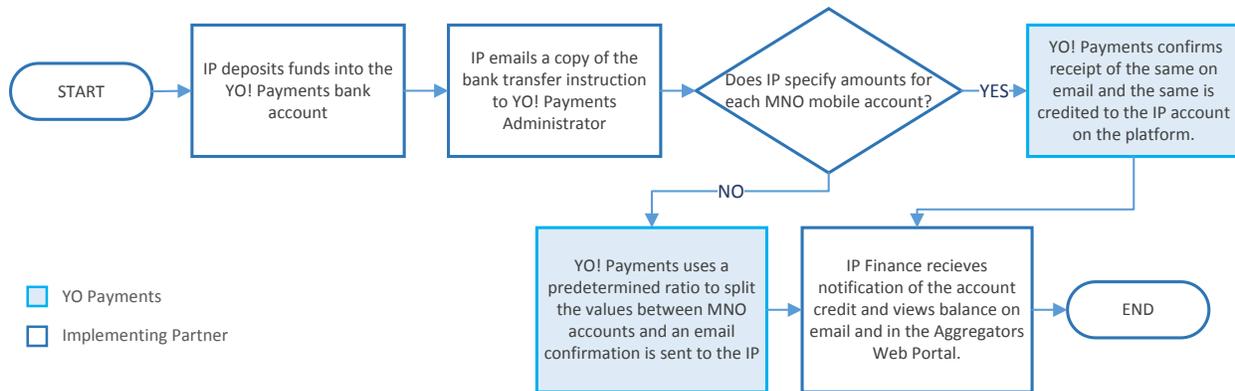


Account Funding - Yo! Payments

Similar to the Pegasus system, the implementing partner will have to deposit funds in any of Yo! Payments' holding accounts. Unlike Pegasus, Yo! Payments holds a balance of e-float with MTN and Airtel, and can therefore credit clients' account as soon as funds to the Yo! Payments bank account are credited. This allows Yo! Payments to work somewhat independently of MNO processing times and to ensure it always has enough e-float from both MNOs.

Yo! Payments requires the implementing partner to determine the value to be transferred to each MNO. If this is not stipulated, Yo! Payments provisions this split based on a predetermined ratio based on the current mobile money market share for each MNO.

Figure 22. Yo! Payments Account Funding Process Flow



Yo! Payments has managed to reduce the problem of delays in account crediting by holding enough prepaid e-value from both MNOs which it can directly credit to client accounts once funds appear in the aggregator’s account. Due to limited resources, Pegasus has not been able to apply the process to its operations, and clients must depend on MNO processing times before their accounts are credited. If aggregators are to be able to take on more implementing partners, this will need to be addressed to improve efficiency and provide a more responsive service to implementing partners without casing undue strain on aggregators.

7.4.3 Financial Capacity

The financial capacity of aggregators is restricted by the fact that they are in essence start-up companies with limited capital. This means that aggregators are often restricted by lack of financial resources and feel the costs of doing business rather heavily.

Keeping e-float

Lack of financial capacity has meant that Pegasus is not been able to buy e-float in advance from the MNO. Instead it must buy float directly from MNOs once implementing partners transfer funds to its bank account. This makes Pegasus heavily dependent on MNO processing times.

Account limits

Financial capacity to handle large volumes of transactions is currently restricted due to limitations on the aggregator accounts imposed by the Bank of Uganda, MNO partner banks and MNOs. As explained in the MNO section, if aggregators are to be able to take on more implementing partners, account limits must be raised to a level comparable to MNOs.

Cost

Both Yo! Payments and Pegasus agreed to not charge implementing partners during the pilot stage. Implementing partners are now being charged for the service. Yo! Payments is offering its pilot

implementing partners a low rate of UGX 100 (USD\$0.04) and is planning to charge subsequent clients UGX 250 (\$0.09) for the service. Pegasus' charges UGX 130 (USD \$.05) per transaction.

Aggregator pricing models must be cost competitive for the client and cost effective for the aggregator.

The volumes of transactions have so far been limited, but the cost and labor intensity of providing a bulk payment service have been relatively high. A business model that includes reasonable pricing for the client and aggregator will be required to solidify a sustainable aggregator business. In the meantime, aggregators may need to reconsider their current low pricing until volumes increase.

7.5 Key Insights

- Partnering with payment aggregators that are already certified by MNOs allows for implementing partners to enter into partnership directly with payment aggregators.
- Aggregators are very open to further enhancements that meet implementing partners' needs.
- Feedback on aggregator platforms by implementing partners has been very positive, with implementing partners referring to the systems as “quick and easy” and meeting their needs.
- Aggregators have been very supportive of implementing partners' payments but the timeliness of their support is limited by constraints on human resources.
- Delays with account funding and issue resolution are major pain points that risk undermining the Aggregator Model. Streamlining MNO and aggregator account funding processes and improving the timeliness of issue resolution through tighter MNO-aggregator integrations are a high priority if the Aggregator Model is to be competitive and efficient.

7.6 Comparing the MNO and Aggregator Model

This section compares the functionality and cost of Uganda’s two main MNOs (MTN and Airtel) and the aggregator bulk payment systems.

Table 6. MNO and Aggregator Capability Matrix*

#	Service	MNO		Aggregator	
		MTN	AIRTEL	PEGASUS	YO! PAY
1	CSV file upload	Yes	Yes	Yes	Yes
2	Database access and management	No	No	Yes	Yes
3	Bulk payment to non-Mobile Money user	No	Yes	No	No
4	Reports customization	No	No	Yes	Yes
5	Multiple authentication (Maker/Checker/Authorizer)	No	Yes	Yes	Yes
6	Authorization notifications (email, SMS)	No	No	Yes	Yes
7	Pause or cancel running payment	Yes	No	Yes	Yes
8	Payment scheduling	No	No	Yes	Yes
9	Mobile Money interoperability (payments to different wallets)	No	No	Yes	Yes
10	Mobile Money account balance	Yes	Yes	Yes	Yes
11	Mobile Money account pre-funding	Yes	Yes	Yes	Yes
12	Bulk payments service training at client’s location	No	No	Yes	Yes
13	Bulk payments service training at own location	Yes	Yes	Yes	Yes
14	Platform user manual provided for clients	No	Yes	Yes	Yes
15	Pre-payment mobile account validation (Automated)	No	No	Yes	Yes
16	Pre-payment mobile account validation (Manual)	Yes	Yes	Yes	Yes
17	Payments during network outages sent once network is back up	No	No	Yes	Yes
18	User Access Rights Customization	No	No	Yes	Yes
19	Rejection of duplicate numbers in 1 payment sheet	No	No	Yes	No
20	Web access to payments portal	Yes	Yes	Yes	Yes
21	Automated payment reversal request	No	No	No	No
22	Detailed audit trail of all transactions on web portal	No	No	Yes	Yes
23	Calculation of all charges prior to payments submission	No	No	Yes	Yes
24	On-site registration of beneficiaries	Yes	Yes	No	No

* Disclaimer: Information in the above table is based on the interpretation of the current services available from the MNOs. These services are upgraded periodically and newer releases may incorporate new features which were currently not available at the time of publication (March 2014).

Table 6. Detailed Comparison of MNO and Aggregator Models

		MNOs	Aggregators
Set up	MTN	<ul style="list-style-type: none"> Set up processes have reportedly been long MTN only conducts trainings at MTN offices and No user manual provided 	<ul style="list-style-type: none"> Set up time is relatively short, with an aggregator taking only two months for project participants Training is conducted for all staff at client’s preferred location. NU-HITES was trained in Gulu - 11 members of staff from Gulu, Lira and Kitgum were present Clients provided with a user manual
	Airtel	<ul style="list-style-type: none"> Set up processes have reportedly been long Airtel conducts trainings on-site Clients provided with a user manual 	
Functionality	MTN	<ul style="list-style-type: none"> Inflexible and risky bulk payment platform: <ul style="list-style-type: none"> No interoperability – payments to MTN users only Lack of adequate segregation of payment functions and only one level for payment authorization, exposing the system to misuse Risk - Once logged on the web, there is no limit to the number and value of transactions that can be done System must be operated on a static IP address and computer, denying the authorizers the opportunity to review away from the file uploader Only works with Internet Explorer (version 8) requiring clients to downgrade their browsers Payments fail in the event of network outage 	<ul style="list-style-type: none"> Aggregators offer superior functionality, including: <ul style="list-style-type: none"> Ability to make cross network payments directly into beneficiaries’ e-wallets Beneficiary database More secure controls through multiple authentication and authorization Greater convenience through notifications sent to users via SMS and/or email Better and customizable reporting Payment scheduling Automatic calculation of total charges prior to submitting a payment In the event of network outage, automatic resend function allows payment to appear as pending until the aggregator system successfully transfers the payment to MTN/Airtel Incompatible with Internet Explorer Bulk payment uploading times can be slow and require strong Internet connection
	Airtel	<ul style="list-style-type: none"> Better platform than MTN with 3 levels of user controls and ability to make payments to unregistered users, known as “off-net payments”. Off-net payments work through a pin code that is sent to the beneficiary with a flash notification message. <ul style="list-style-type: none"> In the event of network outage or the recipient’s phone being turned off for over 24 hours, the message is not delivered Off-net transfers are useful features for making cross network payments but do not represent true interoperability, there is no traceability of funds and beneficiaries only have 5 days to withdraw before funds are returned to sender Payments fail in event of network outage 	
Escalation	MTN	<ul style="list-style-type: none"> Complaints of modest levels of customer care have been reported by clients 	<ul style="list-style-type: none"> Aggregators provide clients with customer relations managers Customer service response times stands to be improved Unable to provide direct technical support as majority of issues must be resolved with MNO
	Airtel	<ul style="list-style-type: none"> Responsive to clients with someone always available over the phone 	
Cost	MTN	<ul style="list-style-type: none"> Most expensive MNO but cheaper than aggregator, with a flat fee of 380 UGX (USD \$0.15) per payment 	<ul style="list-style-type: none"> Aggregator platforms are more expensive and include MNO charges, aggregator charges and optional inclusion of withdrawal charges
	Airtel	<ul style="list-style-type: none"> Cheaper than MTN and aggregator with flat fee of 300 UGX (USD \$0.12) per payment Off-net payments expensive at 1,600 UGX (USD \$0.64) per payment but exclude withdrawal charges as withdrawal is free using the pin code system 	

8. Final Analysis

8.1 Cost-Benefit Analysis of the Aggregator Model

Costs	Benefits
Additional funds are required to cover the costs levied by MNOs for transferring funds to beneficiaries and for beneficiaries to withdraw funds.	Time taken to physically distribute payments is drastically decreased as funds are received by beneficiaries in seconds.
Internet dongles for field staff working in remote areas with no readily available Internet	Operational efficiency is improved as large volumes of payments can be made to multiple recipients with accurate record keeping and reconciliation. Paper work is also reduced.
Mobile payment systems can be labor intensive and time consuming.	Financial operations are centralized as accounts teams can manage all their payments on a single electronic banking platform.
Training of staff is required on how to use the mobile money software.	More convenient for accounts staff who no longer need to travel to the field and for beneficiaries who receive payment directly to their mobile phones rather than having to wait for staff to arrive and distribute cash.
Transport costs incurred by beneficiaries who have to travel long distances in areas with poor agent networks	Lowers the risk of theft and/or fraud, unlike cash which can be lost or stolen. Security is increased for the beneficiaries and staff who do not have to travel with cash.
Unexpected technical problems can delay payments, possibly requiring beneficiaries to spend an extra night in accommodation paid for by the implementing partner.	Increased accountability and transparency in financial dealings and reduced risk of fraud or corruption. Digital payment systems can also provide donors with accurate financial records.

8.2 Next Steps

Through the course of the project a number of opportunities for the further development of a mobile-based payment system have surfaced. Implementing partners are looking to continue using mobile payments in their operations and have indicated their interest in a wider service offering, as well as their intention to expand this service to other partners and donors. Figure 23 highlights the main opportunities for next steps. ■

Figure 23. Opportunities for Next Steps

Alternative Mobile Money Uses	NGO Partners	Added Value Products	Other Donors
<ul style="list-style-type: none"> Implementing Partners to move beyond payments for per diems and become cashless operations for inflow (loan repayments, pay-in schemes) and outflow (payment to vendors and service providers) 	<ul style="list-style-type: none"> Implementing Partners looking for partner NGOs and sub-implementors (local and international) to use mobile money 	<ul style="list-style-type: none"> Aggregators can offer other services to Implementing Partners, including bulk SMS, mobile surveys and beneficiary data collection technology to be used at trainings 	<ul style="list-style-type: none"> Implementing Partners to use mobile payments for donors other than USAID Bring other donors on board to support mobile money transition for their own implementing partners

9. Recommendations

Based on the learnings uncovered throughout the nine-month Digital Payments Project, Vital Wave has identified ten recommendations to support the scaling of digital payments and growth of the Ugandan mobile money ecosystem.

Recommendation 1 - Develop partnerships with aggregators

Partnering with an intermediary such as an aggregator simplifies operations for implementing partners. Aggregators provide superior functionality, increased security controls, better reporting, a beneficiary database, and the ability to manage across network payments from a centralized platform, thus increasing transparency throughout the entire payments value chain.

Recommendation 2 - Seek better pricing structures

Fixed bulk payment price structures and high withdrawal costs are major pain points in the Ugandan mobile money market. Pricing models remain a barrier to broader adoption. As volumes increase, the argument for alternative models improves.

Recommendation 3 - Improve planning and account management

Successful transition to digital payments requires careful change management for all stakeholders, and good planning is crucial. Implementing partners should alert aggregators of large payments in advance, and aggregators must carefully monitor their account limits. This includes keeping a balance in the aggregator account and adding funds as required. This also allows excess funds to be available for implementing partners in the event of an unplanned, last-minute payment.

Recommendation 4 - Improve aggregator model agility

There is an urgent need to improve the agility of aggregators through tighter integration with MNOs. Account funding processes are slow due to unpredictable MNO processing times. Account limits imposed by MNOs are low compared to the MNO model, and issue resolution can be slowed due to the existence of an intermediary. Streamlining and tightening key integration points between MNOs and aggregators are a high priority if the Aggregator Model is to be efficient and viable.

Recommendation 5 - Streamline and automate MNO processes

There is a need to improve MNO operations and escalation processes for a more streamlined and efficient customer experience that is less dependent on human intervention. Operational and financial processes are currently highly manual and rely on the presence of particular individuals. Turnaround times are unpredictable and escalation mechanisms, particularly over the weekend, are lacking. Timelines for aggregator issue resolution need to be put in place.

Recommendation 6 - Build aggregator capacity

The capacity of aggregators to provide timely support to implementing partners is constrained due to limited human and financial resources. To improve responsiveness, there needs to be an increase in personnel for various operational roles, including technically knowledgeable relationship managers, trainers, and support and monitoring staff. For smaller and newer aggregators, resources need to be made available to allow for e-value accounts to be pre-funded, reducing dependence on MNO processing times and improving the account funding experience for the client. Expanding the digital payments system with more implementing partners would likely require more personnel, expanded operating capacity including a more robust feature set, and increased credit lines at Pegasus and Yo! Payments. Additional entrants into the aggregator space will also relieve capacity constraints.

Recommendation 7 - Engage with banks and stakeholders

MNO, bank and regulator policies can stifle growth by imposing limits, taxes and time-consuming processes, ostensibly for the purpose of risk management. Engaging key stakeholders will help to improve processes and allow the mobile money ecosystem to flourish.

Recommendation 8 - Enhance interoperability

Interoperability is lacking, resulting in delays to account funding processes. EFT takes up to three days, and while RTGS exists, processing times are unpredictable as funds must be cleared by the Bank of Uganda, which can take up to one day. This lack of interoperability and predictability reduces the flexibility of the entire system for the client. There is a need to mobilize financial ecosystem stakeholders such as MNOs, banks and regulators to develop better solutions for faster banking and the creation of an interoperable digital payment grid.

Recommendation 9 - Open platforms

Stakeholders like MNOs should be encouraged to create open platforms that will allow multiple players like aggregators, merchants, banks and developers to integrate easily with their system, thus promoting innovation and the spread of mobile money services. Opening APIs for the verification of names against registered numbers would improve security and add value to bulk payment systems.

Recommendation 10 - Support the business case for merchant acquisition

The offering of convenient services to members of various communities is essential if digital payments are to scale in inclusive ways. Currently, merchant acceptance of mobile money remains limited in Uganda, resulting in an over-reliance on the agent network for cash outs. An increase in merchant acceptance through POS devices that accept mobile money in supermarkets and petrol stations represents a major opportunity to expand the digital payments ecosystem. This would also lighten the burden on agents and reduce costs for implementing partners who currently cover withdrawal charges. ■

10. Conclusion

There is an essential need to utilize technology for the improvement of aid effectiveness and efficiency. Moving away from cash-based payments to the digital distribution of funds brings about a number of benefits to individuals and organizations. Mobile money provides beneficiaries and organizations with a safe, accessible, and reliable alternative to cash. Digital payments reduce the costs and risks associated with transferring and receiving cash in remote locations, especially in areas with few financial institutions. This project has shown how a well-implemented digitization process can change the way beneficiary payments are made in Uganda and the world, increasing operational effectiveness and financial efficiency for organizations and donors.

For the organizations involved, transitioning to digital payments can be demanding on all personnel. However, as this project has illustrated, the benefits of a successful transition are worth the investment and effort. In Uganda, mobile money infrastructure still lags behind that of Kenya, where years of experience with M-PESA have led to a sophisticated mobile money ecosystem. However, Uganda is well on its way. While mobile money players still have much work ahead to develop a more reliable and streamlined service, the ecosystem is changing fast. As technologies and mobile payment systems expand and stakeholders mature, clients, and end users can expect to see innovation aimed at reducing costs and inconveniences.

While the Aggregator Model does have certain limitations, most due to the aggregator's nascent position as an intermediary, it also provides far superior functionality and security for those looking to transition to digital payments. For this reason, the benefits of the model far outweigh the challenges. As resources improve and competition increases, aggregators can become highly competitive businesses that enable the transition to digital payments for beneficiaries in Uganda.

There is great potential for digital payments in Uganda, East Africa and globally. In 2012 total aid to developing countries amounted to \$125.7 billion. This aid contributes to numerous programs, many of which use cash in the field. The majority of staff travel allowances, social direct payments, cash-for-work programs and emergency relief payments make use of cash transactions, which present operational and security challenges for donors, implementing organizations and beneficiaries. Supporting the growth of digital payment ecosystems will contribute to the creation of a cash-lite society, helping to increase innovation, control fraud and theft, and empower individuals globally to have more control over their own lives through inclusion in mobile financial services. ■

Digitizing Payments Process Kit

Work Plan, Framework, and Practical Tools



United States Agency for International Development

Bill & Melinda Gates Foundation

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1. Introduction

Globally, governments, the development community, and the private sector distribute billions of dollars in payments to individuals for salaries, supplier fees, social welfare stipends, cash-for-work programs, emergency relief payments, and other purposes.¹ Most of these disbursements are cash transactions, presenting operational and security challenges, particularly in countries with limited physical and financial infrastructure, as they require carrying cash in small denominations from urban centers to remote rural areas. More specifically, cash payments can bear high financial and social costs related to:

- **Security** – Individuals who carry large sums of cash, including merchants, couriers, payment beneficiaries, and parents paying school fees, are targets of theft.
- **Transparency and accountability** – Cash cannot be tracked and, therefore, it is impossible to document its disappearance. With mobile or electronic payments, transactions can be tracked. A recent CGAP survey found that Mobile Network Operators (MNOs) are taking oversight seriously, with each MNO having a dedicated staff to monitor and investigate suspicious or unusual transactions.
- **Transportation** – Hiring couriers to safely transport bags of cash to disbursement sites can be very expensive.
- **Development** – Moving cash from one location to another is expensive and time-consuming, reducing profit margins and growth opportunities for private businesses and development organizations. However, mobile money and electronic payments significantly lower transaction costs and enable sustainable fee-for-service models.²

Shifting cash-based payments to electronic distribution methods creates considerable benefits for individuals, communities, and economies. Mobile phone-based money systems reduce the costs of transferring cash to remote populations, especially in areas with few financial institutions. Transfer recipients have a relatively safe and reliable alternative to cash when receiving (and making) payments, provided they have ready access to mobile money service providers.³ Further, research on the impact of digital payment systems in Kenya suggests that households were able to increase their access to financial services and informal private transfers between individuals, allowing them to better manage financial shocks.⁴

To identify more effective ways of processing digital payments, Vital Wave, in partnership with the Bill and Melinda Gates Foundation, conducted extensive research in Kenya, Tanzania and Uganda. The aim of this research was to understand the stakeholder landscape and how mobile money systems have been successfully utilized by organizations to make payments to their beneficiaries. In Uganda, specifically, Vital Wave interviewed a cross section of local stakeholders in order to understand the challenges and opportunities of using mobile money to make bulk payments.

Vital Wave then worked with six USAID implementing partners to assist them in making the transition to digital payments for their beneficiaries. The project engaged key stakeholders,

¹ Better Than Cash Alliance

² USAID Blog, <http://blog.usaid.gov/2012/02/we-must-do-better-than-cash/>

³ Center for Global Development, Zap It to Me: The Short-Term Impacts of a Mobile Cash Transfer Program

⁴ Center for Global Development, Zap It to Me: The Short-Term Impacts of a Mobile Cash Transfer Program

including USAID implementing partners and their beneficiaries, USAID Uganda Mission, MNOs, payment aggregators, and Ugandan regulators. The project supported six USAID implementing partners to transition away from cash payments in the field to bulk payments via mobile money.

This “Digitizing Payments Process Kit” describes the process and shares useful materials developed to facilitate the transition to digital bulk payments by USAID implementing partners to their beneficiaries. The Kit includes a work plan, process manuals, guidelines, and other resource documents. It is intended to inform and guide USAID missions, donor agencies, implementing partners, MNOs, Business Process Outsourcing vendors, or aggregators, and other interested service or technology providers.

2. Background

This section provides a brief overview of access to mobile technology and electronic payments, specifically in sub-Saharan Africa. This section also includes diagrams that capture the current model and the recommended model for the distribution of bulk payments.

Technologies such as mobile phones and the Internet have enabled millions of new users to access financial services in many developing countries. When technology is combined with business processes, electronic payments can be made inexpensively and transparently.

However, in most of sub-Saharan Africa, only a small percentage of upper-income households use card-based, online, or mobile banking and payment systems. Most consumers still pay with cash. One study shows that more than 90% of retail transactions in parts of Kenya remain cash-based, and Gallup’s survey of 11 countries in sub-Saharan Africa found that fewer than 20% of adults have made bill payments or remittances via mobile money.⁵

A lack of mobile technology is not the major obstacle to increasing mobile money penetration in the region: two-thirds of adults in sub-Saharan Africa currently use mobile phones. Instead, mobile money adoption is held back by the dearth of financial institutions, a discouraging regulatory environment, lack of trust in banks or telecommunication providers, or a limited agent network. For organizations that distribute large sums of money to diverse recipients, however, the benefits of mobile money are clear. USAID, for example, argues that digital payments lead to broader financial inclusion, as well as improvements in transparency, security, and cost savings for both governments and intermediaries (banks).⁶

Digitizing payments has the potential to transform the way implementing partners make small payments to beneficiaries around the world. In Uganda, where USAID is the largest donor, and NGOs typically have multiple funding partners, a well-implemented digitization process can change the way beneficiary payments are made, increasing operational effectiveness and financial efficiency.

⁵ Sub-Saharan Africa: A major potential revenue opportunity for digital payments, McKinsey & Company

⁶ Ibid.

Currently, many organizations are attempting to distribute bulk payments by working directly with MNOs (see Figure 1). This model creates many redundancies, and implementing partners are not able to perform many needed functions due to the limitations of the MNO platforms. As a result of the inherent limitations posed by working with the MNOs, an alternative approach is proposed. Working with an intermediary such as an aggregator simplifies operations, both to the implementing partners and to USAID (see Figure 2). Further, this approach increases transparency throughout the entire payments value chain.

This “Digitizing Payments Process Kit” provides useful resources for organizations to implement an Aggregator Payment Model. Below, and in the Appendices, readers will find the organizing process, framework and practical resources used in the Uganda Digital Payments project, with the recognition that any digitization effort is unique and will be informed by country context, stakeholder interests and other factors.

Figure 1 - Direct-to-MNO Payment Model

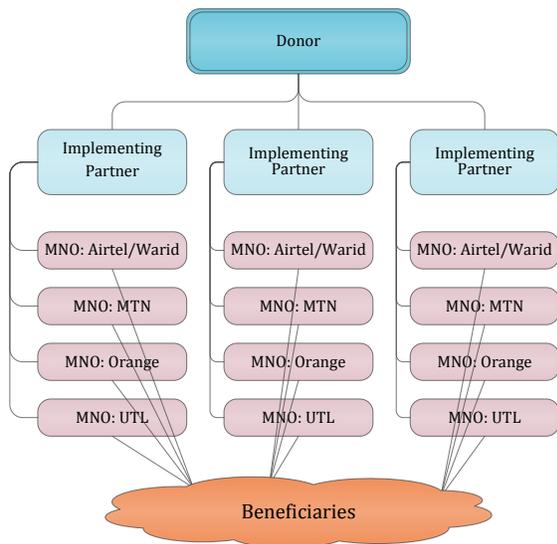
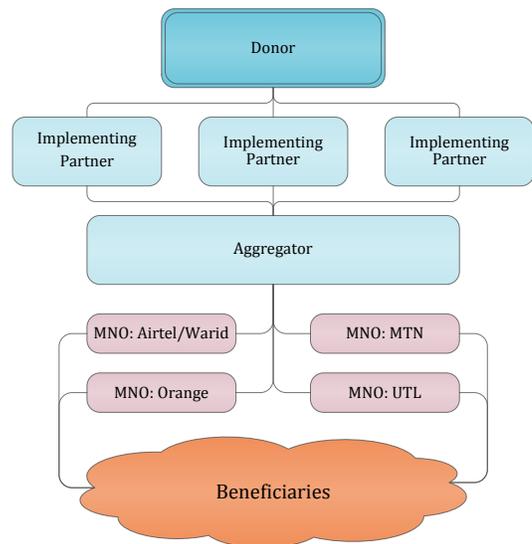


Figure 2 - Aggregator Payment Model

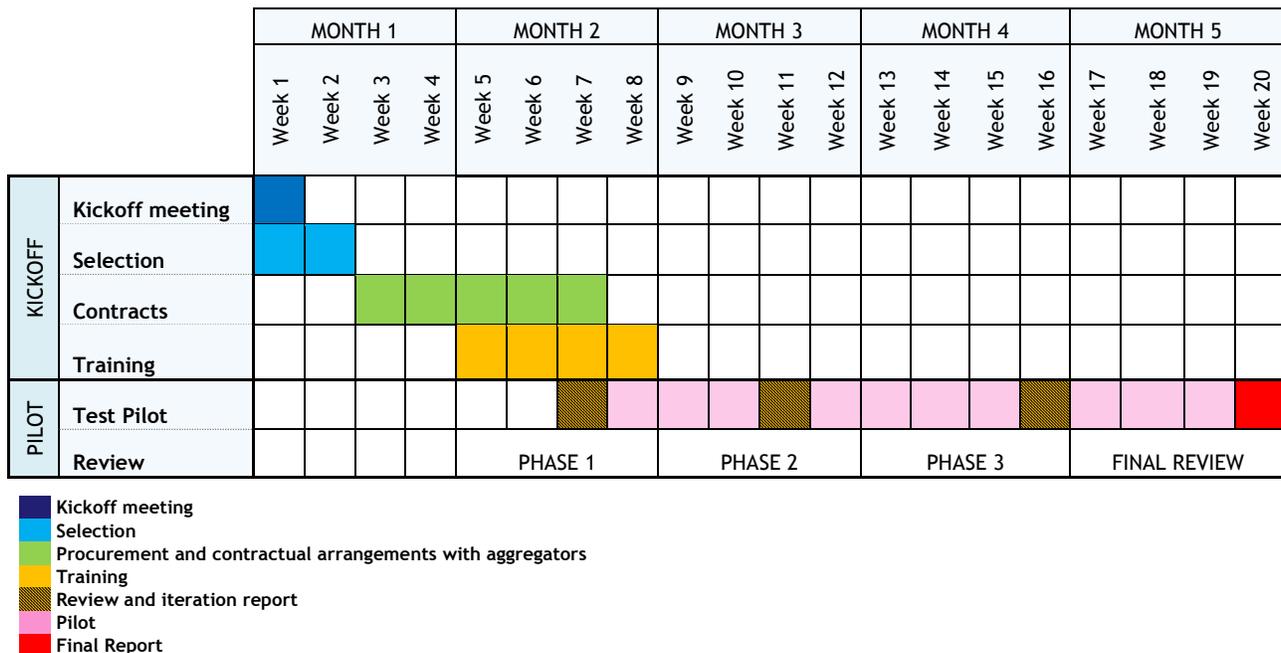


3. Work Plan

This section provides a proposed project schedule and detailed project stages recommended for the design, management, and implementation of a pilot digitization project. When entering a new country, implementing a well-designed pilot that engages several key implementing partners is critical.

3.1 Project Schedule

The project schedule provides a visual, five-month timetable to make the transition to digital payments, from kickoff to review.



3.2 Project Stages

This section provides a detailed overview of activities at the week and month level across each stage in the process of transitioning to digital payments. The project is broken down into four stages: 1.) In-country Kickoff, 2.) Development and Testing, 3.) Pilot (further divided into three phases), and 4.) Final Review. For each stage, a list of direct actions is provided, involving coordination among a variety of stakeholders, to ensure the completion of each stage.

This work plan was developed for use in a pilot study involving several implementing partners. If, however, a single organization wishes to implement mobile payments, it can follow this work plan by omitting certain activities specific to the running of a pilot. Further, the work plan assumes implementation by a third-party Project Manager. If, however, it is implemented directly by a donor agency, specific donor coordination and approval tasks can be omitted. It should also be noted that, while specific weeks have been allocated for review meetings with donors, review meetings with implementing partners are to be held continuously throughout the project.

Stage 1: In-country Kickoff

1.1 Introduce Project Team and Pilot to Stakeholders

The Project Manager meets with all key stakeholders to introduce the pilot, gauge interest, and capture relevant data related to the pilot.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Week 1	Donor agency, MNOs, payment aggregators	Meet with key stakeholders to introduce the project team and discuss plan of action
Week 1	Donor agency, implementing partners	Kickoff meeting to introduce the pilot and answer questions from implementing partners
Month 1	Regulators	Meet with relevant regulators to discuss regulatory environment and introduce pilot

1.2 Select Partners

Following consultations with MNOs and the donor agency and a call for applications, the Project Manager selects payment aggregators (preferably three) and implementing partners (preferably five).

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Week 1	Donor agency	Meet with donor agency to discuss criteria of selection and application process
Week 1	Implementing partners, payment aggregators	Launch application process for implementing partners and payment aggregators
Week 2	Implementing partners	Meet with each implementing partners to gain better understanding of their operations
Week 3	Donor agency	Select 5 implementing partners following consultation with donor agency
Week 3	Agency, Implementing partners	Select 3 aggregator partners (1 preferred and 2 backups)

1.3 Negotiations

The Project Manager conducts negotiations over bulk payment pricing with MNOs and with payment aggregators.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
All Months	MNOs	Hold discussions with MNOs over bulk discount
Week 3	Payment aggregators	Negotiate bulk payment rate card with shortlisted payment aggregators
Weeks 3 - 7	MNOs, payment aggregators, implementing partners	Finalize agreements and aggregator integration schedules

1.4 Identify Key Potential Risks

Following an evaluation of the landscape and meetings with stakeholders, it is advisable to identify key risks, as well as a mitigation strategy or contingency plan for each risk.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Month 1	MNOs, payment aggregators, implementing partners	Meet with stakeholders to identify key areas of potential risk
Month 1	MNOs, payment aggregators, implementing partners	Design action plan and develop strategies to mitigate against potential risks

Stage 2: Development, Testing and Change Management

1.5 Software Development and Technical Integration

Software is developed to meet requirements defined by implementing partners.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Months 1 - 5	Payment aggregators, implementing partners	Consultation meetings with implementing partners and payment aggregators
Months 1 - 5	Payment aggregators	Aggregators develop any necessary software under supervision of Project Manager
Months 1 - 5	Payment aggregators, MNOs	Aggregators to update their APIs with MNOs where necessary to deliver on the project requirements

1.6 Define New Payment Processes

Digital payment processes are developed with implementing partners and payment aggregators.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Weeks 4 - 6	Implementing partners	Meet implementing partners to document payment processes
Weeks 4 - 6	Implementing partners, payment aggregators	Identify key areas of change needed for transition to mobile payment systems
Weeks 4 - 6	Implementing partners, payment aggregators, MNOs	Meet with stakeholders to design digital process

2.1 Training

Training materials are developed detailing digital payment processes and troubleshooting in a user-friendly manner. Trainings for implementing partners are conducted by payment aggregators.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Months 1 - 2	MNOs, payment aggregators	Develop training materials
Month 2	Payment aggregators, implementing partners	Training session for implementing partners

2.2 Test Software

Software that has been developed is tested to ensure it complies with specific requirements.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Month 2	Payment aggregators, implementing partners	Testing of bulk payment software
Month 2	Payment aggregators	Beta testing
Month 2	Payment aggregators	Sign off User Acceptance Testing (UAT)

2.3 Encourage Internal Buy-in

Supporting internal buy-in is essential, so that implementing partners will receive support for their change management processes. They will also benefit from sharing experiences with other pilot partners and other successful organizations.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Weeks 1 - 3	Implementing partners	Communicate decision to transition to digital payments to home office, local and field staff
Week 3	Implementing partners	Set up team of finance staff to help stir the process forward
Month 2	Implementing partners	Initiate change management processes and the development of digital payment policies
Month 2	Implementing partners	Communicate new policy clearly to field staff and draft presentation that staff can start sharing with beneficiaries at trainings

Stage 3: Proof-of-concept – Limited Implementation

A three-month proof-of-concept stage is recommended. Payments can be made in a staggered manner. It is recommended to carry out first test payments with staff. As confidence in the system grows implementing partners can start to roll-out payments, starting with one training session, and increasing in number over time, depending on the project needs and activity schedule. Reviews should be held regularly with all stakeholders, as required.

Phase 1: Primary implementation

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Week 6 - 7	Implementing partners	Identify targets for primary digital payment test
Week 7	Donor agency, implementing partners	Review meeting
Week 7	Payment aggregators, MNOs, implementing partners	Launch small number of test payments to staff
Weeks 7 - 11	Payment aggregators, MNOs, implementing partners	Implement changes according to review results

Phase 2: Second iteration of implementation

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Weeks 9 - 10	Implementing partners	Make first test payments to beneficiaries attending a small trainings session in an urban area
Month 3	Payment aggregators, MNOs, implementing partners	Gradually increase number of payments made to target beneficiaries
Week 11	Donor agency, implementing partners	Review meeting
Weeks 11 - 16	Implementing partner field staff, beneficiaries	Receive feedback from field staff and beneficiaries
Weeks 11 - 16	Payment aggregators, MNOs, implementing partners	Implement necessary changes according to feedback received from review meeting and field staff

Phase 3: Third iteration of implementation

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Month 4	Payment aggregators, MNOs, implementing partners	Increase number of payments made to target beneficiaries
Month 4	Implementing partners	Receive feedback from field staff and beneficiaries
Week 16	Donor agency, implementing partners	Conduct monthly review meetings
Week 16 - 21	Payment aggregators, MNOs, implementing partners	Implement changes according to feedback received

Stage 4: Final Review

The final review is conducted to share strategic recommendation with all stakeholders and to develop useful materials for future transitions.

<i>Timeframe</i>	<i>Stakeholders</i>	<i>Actions</i>
Week 20	Implementing partners, payment aggregators, MNOs and donor agency	Conduct overall review with key stakeholders
Month 5	Project manager	Revise and share materials useful for workshops in other donor agencies
Month 5	Donor agency	Present findings to donor

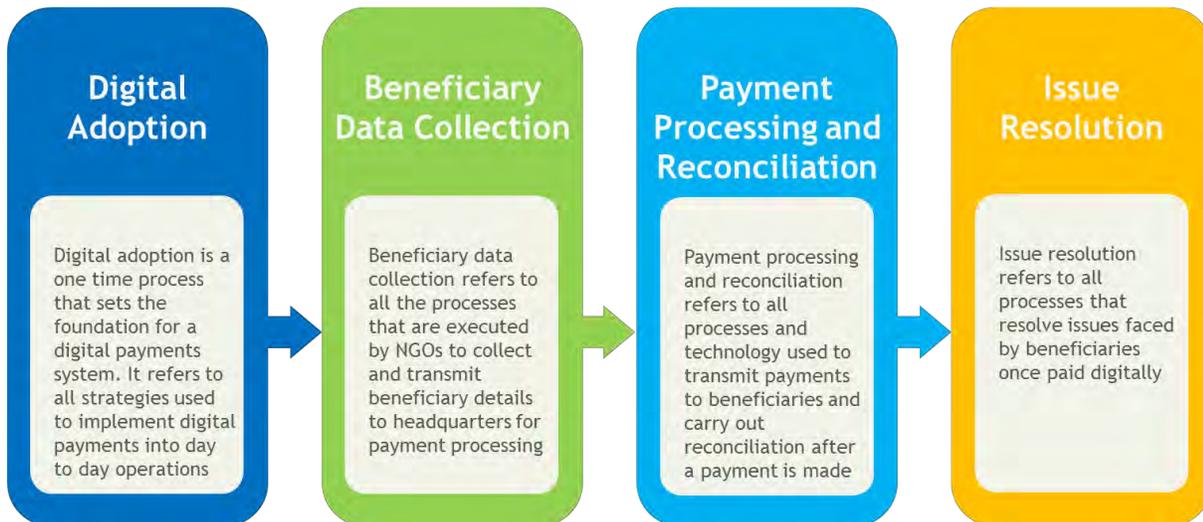
4. Digitizing Payments Process and Resources

Vital Wave has identified four pillars that make up the process for transitioning to digital payments: Digital Adoption, Beneficiary Data Collection, Payment Process and Reconciliation and Issue Resolution (Figure 1, below). Each pillar represents a critical part of any digital payments policy and must be carefully thought out. While digital adoption is a one-time process that provides the foundation for switching to a digital payment system, all other pillars are continuously utilized throughout the digital payment process and can be reviewed and improved as payments increase and as an organization becomes comfortable with the process and aware of any inefficiencies.

This section provides a checklist of essential activities for each pillar, as well as a Document Reference Chart that maps out practitioner resources by pillar and by stakeholder. The resources listed in the Document Reference Chart can be found in the Appendix.

4.1 Digitization Process Flow

Figure 1. Four Pillars of Digital Adoption



Digital Adoption

Digital Adoption involves the technical and operational adjustments to be made by implementing partners and other mobile money stakeholders. It is time-consuming but crucial. It is necessary to not underestimate the amount of time it takes to get the foundations for a transition right.

Digital Adoption Checklist	
	Design a plan for internal communication of transition to home office, local office and field staff
	Communicate decision to digital payments to home office, country office and field staff
	Secure the necessary approvals
	Conduct procurement of aggregators through interviews, testing of systems and due diligence
	Collect all necessary documentation for account set up
	Review and signing of contract by legal teams in local or home office
	Training for all user of new payment system
	Clarify account funding procedures and agree on deadlines for account funding with aggregator
	Set up user accounts
	Update documentation used at trainings to capture mobile numbers of beneficiaries
	Update travel advance forms to capture mobile numbers of staff
	MNOs invited to organization office to register staff for mobile money
	Identify date for first test payment to staff
	Field staff communicate new policy to beneficiary community
	Beneficiaries encouraged to register for mobile money by field staff
	MNOs invited to attend trainings to register participants and present on how to use mobile money
	First test payment made to beneficiaries community
	Design plan for scaling of digital payments to all desired locations

Beneficiary Data Collection

Working to improve planning at the beneficiary data collection stage, the implementing partner can reduce the amount of time and human resources required to make payments by improving the accuracy of data. Beneficiaries should be warned well in advance that they will be paid using mobile money, allowing them enough time to register for the service and to share their number with program staff if they have not done so already.

For countries where beneficiaries must be registered for mobile money in order to receive funds, beneficiaries can be asked if their phones 'send and receive money,' rather than if their phones are 'registered for mobile money.' This reduces misunderstandings that may arise if beneficiaries think that being registered for mobile money is the same as having a registered SIM card.

Beneficiary Data Collection Checklist	
	Invitation sent to all training participants informing them they will be paid using mobile money and requesting their mobile money-registered numbers
	Program staff collects data including beneficiary names, titles, and mobile money-registered phone numbers prior to training activity and sends to finance staff for pre-verification.
	In office: pre-verification and approval of beneficiary information by finance staff
	At training: beneficiaries provide field staff with name and numbers on day of training
	Beneficiary information sheet transferred to finance staff at HQ for final verification and payment processing

Payment Processing and Reconciliation

The digital payment process mirrors the cash payment process in a number of ways, but instead of transferring money to a bank, cash is transferred to the aggregator's account. From an operational standpoint, there is also a change in accounting procedures, as cash being sent to the field is no longer treated as an advance but can be reconciled in real time.

Payment Processing Checklist	
	Calculate total amount to be paid out, including aggregator, MNO and withdrawal charges
	Transfer amount to aggregator account in accordance to pre-agreed deadlines in order to ensure funds are available for payment
	Alert aggregator of payment schedule
	Create payment sheet on CSV or excel with name, number and amount to be paid to each beneficiary and upload onto aggregator platform by finance staff
	Send payment sheet for verification
	Verification of list of numbers and names against database and amount to be paid carried out by finance staff
	Approval of payment made by authorized staff
	Beneficiaries receive notification alerting them to payment made on their mobile money account
	Print payment report for immediate reconciliation

Issue Resolution

Once payments are made, there are a number of issues that may arise which will require quick resolution. It is important that all staff using the system are prepared for the issues that may arise and have a clear understanding of how to handle the situation and, should it be required, who to escalate the issue to.

Issue Resolution Checklist	
	Discuss potential scenarios with aggregator and get clear understanding of escalation procedures
	Design escalation flow charts and circulate among finance staff
	Maintain good communication with aggregator relationship manager and alert immediately in the event of an issue

4.2 Document Reference Chart

The Appendix of this Kit includes resources developed for the Digital Payments Uganda project. The documents, forms, presentations and other resources can be used or adapted by implementing partners, MNOs, aggregators, and donors looking to implement a transition to digital payments. The document reference chart below organizes the relevant materials for each stakeholder across each pillar of the digitizing payments process, and indicates where they can be found in the Appendix, for easy reference.

	Digital Adoption	Beneficiary Data Collection	Payment Processing	Reconciliation & Issue Resolution
Implementing Partners	Business Requirements Document, App. 1.1	Attendance Sheet for Trainings, App. 2.1	Financial Model for Costs and Savings, App. 3.1	
	Selection Criteria for Implementing Partners and Scorecard, App. 1.2			
	Digitizing Payments Application, App. 1.3			
	Description Accompanying Digitizing Payments Application, App. 1.4			
	E-mail Accompanying Digitizing Payments Application, App 1.5	Payment Sheet for Trainings, App. 2.2	Payment Sheets in Excel, App. 3.2	
	Board Resolution, App. 1.6			
	Presentation for Beneficiaries on Transition, App. 1.7			
MNOs	Instructional Manual on How to Use Mobile Money, App. 1.8		Screenshot of Message Sent to Beneficiary Phone, App. 3.3	
	Mobile Money Agent Training Curriculum, App. 1.9			
Aggregators	Aggregator Procurement Process and Selection Criteria, App. 1.10		Bulk Payment e-mail Notification, App. 3.4	Sample Report, App. 4.1
	Request for Information, App. 1.11			
	User Acceptance Testing Checklist, App. 1.12			
	User Acceptance Testing Sample, App. 1.13			
	Proposed Bulk Payment Contract, App. 1.14			
	Required Documentation to Register, App. 1.15			
	Business Account Opening Form, App. 1.16			
	Authorization Letter, App. 1.17			
	User Training Manual, App. 1.18			

5. Conclusion

While the process of transitioning to digital payments can be daunting, the potential of a successful transition are worth the investment. This section summarizes the benefits, challenges, and key lessons learned from a successful transition to digital payments.

5.1 Benefits

There are a number of benefits to be gained by moving away from cash payments, particularly within the development community and in a developing-country context.

- Staff no longer have to travel to the field with a large amount of cash, thus reducing the security and fraud risk
- Reduction of cash leakages through loss and/or theft, minimizing the overhead spent on fraud prevention
- Digital payments make it possible for organizations to conduct real-time reconciliations of payments made to beneficiaries as opposed to waiting for receipts to be sent from the field and processed at HQ
- Aggregator platforms and reporting functions make it possible for organizations to have more accurate financial records of payments made to field staff and training participants
- Audit trails and reporting functions increase accountability and transparency and improve the quality of reporting that can be presented to donors

5.2 Challenges and Mitigations

The process of transitioning to digital payments is not an easy one. It requires internal coordination, planning, training and capacity building, and relies on external and environment-specific requirements. The table below describes common challenges in the transition to digital payments and offers strategies to address these potential barriers.

Challenge	Mitigation Strategies
<p>Challenge 1: Capacity of mobile money partners: Modest levels of customer service and capacity of mobile money partners make issue resolution difficult</p>	<p>Mitigation: Implementing partners should conduct due diligence on MNOs and partner aggregators prior to developing a partnership with particular focus on issue resolution and escalation mechanisms</p>
<p>Challenge 2: Poor agent network and liquidity: Outside urban centers agent availability and liquidity can undermine the opportunities of a mobile money system by making it difficult for beneficiaries to cash out</p>	<p>Mitigation: Notify MNOs of any large payments taking place in areas with low agent penetration to support agent liquidity and presence. Simultaneously develop strategies to facilitate access of agents for beneficiaries such as organizing training sessions close to mobile money agents</p>

<p>Challenge 3: Poor network availability</p> <p>Some beneficiaries may be in areas where little to no network coverage exists. In times of network outage, notification messages informing beneficiaries of payments made may not arrive.</p>	<p>Mitigation: Start by rolling out payments to beneficiaries located in areas where network coverage exists. Encourage beneficiaries to check their mobile money account balances when they expect to receive funds, even without a notification messages. Implementing partners can also call beneficiaries to alert them that funds have been transferred.</p>
<p>Challenge 4: Internal resistance to change</p> <p>Staff and beneficiaries may resist change to payment systems.</p>	<p>Mitigation: Implementing partners should communicate with home office, key decision makers and accounting staff of decision to transition to digital payments early. Implementing should be ready to address concerns and answer questions. Once this is done an efficient service needs to be delivered for beneficiaries to accept and embrace mobile payments as a better alternative.</p>
<p>Challenge 5: Beneficiary data collection</p> <p>The data collection process can be time consuming, labor intensive and subject to error. Incorrect numbers and delays in transferring beneficiary data to HQ for payment processing can delay payments.</p>	<p>Mitigation: Develop internal processes that improve the quality of data collected, such as collecting beneficiaries' numbers prior to an event. Where possible, utilize software tools to simplify the beneficiary data collection by electronically collecting beneficiary phone numbers, thus improving reliability and timeliness of data collected.</p>
<p>Challenge 6: Payment delays due to technical issues</p> <p>Technical problems related to network outages and/or internal upgrades on the part of the MNO or aggregator may lead to payment delays.</p>	<p>Mitigation: Alert aggregator partners of payment schedule and ensure that aggregator communicates any plans for upgrades and/or foreseen technical issues in advance to assist planning. Unless confident in partners' ability to carry out issue resolution over the weekend, avoid making payments on a Friday.</p>

5.3 Key Lessons Learned

Based on Vital Wave's experience in Uganda, the following key lessons were crucial for the successful transition to a digital payments system:

- Organizations should conduct thorough due diligence of aggregator partners, paying particular attention to their technical know-how, customer service and responsiveness.
- Engage the home office early, especially accounting staff, as there may be concerns that require attention and delay the roll-out process.
- Do not underestimate the amount of time needed to build internal buy-in, agree on and sign contracts, and set up user accounts.
- Conduct pre-tests with staff for testing the system internally, creating internal buy-in and reducing the risk of beneficiary resistance.
- Make small incremental payments before rolling out to a large number of beneficiaries.
- Improve planning mechanisms and internal communication between finance and program staff and communicate payment plans to partner aggregator regularly.

6. Appendix

This section includes tools that can be used or adapted by implementing partners, MNOs, aggregators, and donors looking to implement a transition to digital payments. Please reference the Document Reference Chart in Section 4.2 above, and the table below, to navigate the resources that follow.

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Digital Adoption: Implementing Partners

Appendix 1.1 – Business Requirements Document



United States Agency for International Development

Bill and Melinda Gates Foundation

Business Requirements Document (BRD)

1. Introduction

1.1 Document Purpose

The purpose of this document is to describe business requirements of the Bulk Payment Aggregation solution, which is comprised of applications, services, processes, and policies to facilitate the distribution of bulk payments from USAID implementing partners to their beneficiaries.

- Business requirements for major enhancements to an existing application
- Business requirements for new application development
- Business requirements for replacement application development
- Business requirements for a request for proposals (RFP)

1.2 Intended Audience

The intended audience for this document includes implementing partners, Mobile Network Operators (MNO's), Business Process Outsourcing vendors (or aggregators), and other interested service or technology providers.

1.3 Project Background

Extensive work in the global development community has identified the important role technology has to play in achieving affordable access to, and use of, financial services by the poor. In addition, when technology is combined with business processes, electronic payments can be made inexpensively and transparently.

This project aims to change the way non-governmental organizations (NGOs) and projects in Uganda make small payments to beneficiaries. USAID is the lead donor in the country, and many NGOs have multiple funding partners. If successful, those NGOs and USAID could change the way beneficiary payments are made in countries beyond Uganda.

Currently, many organizations are attempting to distribute bulk payments by working directly with MNOs (see Figure 1, upper right). This model creates many redundancies, and implementing partners are not able to perform many needed functions due to the limitations of the MNO platforms.

As a result of the inherent limitations posed by working with the MNOs, an alternative approach has been proposed. Working with an intermediary such as an aggregator simplifies operations and lowers costs, both to the implementing partners and to USAID (see Figure 2, lower right). Further, this approach increases transparency throughout the entire payments value chain.

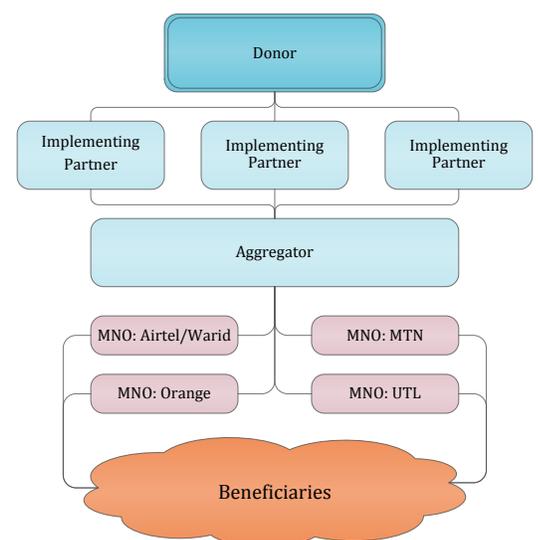
1.4 Business Goals/Objectives

The objective of the project is to demonstrate the financial and operational feasibility of digital payments for USAID implementing partner programs in Uganda through the implementation of a proof-of-concept project.

1.5 Stakeholders

Key stakeholders with vested interest in the project outcomes are:

- 1) USAID implementing partner beneficiaries
- 2) USAID implementing partners
- 3) Uganda mobile network operators (MNOs)
- 4) Uganda payments aggregators
- 5) Uganda MNO banking partners



- 6) USAID Uganda Mission
- 7) USAID Washington, DC
- 8) Bill and Melinda Gates Foundation

1.6 Dependencies on Existing Systems

The success of the project depends on the ability of MNOs to continue to accept bulk payment requests and funds, distribute bulk payments to individual subscribers, and to make their application program interface (APIs) available to bulk payment aggregators. The pricing and tariff schedules are a key dependency for those who initiate bulk payments and for end users (beneficiaries) who receive payments.

The project also depends on a consistent and predictable regulatory environment that allows appropriate access to beneficiary payment systems and mobile phone tools in a manner that is attractive to end users, as well as institutions that initiate bulk payments.

The delivery of payments and services is dependent on several factors, including MNO network availability, agent presence and liquidity, the acceptance of mobile payments by merchants or other service providers, and the ubiquity and reliability of Internet access so that implementing partners can access payment portals and tools used by payment aggregators.

1.7 Assumptions

The following assumptions are integrated into the planning of the project:

- 1) A sufficient number of USAID implementing partners will participate in the proof-of-concept project to make the outcomes measurable and relevant to a larger community, including implementing partners outside Uganda.
- 2) Aggregators will be interested in developing solutions to meet the needs of implementing partners at no cost to the project.
- 3) MNOs will consider alternative pricing models (volume-based discounts, for example) to enhance financial viability.
- 4) Systems integration between the aggregators and MNOs will be completed in a timely manner.
- 5) Aggregators will be willing to make the changes to their front-end, middleware and platform integration APIs to meet the needs of the implementing partners.
- 6) Aggregators will be willing to adopt a volume-based pricing model, reducing costs for higher volumes of transactions.

2. Functional Requirements

2.1 Requirements Summary

This section describes the functional requirements for each participant in the digital payments value-chain. The functional requirements may affect applications, processes, policies, or procedures. All functional requirements must be addressed to achieve a functional digital payments system.

2.2 Implementing Partner Business Requirements

The USAID implementing partners currently are delivering payments to their beneficiaries via non-digital methods. To adopt digital payments, the following requirements should be fulfilled.

- 1) Implement new training curricula
 - a. Internal training: Operations manuals and training for procedures on how to use web-based payments portal provided by aggregator of bulk payments
 - b. Internal training: Processes for initiation (scheduling), verification and releasing of digital payments
 - c. Internal audit: Validation of payment delivery, balancing of bank accounts to digital payment ledgers, balancing of MNO (via aggregator) ledgers to payment requests
 - d. Field training: Initiation of payment requests via portal or mobile devices
 - e. Field training: Validation of delivery of services or goods which trigger scheduled payments
- 2) Implement processes
 - a. Preparation of electronic bulk payment beneficiary repositories containing:
 - i. National ID or other unique identifying number
 - ii. Name
 - iii. Phone number
 - b. Design payment programs for specific interventions/activities:
 - i. Payment program
 - ii. Beneficiary
 - iii. Schedule of payments (date, time and amounts)
- 3) Implement payment hierarchy with appropriate levels of controls and authorities to initiate, review, and approve bulk payments.

2.3 Aggregator Business Requirements

Aggregators who successfully implement the requirements listed below will be in a position to work with implementing partners to accept and distribute bulk payments.

- 1) Reporting
 - a. Payment activity summary (successful and undelivered) and details including transaction numbers organized by:
 - i. Specific date

- ii. Specific week
 - iii. Specific month
 - iv. Specific year
 - v. Date range
 - vi. Beneficiary
 - vii. Beneficiary data (organized by name, phone number, and National ID)
 - viii. Others as specified
 - b. Customer service reports by
 - i. Date
 - ii. Disposition code
 - iii. Beneficiary name, national ID, and phone number
- 2) Web portal functions
 - a. Payment scheduling that generates a unique ID for:
 - i. Single payments (one-time or recurring)
 - 1. Direct entry of recipient information into portal
 - ii. Bulk payments (one-time or recurring)
 - 1. Direct entry of recipient information into portal
 - 2. Upload of data file (CSV or other mutually agreed format)
 - 3. From database maintained on portal on behalf of implementing partner
- 3) Customer support
 - a. Receive beneficiary customer service requests relating to payment issues
 - b. Maintain a log of requests, disposition and resolution date, including a unique ticket number, date, time, beneficiary name, phone number and other pertinent information
 - c. Catalog all support tickets based on disposition codes
- 4) Mobile portal functions based on appropriate level of access
 - a. Ability to view payment status by entering scheduled payment ID
 - b. Ability to modify (pause, cancel, and release) scheduled payments for use by field personnel at the conclusion of intervention or project
- 5) Pricing
 - a. Volume-based activity
 - i. Aggregator to provide pricing schedule based on volume of payments by month or in total
 - b. Rate card for system enhancements or new features
 - c. Pricing for hosting databases
- 6) Data security
 - a. Encryption methods to be industry standard and compliant with Ugandan regulations for privacy and security
 - b. Physical storage in compliance with Ugandan regulations for privacy and security, and in a manner that grants access only to authorized personnel
- 7) User security

- a. Implementing partner will be issued a master ID for use in managing authentication and access by partner employees or contractors
- b. Payment portal will provide at least three levels of access:
 - i. Master: Ability to access all transactions, reports, and databases. Master ID will be able to add users, alter authentication levels, and remove users in addition to all functions in the Designate level
 - ii. Designate: Ability to view scheduled payments, review and release payments that have been scheduled, request and review all reports on-line, print all reports in addition to all functions in the Basic level
 - iii. Basic: Ability to prepare and upload payments to the portal, review certain reports on-line, and review specific transactions in support of customer service activities
- c. Payments portal will provide multiple layers of authentication (multi-hierarchy) to limit access to features and functions

2.4 MNO Business Requirements

- 1) Pricing
 - a. Negotiated rate card based on volume-based pricing for bulk payments
- 2) Agent Network
 - a. Negotiated rate card or subsidized for cash out for beneficiaries
 - b. Liquidity management based on bulk payment targets

3. Data Retention and Archiving

The successful aggregator will maintain all transaction data on behalf of the implementing partner for as long as is allowable by law and Ugandan regulations. Copies of the data, protected by password, will be provided to the implementing partner upon request in either printed or digital format.

4. Availability Requirements

The aggregator payments portal will be available to the implementing partner on a full-time basis (365 days/year, 24 hours/day) with the exception of outages for system upgrades and enhancements, to be scheduled during non-business hours and in pre-agreement with implementing partners. The Aggregator will provide a schedule of maintenance periods to all implementing partners.

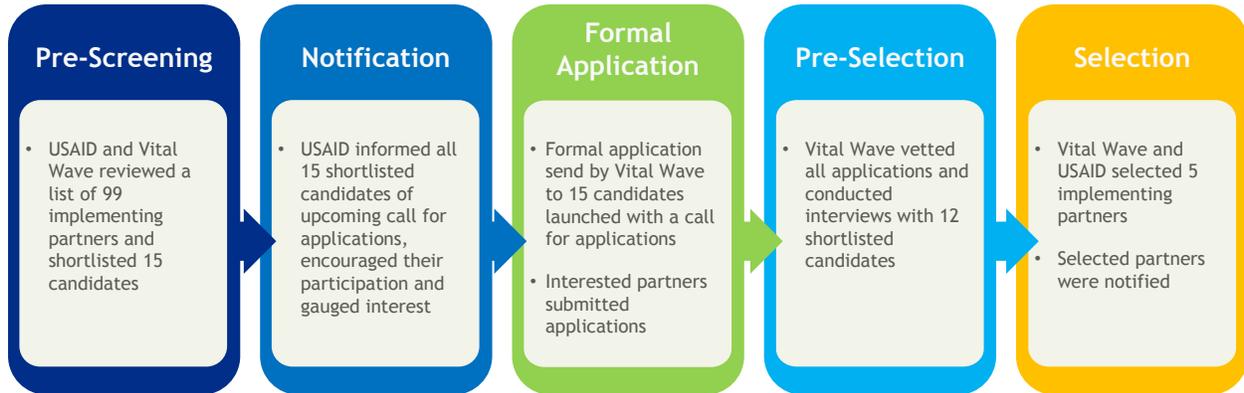
The Aggregator will maintain a help line for use by implementing partners to report outages to the aggregator. Finally, the Aggregator will publish and adhere to a Service Level Objective policy that clearly outlines the aggregator policies and processes which will be taken to restore service.

5. Revision Log

Date	Version	Change Reference	Reviewed by

Appendix 1.2 – Selection Criteria for Implementing Partners and Scorecard

The implementing partner selection process followed five steps: Pre-screening, Notification, Formal Application, Pre-Selection, and Selection. The process was developed in close consultation with the USAID Uganda Mission.



Point	Selection Criteria	IP1	IP2	IP3	IP4
20	Implementing Partner demonstrates elevated levels of risk or previous difficulties with cash disbursement	0	0	0	0
15	Implementing Partner makes bulk payments to beneficiaries currently	0	0	0	0
15	Implementing Partner has relatively high average transaction amounts and high frequency of bulk payments	0	0	0	0
10	Implementing Partner has shown an interest in implementing digital payments for making beneficiary payments and for the purpose of addressing risk associated with cash payments	0	0	0	0
10	Implementing Partner has a productive relationship with USAID Uganda	0	0	0	0
10	Implementing Partner maintains adequate service delivery controls pertaining to disbursements	0	0	0	0
10	Implementing Partner has more than 2 years left in their project/activity	0	0	0	0
5	Preferred: Implementing Partner has a country office or partner in another country for a member of staff that has already undergone the transition to mobile payments	0	0	0	0
5	Preferred: Implementing Partner beneficiaries are in close proximity to functioning agent (for interview)	0	0	0	0
100		0	0	0	0

- 1: Very Poor: Does not fulfill criteria
- 2: Poor: Fulfills criteria only minimally
- 3: Moderate: Shows some but not all requirements to fulfill criteria
- 4: Good: Shows most but not all requirements to fulfill criteria
- 5: Excellent: Demonstrates all requirements to fulfill criteria

Appendix 1.3 – Application for the ‘Digitizing Payments for USAID Beneficiaries in Uganda’ Program

Application for Assistance and Guidance in the Digitalizing Payments Program

Please submit all applications via email (MS Word or PDF) to [insert Project Coordinator e-mail] by [insert date], [insert time] East African Time.

Note:

- a) All information provided in this application is strictly confidential.
- b) The timeliness of your application will be taken into consideration.
- c) The space given under each category of the application is indicative of the amount of information needed. Applicants are encouraged to use as much space as needed.
- d) Should you have any questions regarding this application process or program, please contact the Project Coordinator at [insert Project Coordinator e-mail].

Date of Application: _____

Section A: Contact Information

Name of organization	
Name of activity/project	
Type of organization running the activity/project (CBO/NGO/private company/other – specify)	
Name of the chief of party	
Office location	
Office phone number	
Mobile phone number (chief of party)	
Fax	
Email	
Website	
Key contact person – name and designation	
Contact number of key contact person	

Section B: Application

1. Rationale/Need Justification

Describe in detail the situation/circumstances that have led to the decision to digitize payments. Provide as much supporting information as possible.

2. What is your project/activity's experience with making bulk payments in cash to beneficiaries?

Describe the situations that require bulk payments, how often bulk payments are made, the average amount of each transaction, and the number of beneficiaries who receive payments.

3. Has your project/activity faced any risks or previous difficulties with cash payments?**4. What tools does your project/activity use to ensure the adequate service delivery or controls pertaining to cash payments?**

--

5. Does your project/activity have a country office or partner in another country or member of staff that has already undergone the transition to mobile payments?

If yes, please explain.

--

6. Project Beneficiaries

To whom is your project/activity making bulk payments? <i>Tick as appropriate</i>		Service providers and vendors
		Staff in the field
		Beneficiaries in the field
Where are your project/activity's beneficiaries located?		
How many beneficiaries does your project/activity make bulk payments to and how often?		
How would you characterize the use of bulk payments in your project/activity? <i>Tick as appropriate</i>		High Frequency/Low Amount
		High Frequency/High Amount
		Low Frequency/Low Amount
		Low Frequency/High Amount

7. Details of the Proposed Team for Project Implementation

Please provide information on the key staff proposed for the project with relevant technical skills and responsibilities within the proposed project. Provide as much background information as possible (CVs if available).

Name	Proposed Position	Total Working Experience	Currently working with your organization (Y/N)

8. Sharing of Information*

In order for us to better understand how your organization works, are you willing to share:

	Yes	No
I. Financial data, down to transaction levels? <i>Tick as appropriate</i>		
II. Internal processes and procedures? <i>Tick as appropriate</i>		

* Please note that all information provided is confidential.

Section C: Application Checklist and Declaration

	Yes	No
All sections of the applications have been filled as per given directions		

To the best of my knowledge, I declare that all the above information is true and accurate.

Sincerely,

Name: _____

Position: _____

Signature: _____

(To be signed by authorized party)

Appendix 1.4 – Project Description Accompanying Digitizing Payments Application

Digitizing Payments for USAID Beneficiaries in Uganda Program

I. Project Description

Vital Wave, a consulting firm contracted by the Gates Foundation on behalf of USAID/Uganda, will work with 4-6 USAID implementing partners to assist them in making the transition to digital payments for their beneficiaries. Vital Wave has conducted extensive research in Kenya, Tanzania and Uganda to understand the stakeholder landscape and how mobile money systems have been and can be used by organizations to make payments to their beneficiaries. In Uganda specifically, Vital Wave has worked closely with USAID to interview a cross-section of local stakeholders in order to understand the challenges and opportunities of using mobile money to make bulk payments.

This project will be a pilot study with the 4-6 selected partners. If successful, it has the potential to change the way NGOs and projects in Uganda and East Africa make payments to beneficiaries.

Participation in the pilot will provide implementing partners with support and guidance for moving away from cash payments in the field to making bulk payments via mobile money. The 4-6 selected implementing partners will:

- receive support for developing new digital payment operational and financial processes
- receive training, manuals and support on how to use mobile bulk payment platforms
- gain and learn from the knowledge acquired by Vital Wave through extensive research conducted in East Africa
- benefit from experience with troubleshooting and best practices learned by organizations that have succeeded in transitioning to digital payments in other East African countries
- be supported in their relations and dealings with MNOs and aggregators
- benefit from the availability of software developed to support the digital payments transition in a secure and user-friendly way

Reviews will be conducted monthly between implementing partners, Vital Wave and USAID to report on the progress of the pilot and identify, learn from, and apply lessons learned.

Appendix 1.5 – E-mail Accompanying Digitizing Payments Application

Dear USAID Implementing Partners,

Please find attached the application for participation in the 'Digitizing Payments for USAID Beneficiaries in Uganda' program. The deadline for submission of applications is [insert date and time].

Successful projects and/or activities will benefit from support and guidance in transitioning from cash to mobile money when making bulk payments to beneficiaries.

Your projects/activities have already passed the initial pre-screening stages of the application process. Following submission of applications, a kickoff meeting will be held and shortlisted candidates will be interviewed. 4-6 Implementing Partners will be selected for the program.

Should you have any questions on the application process or program please contact the Project Coordinator at [insert Project Coordinator e-mail].

We look forward to receiving your applications.

Kind regards,

Name: _____

Position: _____

Appendix 1.6 – Board Resolution

THE REPUBLIC OF UGANDA
IN THE MATTER OF THE COMPANIES ACT CAP 110
AND
IN THE MATTER OF [NGO]

ORDINARY RESOLUTION

At a meeting of the Board of Directors of the company on the [Date], be it resolved as follows:

1. THAT [NGO] shall as recommended by USAID/Uganda join the 'Digitizing Payments for USAID Beneficiaries in Uganda' Project as coordinated by Vital Wave Consulting.
2. THAT as a prerequisite for this service to become operational this resolution is so hereby made to facilitate this with the Aggregator who will be identified by USAID/Uganda and Vital Wave Consulting.
3. THAT the Board liability shall be limited to passing this resolution.
4. THAT the financial instruments of this project be signed as per [NGO] financial management policy.
5. THAT this resolution be filed with the Uganda Registration Services Bureau.

DATED at Kampala on [Date].

Signed By:
[NGO] Board of Directors

No.	Name	Title	Approved	Not Approved
1.				
2.				
3.				
4.				
5.				

Appendix 1.7 – Presentation for Beneficiaries on Transition to Digital Payments

USE OF MOBILE MONEY⁷

Background:

USAID has requested its partners to consider making payments using a mobile money system. After a successful introduction of mobile money payments with six USAID partners, the program will be expanded to other partner organizations.

Current challenges faced:

- a) Usually the sum to be paid out is a large amount, posing the risk of traveling and working with a lot of cash.
- b) Administratively, it's challenging to gather all beneficiaries in one place to pay them after a workshop has closed and the recipients have begun to disperse.
- c) Also, it consumes a lot of time to make payments to many people
- d) There is no guarantee that the person registered is the one who collects the payment, since many participants may not have IDs.

How it will work

- a) Participants will be required to register their mobile numbers for a mobile money payment system.
- b) Participants will then register their numbers with the program staff for the database.
- c) When participants are invited for a workshop, they will be required to register. As the workshop is taking place, the [insert name of activity] will carry out their verification before releasing the money to the registered mobile number.
- d) The [insert name of activity] will receive reports to show all the transactions that have been made.

Benefits to:

[insert name of activity]

- a) No risk on the side of [insert name of activity], since staff will no longer carry large sums of money.
- b) [insert name of activity] will be able to view reports of all payments made to the attendees of any event.
- c) There are reduced challenges in managing the payment of beneficiaries (i.e., no queues, no need for signatures or identification, etc.).
- d) There is less susceptibility to fraud or loss of money.

⁷ SDS Programme, 2013.

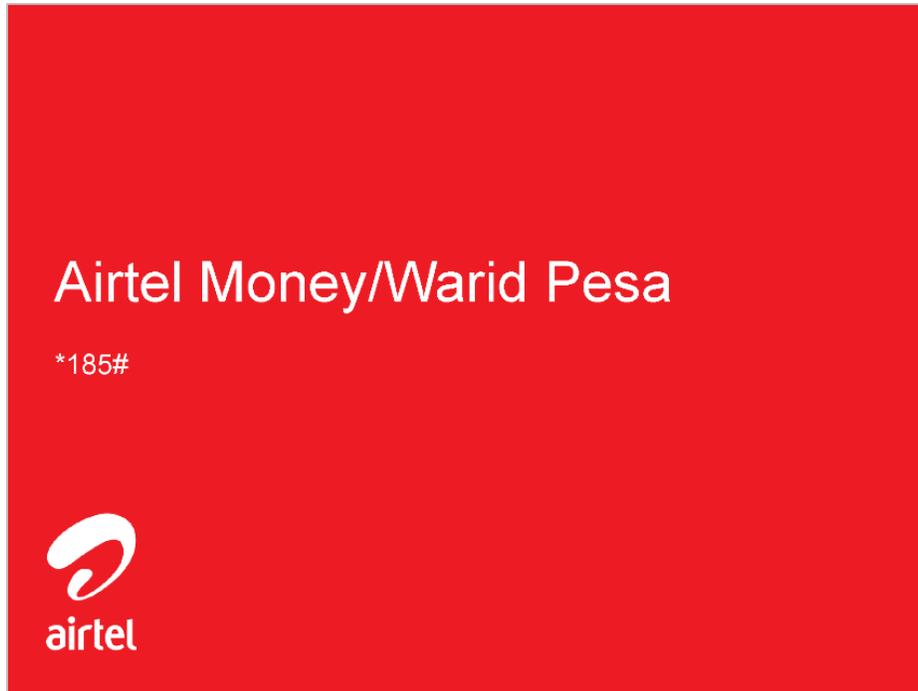
Beneficiaries

- a) Fewer delays in payments
- b) Reduced risk of one participant signing for money meant for another.
- c) Avoid the inconvenience of queuing up for a payment.
- d) No risk of carrying cash from a workshop to home.
- e) Enjoy all the benefits of having a mobile wallet.

Note: All mobile money transfers will include agent's fees (i.e., recipients will receive the full amount they would have previously received in cash).

Digital Adoption: MNOs

Appendix 1.8 – Instructional Manual on How to Use Mobile Money



Customer Menu



5. Enter your A.Money PIN ____ a confirmation message will be sent to you.





1. *185#

2. 1. Send Money
2. Buy Airtime
3. Withdraw money
4. Pay BILLS
5. Mobile Banking
6. My Account
7. Request Message Resend

3. Enter Agent's Number
0752600600

4. Enter Amount
10,000

5. Enter your A.Money PIN ____ a confirmation message will be sent to you.

NB. A customer receives a CODE at stage 3 which the agent uses to give the cash




2. 1. Send Money
2. Buy Airtime
3. Withdraw money
4. Pay BILLS
5. Mobile Banking
6. My Account
7. Request Message Resend

3. 1. LUMENE Touch Pay
2. Water
3. Pay TV
4. Multiplex
5. KCCA
6. PostPaid

4. Enter Account Number
xxxxxxxx

5. Enter Amount
100,000

6. Enter your A.Money PIN ____ a confirmation message will be sent to you.



Appendix 1.9 – Mobile Money Agent Training Curriculum

User Menu



everywhere you go.

Step 1



Step 2



Step 3



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Sending Money



everywhere you go.

- A registered user can send money to anyone, whether registered or not, with or without a phone
- If sending money to a person who has a mobile phone, the sender should go to the **Send money**. A mobile user can either be registered or un-registered
- When sending money to a non registered user, the system will ask for a **secret code**(4 digit number) that is to be entered by the sender. It will then provide a **Token ID (11 digits)**
- The **Token ID** and **Secret Code** are to be shared with the recipient only as this is what s/he will give to an agent to process the transaction.

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Sending Money [To a Registered User]


everywhere you go

Step 1	Step 2	Step 3	Step 4
			
Select Mobile Money	Select Send Money to	Select Mobile User	Enter Mobile Number

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Sending Money [To a Registered User]...


everywhere you go

Step 5	Step 6	Step 7	Step 8
			
Enter Amount	State reason	Confirm details	Enter MM Pin

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Sending Money [To a Registered User]...

Step 9



Transaction confirmed

Step 10



Balance confirmation!

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Sending Money [To a Registered User]...

Step 9



Enter secret code

Step 10



Confirm details

Step 11



Enter MM Pin

Step 12



Transaction confirmed

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Sending Money [a non-registered User]


everywhere you go

Step 13



Balance confirmation!

Step 14



Transaction completion

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Sending Money [Non-registered User]


everywhere you go

Step 1



Select Mobile Money

Step 2



Select 'Send Money to'

Step 3



Select Non mobile user

Step 4



Enter Amount

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Sending Money [Non-registered User]


everywhere you go

Step 6	Step 7	Step 8	Step 9
			
State reason	Confirm transaction details	Enter MM Pin	Enter secret code

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Sending Money [Non-registered User]


everywhere you go

Step 10	Step 11	Step 12	Step 13
			
Confirm details	Enter MM Pin again	Transaction details confirmed	Transaction completed

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Checking Balance


everywhere you go

Step 1



Select Mobile Money

Step 2



Select My Account

Step 3



Select Balance

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Checking Balance


everywhere you go

Step 4



Enter MM Pin

Step 5



Balance confirmation

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Paying Bills



everywhere you go.

Step 1



Select Mobile Money

Step 2



Select Pay Bill

Step 3



Select Bill to pay

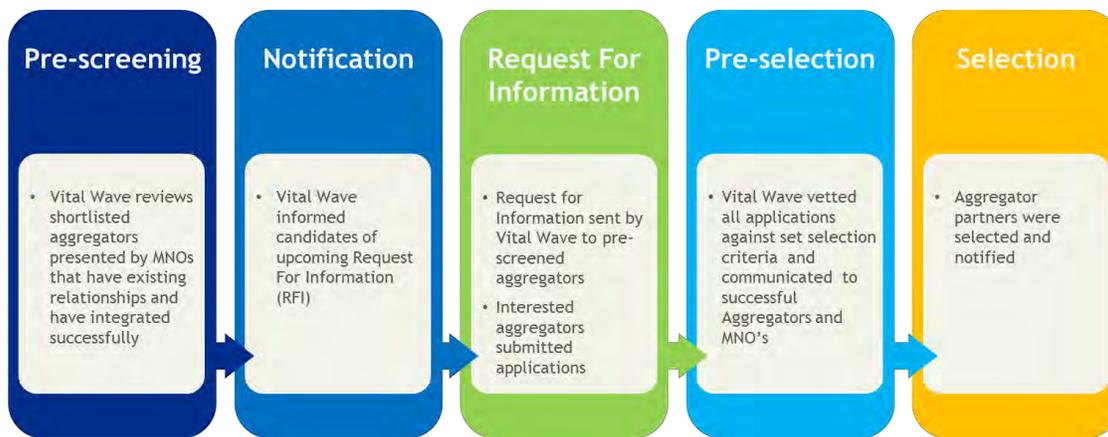
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Digital Adoption: Aggregators

Appendix 1.10 – Aggregator Procurement Process and Selection Criteria

Aggregators were selected from a shortlist of integrated and certified aggregators presented by the MNOs. Yo! Payments, Pegasus and Cellulant were selected as aggregators.

The aggregator selection process followed five steps: Pre-screening, Notification, Request for Information, Pre-Selection, and Selection.



The aggregator selection criteria were informed by the Business Requirements Document, which synthesized implementing partner requirements and the results of research carried out by Vital Wave.

Selection Criteria	Weight
Aggregator has an existing connection with the two largest MNOs	15
Aggregator has an existing bulk payments solution	15
Aggregator is currently servicing clients on the bulk payments solution	15
Aggregator meets all the BRD requirements	15
Aggregator shows capacity to handle the transaction volume	5
Aggregator is a Limited Liability Company (LLC)	5
Aggregator has been in operations for over two years	5
Aggregator has adequate business continuity management	5
Aggregator has adequate staff	5
Aggregator is financially stable	5
Aggregator has a flexible pricing arrangement	5
Aggregator has a good relationship with a top-tier bank	5
Aggregator has other services that may be beneficial to the project (SMS, USSD, WAP)	5
Highest Possible Score:	105

Appendix 1.11 – Request for Information

Aggregator

Request for Information (RFI)

Digitizing Payments in Uganda Program

Prepared by: Sieka Gatabaki
Prepared for: MNO Certified Aggregators
Date Submitted: October 4, 2013

Project Sponsor: Bill and Melinda Gates Foundation
Client Acceptor: Bryce Edgar
Engagement Manager: David Sessions
Lead Analyst: Leah Gatt
Advisor: Sieka Gatabaki

Confidentiality

All information included in this RFI is confidential and only for the recipient knowledge. No information included in this document or in discussions connected to it may be disclosed to any other party.

Introduction and purpose of the RFI

With this RFI we request information regarding your company and your products/services. The same information will be gathered from different companies and will be used to evaluate which aggregators will be selected for the Digitizing Payments in Uganda Program.

Scope

Specific information is requested according to the form below.

RFI procedure

To answer this RFI please fill in the attached form. The contact person/s listed below is available for assistance if needed. All questions should be submitted in email to the contacts below and responses shall be shared with all applicants.

How to deliver the answer

Send the attached form in PDF format by email to [insert project coordinator's email]

Timeframe

This is the timeframe for the RFI submission and evaluation

[Insert Date] – The RFI is sent out

[Insert Date] – Last date for questions

[Insert Date] – Last date for submission of answer

[Insert Date] – Final aggregator(s) chosen for prototyping and tests

[Insert Date] – Start of project

Background Description

Project Context

This project aims to change the way non-governmental organizations (NGOs) and projects in Uganda make small payments to beneficiaries. USAID is the lead donor in the country, and many NGOs have multiple funding partners. If successful, those NGOs and USAID could change the way beneficiary payments are made in Uganda and throughout East Africa.

Currently, many organizations are attempting to distribute bulk payments by working directly with MNOs. This model creates many redundancies, and implementing partners are not able to perform many needed functions due to the limitations of the MNO platforms.

As a result of the inherent limitations posed by working with the MNOs, an alternative approach has been proposed. Working with an intermediary such as an aggregator simplifies operations and lowers costs, both to the implementing partners and to USAID. Further, this approach increases transparency throughout the entire payments value chain.

Requirements

Aggregators who successfully implement the requirements listed below will be in a position to engage with implementing partners to accept and distribute bulk payments.

1) Reporting

- a. Payment activity summary (successful and undelivered) and details including transaction numbers organized by:
 - i. Specific date
 - ii. Specific week
 - iii. Specific month
 - iv. Specific year
 - v. Date range
 - vi. Beneficiary
 - vii. Beneficiary range (organized by name, phone number, and National ID)
 - viii. Others as specified
- b. Customer service reports by:
 - i. Date
 - ii. Disposition code
 - iii. Beneficiary name, national ID, and phone number

2) Web portal functions

- a. Payment scheduling that generates a unique ID for:
 - i. Single payments (one-time or recurring)
 1. Direct entry of recipient information into portal
 - ii. Bulk payments (one-time or recurring)
 1. Direct entry of recipient information into portal
 2. Upload of data file (CSV or other mutually agreed format)
 3. From database maintained on portal on behalf of implementing partner

3) Customer and Implementing Partner support

- a. Receive beneficiary customer service requests relating to payment issues
- b. Maintain a log of requests, disposition and resolution date, including a unique ticket number, date, time, beneficiary name, phone number and other pertinent information
- c. Catalog all support tickets based on disposition codes
- d. Develop and deliver a train the trainer course on the bulk payments system and processes.
- e. Provide training materials and guidelines for each implementing partner.

4) Mobile portal functions based on appropriate level of access

- a. Ability to view payment status by entering scheduled payment ID
- b. Ability to modify (pause, cancel, and release) scheduled payments for use by field personnel at the conclusion of intervention or project

5) Pricing

- a. Volume-based activity
 - i. Aggregator to provide pricing schedule based on volume of payments by month or in total
- b. Rate card for system enhancements or new features
- c. Pricing for hosting databases

6) Data security

- a. Encryption methods to be industry standard and compliant with Ugandan regulations for privacy and security
- b. Physical storage in compliance with Ugandan regulations for privacy and security, and in a manner that grants access only to authorized personnel

7) User security

- a. Implementing partner will be issued a master ID for use in managing authentication and access by partner employees or contractors
- b. Payment portal will provide at least three levels of access:
 - i. *Master*: Ability to access all transactions, reports, and databases. Master ID will be able to add users, alter authentication levels, and remove users in addition to all functions in the Designate level.
 - ii. *Designate*: Ability to view scheduled payments, review and release payments that have been scheduled, request and review all reports on-line, print all reports in addition to all functions in the Basic level
 - iii. *Basic*: Ability to prepare and upload payments to the portal, review certain reports on-line, and review specific transactions in support of customer service activities
- c. Payments portal will provide multiple layers of authentication (multi-hierarchy) to limit access to features and functions
- d. Generally accepted password policies to be applied for all users including but not limited to, minimum password length, password complexity, password aging, initial password change, and user account lockout and password history.

Qualifications

Mandatory

1. The aggregator must have integrated to one or more of the top MNO mobile money providers in Uganda
2. The aggregator must have a running bulk payments solution in place
3. The aggregator must be a limited liability company
4. The aggregator must have backup and redundancy capabilities

Optional

1. The aggregator should have been in business for more than two (2) years
2. The aggregator should have a 24-hour call center
3. The aggregator should have audited reports for the last financial year
4. The aggregator should be registered with the Uganda Communications Commission as a content service provider

Aggregator Questionnaire

Question	Response
Company name	
Company address	
Company website	
Main products/services	
Mobile Network Operators your have completed integrated with	
Mobile Network Operators your are integrating to and timelines	
Main market/customers	
Ownership structure with ownership distribution in percentage	
Structure of mother corporation, joint ventures, subsidiaries, partnerships or other relevant relations	
Number of years in business	
Company location(s)	
Describe your business continuity management	
Employees	
Technical	
Training	

Financial information	
Last year turnover	
Last year gross margin	
Last year profit/loss	
Escrow bank name and relationship manager contacts	
Contact person responsible for answering this RFI	
Telephone	
Email	
Capacity conditions today (maximum number of transactions/ clients)	
Anticipated capacity conditions within 12 months	
Requirements listed in the RFI that cannot be met	
Proposed pricing rate card based on estimated transaction bands (e.g. 0-1,000 transactions - 0.5% of value or UGS 100; 1001-10,000 – 0.4% of value, etc.)	
Description of products or services that are already delivered to customers today, and could be comparable to what is requested in this RFI	
Reference customers using comparable products or services (including contact information)	

Appendix 1.12 – User Acceptance Testing Checklist

User Acceptance Test (UAT)

Digitizing Payments in Uganda Program

Confidentiality

All information included in this UAT is confidential and only for the recipient knowledge. No information included in this document or in discussions connected to it may be disclosed to any other party.

Purpose of the UAT

This UAT has been designed to test the critical functions of the Aggregator portal and ensure it meets the Business Requirements Specifications prior to presentation to the end users.

Scope

All test cases in the UAT are derived from the relevant Business Requirements Specifications.

Test Cases

1. Reporting

	Pass	Fail
Does the system provide Payment activity summary (successful and undelivered) and details including transaction numbers organized by:	<input type="checkbox"/>	<input type="checkbox"/>
i. Specific date	<input type="checkbox"/>	<input type="checkbox"/>
ii. Specific week	<input type="checkbox"/>	<input type="checkbox"/>
iii. Specific month	<input type="checkbox"/>	<input type="checkbox"/>
iv. Specific year	<input type="checkbox"/>	<input type="checkbox"/>
v. Date range	<input type="checkbox"/>	<input type="checkbox"/>
vi. Beneficiary	<input type="checkbox"/>	<input type="checkbox"/>
vii. Beneficiary range (organized by name, phone number, and National ID)	<input type="checkbox"/>	<input type="checkbox"/>

2. Web Portal Functions

	Pass	Fail
Payment scheduling that generates a unique ID for:		
I. Single payments (one-time or recurring)	<input type="checkbox"/>	<input type="checkbox"/>
i. Allows for direct entry of recipient information into portal	<input type="checkbox"/>	<input type="checkbox"/>

	Pass	Fail
II. Bulk payments (one-time or recurring)		
i. Direct entry of recipient information into portal	<input type="checkbox"/>	<input type="checkbox"/>
ii. Upload of data file (CSV or other mutually agreed format)	<input type="checkbox"/>	<input type="checkbox"/>
iii. From database maintained on portal on behalf of implementing partner	<input type="checkbox"/>	<input type="checkbox"/>

3. Mobile portal functions based on appropriate levels of access

	Pass	Fail
a. Ability to view payment status by entering scheduled payment ID	<input type="checkbox"/>	<input type="checkbox"/>
b. Ability to modify (pause, cancel, and release) scheduled payments for use by field personnel at the conclusion of intervention or project	<input type="checkbox"/>	<input type="checkbox"/>

4. User security

	Pass	Fail
a. Implementing partner will be issued a master ID for use in managing authentication and access by partner employees or contractors	<input type="checkbox"/>	<input type="checkbox"/>
b. Payment portal will provide at least three levels of access:		
i. Master: Ability to access all transactions, reports, and databases. Master ID will be able to add users, alter authentication levels, and remove users in addition to all functions in the Designate level.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> ii. Designate: Ability to view scheduled payments, review and release payments that have been scheduled, request and review all reports on-line, print all reports in addition to all functions in the Basic level iii. Basic: Ability to prepare and upload payments to the portal, review certain reports on-line, and review specific transactions in support of customer service activities c. Payments portal will provide multiple layers of authentication (multi-hierarchy) to limit access to features and functions d. Generally accepted password policies to be applied for all users including but not limited to, minimum password length, password e. complexity, password aging, initial password change, user account lockout and password history 		
---	--	--

Sign off

<p>Project Advisor</p> <p>Lead Analyst</p> <p>Aggregator</p>	<p>Signatures</p>
--	-------------------

Appendix 1.13 – User Acceptance Testing Sample



YO PAYMENTS UATS: BULK PAYMENTS FEATURES - 2

ITEM	DESCRIPTION	PASS/FAIL	TEST DONE BY	COMMENT
Extend Bulk Payments so that it can allow upload of a single file with all supported networks	<ol style="list-style-type: none"> 1. Create a list of beneficiary having subscriber number from all supported MNO 2. Confirm that you are able to create a bulk payment using the list by uploading it. After the bulk payment is marked as completed, confirm that all subscribers received their respective payments as layed out in the beneficiary list. 			
Extend Bulk Payments to display display estimated cashout charges	<ol style="list-style-type: none"> 1. Create a beneficiary list 2. Access the bulk payment module to create a bulk payment 3. After selecting the beneficiary list in the bulk payment module, confirm that you are able to see <ol style="list-style-type: none"> a. the total estimated cashout charges b. the total payout amount c. the total MNO charges 4. Confirm that you are presented with a link which when clicked, a proofing file is downloaded with a list of beneficiaries. For each of the beneficiary, the file should indicate <ol style="list-style-type: none"> a. the estimated cashout charge, b. the MNO charges 			

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	<ul style="list-style-type: none"> c. the payout amount if cashout charges are to be applied to the beneficiary d. the payout amount if the cashout charges are to be applied to the applicant <p>5. Confirm that there is an option that allows one to apply the cashout charges to the beneficiary or the applicant</p> <p>6. When the bulk payment is created and the cashout charges were applied to the beneficiary, confirm that the beneficiary gets the amounts as indicated in the proofing file</p> <p>7. When the bulk payment is created and the cashout charges were applied to the applicant, confirm that the beneficiary gets the amounts as indicated in the proofing file.</p> <p>8. Confirm that one can download the cashout charges and MNO charges that are used in the proofing file.</p>			
Addition of Total Balance Field	<ul style="list-style-type: none"> 1. Log into the account and go the Balance page 2. Confirm that you are able to see a total of all balances on the different MNOs 			

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Tested by:

For VITAL WAVE

Date

In presence of:

For Yo! Uganda Limited

Date

Technology Enabled Business Solutions

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Appendix 1.14 – Proposed Bulk Payment Contract

AGREEMENT FOR A MULTIPLE PAYMENTS SOLUTION USING THE 'AGGREGATOR PAYMENT PLATFORM' E-COMMERCE SOLUTION

BETWEEN

[AGGREGATOR]

AND

[NGO NAME]

Drawn By

**Legal Department
'Aggregator'**

Plot _____, _____ Road,

P. O. Box _____

Kampala, Uganda

Tel: (+256) _____

THIS AGREEMENT is made on the day of Two Thousand and Fourteen

BETWEEN

1. **'AGGREGATOR'** a limited liability company incorporated in accordance with the Laws of Uganda and having its registered office at Plot,Kampala, and of Post Office Box Number, Kampala, Uganda, (hereinafter referred to as **"AGGREGATOR"** which expression shall where the context so admits include its successors and assigns) of the one part;

AND

2. **'NGO NAME'** a limited liability company incorporated in the Republic of Uganda whose principal place of business is at Plot,Kampala, and of Post Office Box Number, Kampala, Uganda, (hereinafter called **"the CLIENT"** which expression shall except where the context otherwise provides include its successors and assigns) of the other part.

WHEREAS

1. Aggregator is duly authorised Telecom Payments Aggregator to operate payments aggregation services and offer associated services and value added services in Uganda.
2. CLIENT is engaged in the provision of NGO Services in the Republic of Uganda.
3. THE CLIENT is desirous that AGGREGATOR facilitates the disbursement of payments to its customers, employees, business associates, agents or any of the CLIENT's nominees (the "third party") as shall be indicated by the CLIENT from time to time through Aggregator's Payments platform.
4. AGGREGATOR has agreed to offer the CLIENT a solution to facilitate the disbursement of payments to third parties on behalf of the CLIENT which involves the use of Aggregator's Payments service subject to the terms and conditions hereinafter contained.
2. Aggregator and the CLIENT confirm that they have the requisite authority and capacity to enter into and give effect to this Agreement.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1) DEFINITIONS

Unless the context otherwise provides, the following terms whenever used in this Agreement document shall have the meanings given here below:

'Aggregator Account' means an E-Value Account held by Aggregator.

'Bank Account' means a bank account held with any of the Commercial Banks in Uganda.

'Cash Payment Service' shall mean the service extended to the Third Party through Aggregator, for the disbursement of payments through the Aggregator payments service, in accordance with Aggregator's operating procedures.

'CLIENT's Aggregators Payment Platform Account' shall mean the CLIENT's designated Aggregator account number as shall be advised by the CLIENT, where all payments shall be made through and where Aggregator will be crediting E-value. It shall also mean an account on the Aggregator Payment Platform system with E-value equivalent to real-money deposited in the Aggregator Payment Platform Account by the CLIENT to be used for payments of the third party.

'E-Value' means the electronic value recorded in an E-Value Account, such electronic value representing that E-Value Account holder's entitlement to an equivalent amount of the Real Money held in the Bank Account.

'Force Majeure' shall mean any event or circumstance which affects either party and is not within the reasonable control (directly or indirectly) of the Party affected, to the extent that such event or circumstance or its effects cannot be prevented, avoided or removed by such party acting in accordance with Prudent Operating Practice. "Force Majeure" shall include each of the following events and requirements:

- i) Any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, act of terrorism, or sabotage provided that any such event occurs within or directly involves the Republic of Uganda.
- ii) Any act of God including but not limited to lightning, fire, earthquakes, volcanic activity, floods, storms, cyclones, typhoons, or tornadoes.
- iii) Epidemics or plagues.
- iv) Explosions or chemical contamination (other than resulting from an act of war).
- v) Labour disputes including strikes, go-slows or lockouts that are extended beyond Aggregator's control or are widespread or nation-wide; except where the same is occasioned by Aggregator's default.
- vi) Change in Law to the extent that it will adversely affect any party's performance of its obligations under this Agreement.

'Instruments' shall mean Electronic Funds Transfer (EFT).

'Operating Procedures' shall refer to the procedures and processes through which payments shall be remitted from the CLIENT to the Third Parties through the Aggregator Payments Solution.

'Real Money' means Uganda Shillings being the lawful currency of the Republic of Uganda.

'Services' shall mean any services provided by Aggregator pursuant to this Agreement.

'Third Party' shall mean anyone receiving payment from the CLIENT.

2. SCOPE OF SERVICES

- 2.1 The Payment Service shall be based on Aggregator's Mobile Commerce Platform.
- 2.2 The Aggregator Payments Solution has now been developed by Aggregator to collect information that allows for the remittance of CLIENT's payments through the Aggregator Payments Solution.

3. DURATION

This Agreement shall remain in force unless and until terminated by either party in accordance with the provisions of Clauses 9 to 10 hereinafter appearing.

4. FEES AND CHARGES

- 4.1 In consideration of Aggregator providing the Services herein described, the CLIENT shall pay Aggregator the Transactional Fees set out in the Schedule attached hereto to as Annex 1 and incorporated herein by reference (including subsequent revisions thereof approved in the manner provided for by amendments to this Agreement).
- 4.2 The parties expressly agree that the Transactional Fees shall be solely determined by Aggregator and Aggregator retains the right upon Seven days' notice to the CLIENT to review the Transactional Fees as it shall deem fit.
- 4.3 The Transactional Fees in Annex 1 shall however apply until any new charges are agreed upon by the parties.

5. COLLECTION AND TRANSMISSION OF MONIES

- 5.1 Aggregator will avail the application for payments processing to the CLIENT's designated computers.
- 5.2 CLIENT shall be provided by Aggregator with the Aggregator Payments Solution Account on which Aggregator will credit E-value equivalent to Real Money paid to Aggregator.
- 5.3 Prior to launching the Service captured herein the parties shall carry out tests (to a satisfactory level) to confirm the compatibility and use of acceptable file formats with regard to the Service as being suitable for the proper functioning and performance of each party's obligations under this Agreement.
- 5.4 The payments by the CLIENT will be executed via Aggregator's Core Application system that will be interfaced with a connection to the CLIENT computer system for purposes of providing the payment particulars to CLIENT.
- 5.5 Aggregator will provide the CLIENT with full details of all payments through the connection in accordance with the Operating Procedures and process flow in the **Annex 1** hereto.
- 5.6 Aggregator undertakes to ensure that the information posted through the connection is accurate and up to date; however Aggregator shall not be liable to the CLIENT for any loss that the CLIENT may suffer in the event that such information is tampered with by the CLIENT staff or such other third parties who may gain un-authorized access thereto or for any incorrect information provided by the Persons /suppliers **PROVIDED THAT** Aggregator shall be liable for any losses that arise from the negligence or breach of contract of Aggregator's employees, agents and/ or independent contractors.
- 5.7 Aggregator further undertakes to indemnify and keep the CLIENT fully indemnified from any losses; expenses, costs damages arising from such negligence or breach of contract.

6. STANDARD OF PERFORMANCE

- 6.1 Aggregator shall perform the services and carry out its obligations under this Agreement with all due diligence and efficiency in accordance with the generally accepted techniques and practices commonly recognized by the industry.
- 6.2 The CLIENT acknowledges that the Service is not fault free and the quality and availability of the Service may be affected by factors outside the control of Aggregator such as local geographic or physical obstructions atmospheric conditions and other causes of radio interference as well as faults in other telecommunication networks to which the Network is connected or dependent. The Network and the Service may also from time to time require upgrading modification maintenance or other works that may also result in the Service or any part thereof becoming temporarily unavailable. Pegasus however undertakes to act on such interferences promptly.

7. OBLIGATIONS OF THE CLIENT

- 7.1 Inform the Third Party in a sufficiently prominent manner about Aggregator's solution as a payment channel for the CLIENT payments.
- 7.2 Advise Aggregator promptly in the event of any changes in or re-organization of the CLIENT and any other relevant departments, which may have a material implication on the operations of this Agreement as envisaged by Clause 11.3 herein.
- 7.3 To ensure appropriate system safeguards are in place to protect the unauthorized access to and/or use of or tampering with information held by the CLIENT in connection with this Agreement.
- 7.4 Subject to Clause 5.6 above, the CLIENT will Indemnify and keep Aggregator indemnified against all losses, claims, demands, actions, proceedings, costs and expenses, of whichever nature, arising as a consequence of Aggregator carrying out its obligations under this Agreement. Such indemnity shall include but not limited to, any loss that Aggregator may suffer arising out of the transmission of confidential information in accordance with the agreed procedures and guidelines annexed hereto.
- 7.5 Adhere to all relevant statutory provisions with regard to tax and all other relevant statutory payments **PROVIDED THAT** Aggregator shall not be liable for any default occurring from non-observance of any statutory provisions by the CLIENT and the CLIENT holds Aggregator fully indemnified against any default occurring from non-observance of any statutory provisions.
- 7.6 Notwithstanding any other clause herein the CLIENT undertakes to indemnify and keep Aggregator fully indemnified from any losses; expenses, costs damages arising from such negligence or breach of contract occasioned by the CLIENT, its employees and/or its duly authorised agents.

8. OBLIGATIONS OF AGGREGATOR

- 8.1 To advise the CLIENT promptly in the event of any changes in or re-organization of Aggregator and any other relevant departments, which may have a material implication on the operations of this Agreement as envisaged by Clause 11.3 herein.
- 8.2 To ensure appropriate system safeguards are in place to protect the unauthorized access to and/or use of or tampering with information held by Aggregator in connection with this Agreement.
- 8.3 Subject to the other provisions of the Agreement Aggregator shall indemnify the CLIENT against any losses suffered by the CLIENT as a result of any disconnection of supply to any person/supplier arising from the error or omission of Aggregator. The value of the Indemnity will be limited to the value of the loss in question.

9. TERMINATION - GENERAL

Either party may terminate the Agreement without prejudice to the antecedent rights and obligations accruing to either party for any reason provided that such termination is communicated to the other Party by way of a written notice and provided that such notice is given three (3) months to the date of termination **PROVIDED THAT** the CLIENT shall not make any payment to the Third Party at least three (3) consecutive working days to the date of termination.

10. TERMINATION BY NOTICE

The Agreement may be terminated by notice from either party in its entirety in the following instances:

- a) By either party giving Three (3) months notice in writing at any time of the intended termination.
- b) By either party in the event that the other party commits or permits any material breach of any term of this Agreement and fails to remedy such breach within Thirty (30) days of receiving a request in writing from the other party to remedy such breach.

11. AUTOMATIC TERMINATION IN CERTAIN CIRCUMSTANCES

- 11.1 The Agreement shall forthwith terminate if at any time any party becomes incapable of acting, or is adjudged bankrupt or insolvent, or files a voluntary petition in bankruptcy or makes an assignment for the benefit of its creditors or consents to the appointment of a receiver or other similar official of all or any substantial part of its property or admits in writing its inability to pay or meet its debts as they mature or suspends payment thereof, or if a resolution is passed or an order made for the winding up or dissolution of either parties or if a receiver, administrator or other similar official of such Agent or all or any substantial part of its property or if any order of any court is entered approving any petition filed by or against it under the provisions of any applicable bankruptcy or insolvency law, or if any public officer takes charge or control of either party or its property or affairs for the purpose of rehabilitation, conservation or liquidation so as to render this Agreement impossible to perform.
- 11.2 If any law is passed for the de-establishment of any party so as to render this Agreement impossible to perform.
- 11.3 In the event of any changes in and or re-organization of Aggregator or the CLIENT which may have a material implication on the operations of this Agreement, rendering the implementation thereof to be impossible.

12. EFFECT OF TERMINATION

- 12.1 Any termination of the Agreement in whole or in part however occasioned shall not affect any accrued rights or liabilities of either party, nor shall it affect the coming into force or continuance in force of any provision hereon which is expressly or by implication intended to come into or continue in force on or after such termination.
- 12.2 In the event of termination the CLIENT shall be entitled to payment of all monies collected on behalf of the CLIENT by Pegasus.
- 12.3 In the event of termination Pegasus shall be entitled to all payments of fees due up to the effective date of actual termination.

13. LIMITATION OF LIABILITY

The CLIENT shall exclude Aggregator from liability for any loss that occurs due to any of the events of Force Majeure as defined herein. Aggregator shall not be liable under any circumstances for any incidental or consequential loss or damage or any damages for negligence and its liability shall be expressly limited to the performance of the service provided by this Agreement unless otherwise agreed by mutual consent.

14. RESOLUTION OF DISPUTES

14.1 Any dispute or disagreement arising between the Parties in relation to this Agreement shall, upon the request of one Party to the other, be referred to a senior manager of each Party who shall meet within Fourteen (14) days of such notice in good faith in order to determine whether the matter referred to them is capable of resolution and, if so, to resolve the matter between them.

14.2 If such senior managers shall fail to reach agreement within a reasonable time and in any event within seven (7) days of first meeting, any such dispute shall be referred to a senior executive nominated by the chief executive officer (or equivalent) of each of the Parties who shall meet in good faith within fourteen (14) days of such dispute or disagreement being so referred in order to determine whether the matter referred to them is capable of resolution and, if so, to resolve such matters.

14.3 This clause and any discussion of senior personnel which takes place hereunder shall not prejudice any right or remedy which any Party may ultimately have should the matter fail to be resolved by such discussions.

14.4 If any such dispute or disagreement cannot be settled in accordance with the foregoing provisions of this Article, the dispute shall be referred on election of either Party (the "Notice of Arbitration") to arbitration by a single arbitrator to be appointed by agreement between the parties or in default of such agreement within 14 days of service of Notice of Arbitration upon the application of either party, by the Executive Director of the Centre for Arbitration and Dispute Resolution (CADER).

14.5 Such arbitration shall be conducted in Kampala in accordance with the provisions of the Arbitration and Reconciliation Act, Cap 4, Laws of Uganda 2000 or its successor legislation.

14.6 To the extent permissible by law, the determination of the arbitrator shall be final, conclusive and binding upon the parties hereto.

14.7 Pending final settlement or determination of a dispute, the parties shall continue to perform their subsisting obligations hereunder.

14.8 Nothing in this Agreement shall prevent or delay a party seeking urgent injunctive or interlocutory relief in a court having jurisdiction.

15. CONFIDENTIALITY

15.1 The Parties acknowledge that during the course of this Agreement they may have access to financial, legal, marketing, technical and other knowledge and information pertaining to each other's business affairs as necessary under this Agreement (hereinafter referred to as "Confidential Information").

15.2 Each Party agrees to keep the Confidential Information confidential and agrees that it shall not without the prior written consent of the owner of the Confidential Information, disclose such Confidential Information either directly or by its representatives, persons /suppliers and/or agents, to any person or in any manner whatsoever, in whole or in part. The Parties agree that the Confidential Information shall not be used by the Parties or their representatives, persons /suppliers and/or agents other than in connection with this Agreement. Moreover the Parties shall be responsible for any breach of this clause by their representatives, persons /suppliers and/or agents.

15.3 The Parties agree that the Confidential Information shall so remain until such information becomes part of public domain through no fault or breach of this Agreement or the same is required by a body mandated under law to request for the same.

16. ASSIGNMENT

Neither party shall assign or otherwise transfer any of its rights under this Agreement or any interest herein without the prior written consent of the other party and any such attempted assignment or transfer without the other party's consent shall be void and of no effect.

17. GOVERNING LAW

This Agreement shall be governed by the Laws of Uganda.

18. WAIVER

The waiver by either party of any breach of any of the provisions of this Agreement shall not be construed as a waiver of any succeeding breach of the same or other provisions, nor shall delay or omission on the part of the aggrieved party to exercise or avail itself of any right, power or privilege that it has, or may have hereunder operate as a waiver of any breach or default by the other party.

19. NOTICES

19.1 Any notice, request or consent required or permitted to be given or made pursuant to this Agreement shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the party to whom the communication is addressed, or when sent by registered mail, telegram or facsimile to such party at the following address;

For CLIENT:

The Managing Director
(NGO Name)
Plot, Road,
P. O. Box,
Kampala, Uganda
Tel: (+256)

For AGGREGATOR:

The Managing Director
(Aggregator Name)
Plot, Road,
P. O. Box,
Kampala, Uganda
Tel: (+256)

19.2 Notices will be deemed to be effective as follows:

- a) In the case of personal delivery, on delivery.
- b) In the case of registered mail, seven days from the date of registration, subject to the confirmation of the sender.
- c) In the case of telegrams, facsimiles e-mail 24 hours from the date of the confirmed transmission.

19.3 A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to this clause.

20. GENERAL

20.1 This Agreement constitutes the entire Agreement between the Parties and supersedes any previous Agreement or relationship in respect of the same matter.

20.2 A variation of this Agreement is valid only if it is in writing and signed by or on behalf of each Party.

20.3 Except where this Agreement provides otherwise, the rights and remedies contained in it are cumulative and not exclusive to rights or remedies provided by law. The failure by either Party to enforce at any time or for any period any one or more of the terms or conditions of this Agreement shall not be a waiver of them or of the right at any time subsequently to enforce all terms and conditions of this Agreement.

20.4 If any provision of this Agreement is declared by any judicial or other competent authority or an arbitrator appointed hereunder to be void, illegal, or otherwise unenforceable, the Parties shall amend that provision in such reasonable manner as achieves the intention of the Parties without illegality.

21. COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original.

[SPACE DELIBERATELY LEFT BLANK]

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have set hereunto their respective hand and or seals on date herein above mentioned.

SIGNED for and on behalf of _____ by:
[Aggregator name]

MANAGING DIRECTOR

Name: _____

Signature: _____

Date: _____

In the presence of:

DIRECTOR/COMPANY SECRETARY

Name: _____

Signature: _____

Date: _____

SIGNED for and on behalf of _____ by:
[NGO name]

DIRECTOR

Name: _____

Signature: _____

Date: _____

In the presence of:

DIRECTOR/COMPANY SECRETARY

Name: _____

Signature: _____

Date: _____

ANNEX ONE

TRANSACTIONAL FEES

Aggregator Payments Solution	Telecoms Charge (Per Transaction in UGX)	Aggregator Charge (Per Transaction in UGX)
Bulk Payments	TBD	TBD

Notes:

The Transactional Fees above are exclusive of all applicable taxes.

ANNEX TWO

OPERATING PROCEDURES AND PROCESS FLOW

1. SCOPE OF DOCUMENT

The purpose of this document is to outline the process of Aggregator Bulk Payment Service for Aggregator Merchants, improve and manage expectations, clarify responsibilities and build the foundation for a win-win relationship between the Pegasus Technologies Ltd herein referred to as 'Aggregator', and the CLIENT using the facility, as well as its clients (customers).

2. OBJECTIVES OF AGGREGATOR BULK PAYMENT SERVICES

Aggregator Bulk Payment Solution enables organizations (clients) to send money in the form of E-Value to multiple recipients. The service was designed to assist clients in:

1. Payment of salaries and wages.
2. Payment of suppliers for goods and or services supplied.
3. Payment of winners' cash prizes in Consumer Promotions.

This greatly reduces their costs in cash handling in terms of Bank charges, security and other Administrative costs.

3. SERVICE DETAILS

3.1 Acquisition

A prospective client may be proactively approached by Aggregator or seek Aggregator Bulk payment services from Aggregator.

3.2 The CLIENT will be required to submit the following documents to Aggregator for the purposes of KYC (Know Your Customer)

- a) Duly filled Aggregator Payments Solution Application form.
- b) Duly signed commercial contract between Aggregator and the CLIENT.

3.3 Implementation of the Aggregator Bulk Payment Solution

- o Aggregator will then activate a Aggregator Payment Solution account for the client, with an account number supplied to the customer. The account will appear in any Email/SMS that customers will receive when funds have been transferred to their account on Aggregator Payment Solution.
- o The client will be required to deposit cash in the Trust Account. (details to be specified in communication to the client).this money will be allocated to the CLIENTS' Aggregator account by Aggregator Treasury team.
- o The client can choose to have access to the solution implemented in their premises through either
 - I. Internet Modem
 - II. Public Internet Protocol

3.4 Features of Aggregator Bulk Payment Account

- It is a virtual Aggregator Money Account available in the Aggregator Payments platform.
- Its operations are limited to the Aggregator Payment Platform System available on a PC or internet enabled mobile phone through a web browser.
- The account created can only be used for sending funds to multiple recipients using the Aggregator Payment Platform application.

3.5 Transactional Process

- 1) Funds must be available from the Client's Aggregator Account.
P/S. Recipients of funds must be registered in the Aggregator Payment Platform system
- 2) CLIENT creates a register on an Excel/CSV file with the telephone numbers of the recipients as well as the corresponding amounts to be paid.
- 3) This register is then saved as a "CSV" file.
- 4) CLIENT logs into the Aggregator Payment Platform portal and onward to the client's Aggregator Payment Platform account.
- 5) The CSV file is then uploaded onto the Aggregator Payments Platform System.
- 6) CLIENT's Aggregator Payments Platform Payments Authoriser clicks send.
- 7) The Aggregator Payments Platform payments system will then pick information from the file and send funds as allocated to the respective recipients.
- 8) Recipients can CASH OUT / withdraw money either in part or full at the nearest telecom agent.

P/S: The CLIENT will be responsible for errors associated with sending funds to the wrong recipients; this is because the client has the full responsibility to ensure that the csv file created tallies with the list of intended recipients.

Appendix 1.15 – Required Documentation to Register

1. Certificate of registration
2. Certified copy of certificate of charter/resolution/constitution or equivalent
3. Document specifying allocation of rights (who will have access to accounts and what each of their rights are)
4. Certified copy of Statement of Particulars of Directors/Members/Partners
5. Copies of identification for the directors
6. Aggregator form

Appendix 1.16 – Business Account Opening Form

APPLICATION AND REGISTRATION FORM
FILL IN WITH BLOCK CAPITAL LETTERS

Applicant's (Organization's) Full Legal Name	
Registered Address	Name of Building Plot No. & Street Landlord's Name
	Postal Address Town
	Office Tel. Contact Fax
	Office Email Address Contact Person Name
	Contact Person Email Contact Person Mobile.....
Nature of Business	
Yo! Payments Account Details (Create account online at https://payments.yo.co.ug/)	Account Number Username
Particulars of Directors/ Partners/Members/Trustees	NameTel.No.....
	NameTel.No.....
	NameTel.No.....
	NameTel.No.....
Tax Registration Number	TIN Number VAT Number
Required Documents	<input type="checkbox"/> Copy of Certificate of Incorporation/Equivalent Statutory Registration Document
	<input type="checkbox"/> Copy of Trading License (if applicable)
	<input type="checkbox"/> Copy of at least 1 Director's ID Card (Managing Director)
	<input type="checkbox"/> Copy of Memorandum/Articles of Incorporation or Equivalent Charter
Additional Information	

I hereby confirm that the information provided above is true and correct and I wish to obtain a Yo! Payments Business Account. I confirm that I have read and fully understood the terms and conditions available on the website <https://payments.yo.co.ug/>. I also understand that this Registration Form and the attached terms and conditions constitute a binding Agreement between me and Yo! Uganda Limited.

For and on behalf of the Applicant

Name _____ Signature _____ Date _____

Email Address _____ Mobile Number _____

Official Stamp/Seal

Verification: I certify that all requisite information has been provided, and I have seen and verified the original documents for which copies have been provided herewith. Applicant account may be upgraded to a Business Account.

Yo! Uganda Limited Representative's Name _____ Signature _____

Email Address _____ Mobile Number _____

Appendix 1.17 – Authorization Letter

Dear Sir/Madam,

RE: AUTHORIZATION FOR USE OF YO! PAYMENTS ACCOUNT

Please accept my endorsement to use the [AGGREGATOR NAME] account number [ACCOUNT NUMBER] for our internal business use.

The following individual(s) will be allowed **FULL ADMINISTRATOR ACCESS** to our account:

Full Names	Email Address	Telephone Number

The following individual(s) will be allowed **VIEW ONLY** access to our account:

Full Names	Email Address	Telephone Number

Any mobile money withdrawal transactions must be pre-approved by the following individuals on behalf of the company using your "Email Authorization" feature:

Full Names	Email Address	Telephone Number

In the event that we make a request to withdraw funds from our [INSERT AGGREGATOR NAME] account to a bank account, these are the details:

Bank Account Name:
Bank Account Number:
Bank Name and Branch:
Bank Address:

[OFFICIAL COMPANY SEAL]

Yours Faithfully,

[NAME]
[DESIGNATION]

Appendix 1.18 – User Training Manual

Yo! payments

Web Interface Guide

(Bulk Payments)



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Yo! Payments: Web Interface Guide

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The service license is hereby incorporated herein by this reference.

All product names mentioned in this manual are for identification purposes only, and are either trademarks or registered trademarks of their respective owners.



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Web Interface Guide

1 DOCUMENT HISTORY

Revision Date	Comments	Reviewer
November 2013	Bulk Payments	



2 INTRODUCTION

2.1 ABOUT YO! PAYMENTS

Yo! Payments is a revolutionary mobile payments gateway service. Yo! Payments enables businesses to receive payments from their customers via mobile money, as well as make mobile money payments to any mobile money account holder. Yo! Payments offers a rich API which enables seamless integration with websites, IVR services, SMS services and any other medium through which businesses interact with their customers. Yo! Payments also offers an "internal transfer" service which enables account holders to cheaply transfer funds amongst each other.

Yo! Payments essentially opens the door for all types of businesses to benefit from the highly successful mobile money transfer phenomenon.

2.2 YO! PAYMENTS API

Yo! Payments offers an Application Programming Interface (API) for businesses who wish to customize their customers' payment experience. The API is only available for Business Account holders.

2.3 TRANSACTIONS SUPPORTED BY THE API

The API supports the following transactions, which are also available from the Web Interface:

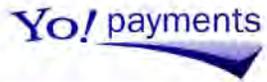
- Withdraw Funds
- Deposit Funds
- Internal Transfer

The above transactions are fully described in the later sections of this document, as well as the Web Interface.

2.4 YO! PAYMENTS WEB INTERFACE

Yo! Payments comes with a user friendly web-based interface with multiple features aimed at making your experience with Yo! Payments as delightful as possible. Some of the features offered by the web interface are:

- Receive Mobile Money Payment
- Send Mobile Money Payment
- Multi-Currency Support
- Internal Transfers
- Online Support
- Narrative Attachments
- Email Authorization
- Administrative Email Authorization
- Sub-Accounts
- Extensive Access Control
- Withdrawal Limits for Sub-Accounts



- Detailed Audit Trail

The Yo! Payments web interface shall be the primary focus of this document.



3 BULK PAYMENTS

Yo! Payments comes with an advanced Bulk Payments feature. This feature enables you to transmit funds to multiple beneficiaries in one go. This feature is useful for any payments made to several individuals for a similar purpose. Use cases include salary payments, rewards disbursements, loan disbursements et cetera.

NOTE: The Bulk Payments feature is only available to Business Account holders. For information on how to obtain a business account, refer to the Yo! Payments website or contact your account manager.

Note that bulk payments are affected by the configured authorization structure discussed in section **Error! Reference source not found.** Any outgoing bulk payments will be sent for authorization first.

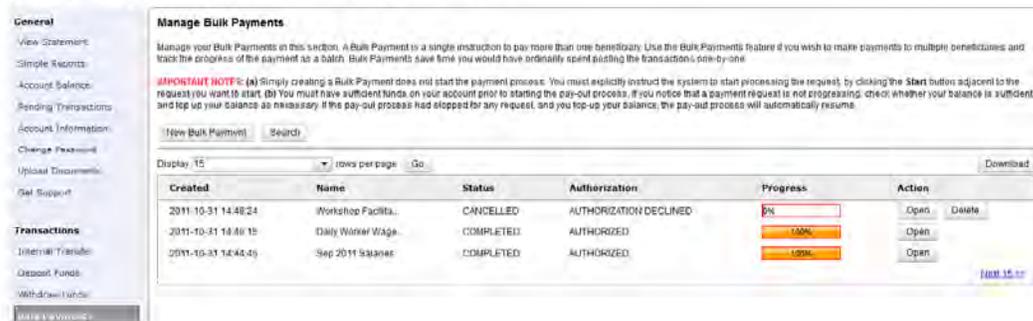
3.1 PROCESS OVERVIEW

In a nutshell, the following process summarizes what you need to do in order to make bulk payments:

1. **Fund your Account.** Ensure your account has sufficient funds to complete the bulk payment, including any chargeable fees;
2. **Create Bulk Payment Request.** Create and submit your bulk payment request.
3. **Authorize Request.** If configured, the request needs to be authorized.
4. **Start Payment Process.** Payment process must be explicitly started before pay-out starts.
5. **Monitor Progress.** During the payment process, you may monitor progress and have opportunity to pause / cancel payment.
6. **Download Reports.** Upon completion of payment, you may download reports.

3.2 ACCESSING THE BULK PAYMENTS FEATURE

Access the Bulk Payments feature by logging into your account and clicking the "Bulk Payments" link on the left-hand-side menu. Clicking this link will result in the system displaying a list of available bulk payment requests as shown in the diagram below:



General

- View Statement
- Simple Reports
- Account Balance
- Pending Transactions
- Account Information
- Change Password
- Upload Documents
- Get Support

Transactions

- Internal Transfer
- Deposit Funds
- Withdraw Funds
- Bulk Payments**

Manage Bulk Payments

Manage your Bulk Payments in this section. A Bulk Payment is a single instruction to pay more than one beneficiary. Use the Bulk Payments feature if you wish to make payments to multiple beneficiaries and track the progress of the payment as a batch. Bulk Payments save time you would have ordinarily spent posting the transactions one-by-one.

IMPORTANT NOTE: (A) Simply creating a Bulk Payment does not start the payment process. You must explicitly instruct the system to start processing the request, by clicking the **Start** button adjacent to the request you want to start. (B) You must have sufficient funds on your account prior to starting the pay-out process. If you notice that a payment request is not progressing, check whether your balance is sufficient and top up your balance as necessary. If the pay-out process had stopped for any request, and you top-up your balance, the pay-out process will automatically resume.

New Bulk Payment Search

Display 15 rows per page Go Download

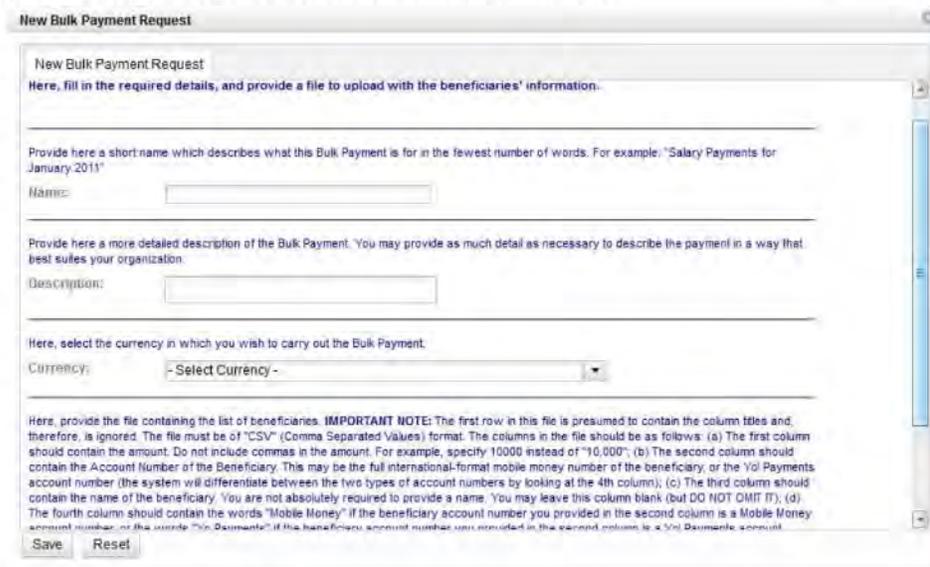
Created	Name	Status	Authorization	Progress	Action
2011-10-31 14:48:24	Workshop Facilita...	CANCELLED	AUTHORIZATION DECLINED	0%	Open Delete
2011-10-31 14:48:19	Daily Worker Wage	COMPLETED	AUTHORIZED	100%	Open
2011-10-31 14:44:09	Sep 2011 Salaries	COMPLETED	AUTHORIZED	100%	Open

Print 15 of 15



3.3 CREATING A NEW BULK PAYMENT REQUEST

To create a new Bulk Payment request, log into your account, access the Bulk Payments section and click the button labeled "New Bulk Payment". Clicking this button will result in the system displaying a form for you to fill in the relevant details of your Bulk Payment request.



New Bulk Payment Request

New Bulk Payment Request
Here, fill in the required details, and provide a file to upload with the beneficiaries' information.

Provide here a short name which describes what this Bulk Payment is for in the fewest number of words. For example: "Salary Payments for January 2011"

Name:

Provide here a more detailed description of the Bulk Payment. You may provide as much detail as necessary to describe the payment in a way that best suits your organization.

Description:

Here, select the currency in which you wish to carry out the Bulk Payment.

Currency:

Here, provide the file containing the list of beneficiaries. **IMPORTANT NOTE:** The first row in this file is presumed to contain the column titles and, therefore, is ignored. The file must be of "CSV" (Comma Separated Values) format. The columns in the file should be as follows: (a) The first column should contain the amount. Do not include commas in the amount. For example, specify 10000 instead of "10,000"; (b) The second column should contain the Account Number of the Beneficiary. This may be the full international-format mobile money number of the beneficiary, or the Yo! Payments account number (the system will differentiate between the two types of account numbers by looking at the 4th column); (c) The third column should contain the name of the beneficiary. You are not absolutely required to provide a name. You may leave this column blank (but DO NOT OMIT IT); (d) The fourth column should contain the words "Mobile Money" if the beneficiary account number you provided in the second column is a Mobile Money account number, or the words "In-Document" if the beneficiary account number you provided in the second column is a "In-Document" account.

Fill in the form and submit.

3.4 AUTHORIZING A BULK PAYMENT

If you have set up email authorization as indicated in section **Error! Reference source not found.**, all Bulk Payment requests which are created shall need to be authorized. In such a case, upon creating a Bulk Payment request, the new request will be displayed with the "AUTHORIZATION REQUIRED" tag as shown below.



New Bulk Payment Search

Display 15 rows per page Go Download

Created	Name	Status	Authorization	Progress	Action
2013-10-09 11:20:54	Field Facilitato...	NOT RUNNING	AUTHORIZATION REQUIRED	0%	Open Start Cancel

Next 15 >>

Yo! payments

Web Interface Guide

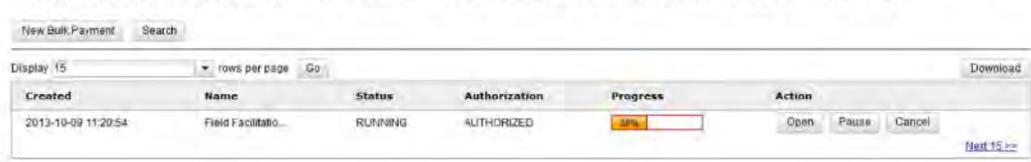
3.5 STARTING THE PAY-OUT PROCESS

Once you have created and authorized a Bulk Payment request, starting the Pay-Out process is as simple as clicking the "Start" Button and confirming. This will cause its status to change from "NOT RUNNING" to "RUNNING". Note however, that inspite of the fact that a bulk payment's status is "RUNNING", if not authorized, the pay-out process will not start.



3.6 MONITORING PAY-OUT PROGRESS

Once a Bulk Payment Request has been authorized and started, you may monitor its progress by viewing it in the Bulk Payments list as below. A Bulk Payment request which has been authorized and is running has its Status as RUNNING and Authorization as AUTHORIZED as seen in screenshot below.



3.7 PAUSING, RESUMING AND CANCELLING A RUNNING BULK PAYMENT REQUEST

A running Bulk Payment Request may be paused, resumed or cancelled as demonstrated below.

3.7.1 Pausing a Bulk Payment Request

This action is performed by clicking the "Pause" button and confirming the action in the confirmation pop-up that is displayed.





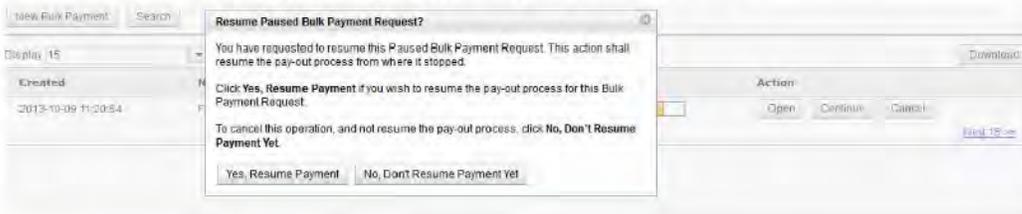
A paused Bulk Payment Request will have its status as "PAUSED"

Created	Name	Status	Authorization	Progress	Action
2013-10-09 11:20:54	Field Facilitat...	PAUSED	AUTHORIZED		Open Continue Cancel

Display 15 rows per page Go Download [Next 15 >>](#)

3.7.2 Resuming a Bulk Payment Request

A paused Bulk Payment may be resumed by clicking the "Continue" button.



Resume Paused Bulk Payment Request?
You have requested to resume this Paused Bulk Payment Request. This action shall resume the pay-out process from where it stopped.
Click **Yes, Resume Payment** if you wish to resume the pay-out process for this Bulk Payment Request.
To cancel this operation, and not resume the pay-out process, click **No, Don't Resume Payment Yet**.

Yes, Resume Payment No, Don't Resume Payment Yet

3.7.3 Cancelling a Bulk Payment Request

A Bulk Payment Request may be cancelled by clicking the "Cancel" button.



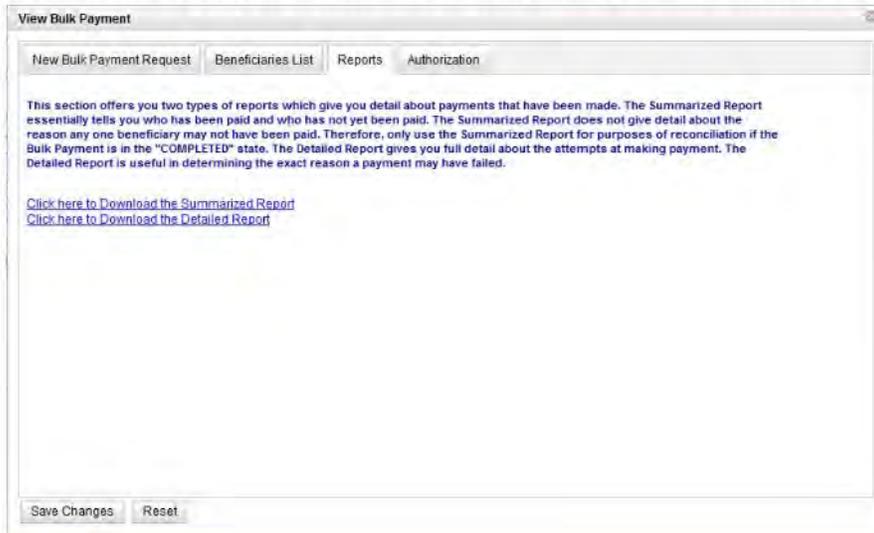
Cancel Bulk Payment?
You have requested to cancel this Bulk Payment. This action shall permanently stop the pay-out process and no further payments will be carried out.
Click **Yes, Cancel Payment** if you wish to proceed to permanently stop the pay-out process.
Otherwise, click **No, Don't Stop Payment** about this operation.

Yes, Cancel Payment No, Don't Stop Payment



3.8 DOWNLOADING REPORTS

You may download reports corresponding to a Bulk Payment Request by clicking the "Open" button adjacent to the Bulk Payment request, and accessing the "Reports" tab in the resultant Window.



Beneficiary Data Collection: Implementing Partners

Appendix 2.1 – Attendance Sheet for Trainings

NGO Organization Name _____
 Place of Activity _____
 Details of Activity _____
 Activity Starting Date _____ Activity Ending Date _____
 Name of Workshop Supervisor/Staff _____ Signature _____

	Participant Name	ID No.	Gender	District	Health Facility	Designation	Telephone	Signature
1								
2								
3								
4								
5								

Appendix 2.2 – Payment Sheet for Trainings

NGO Organization Name _____

Place of activity _____

Description of activity _____

Date of activity _____

Name of activity supervisor _____ Signature _____ Date _____

No	Participant Name	Mobile number	Network	Title	Location	Per Diem amount	Transport amount	Total amount to pay
1								
2								
3								
4								
5								
6								
7								

Payment Processing: Implementing Partners

Appendix 3.1 – Financial Model for Costs and Savings

Electronic Payments Transition Toolkit
Costing Utility Analysis
Contents
1. Costs of Non-Digital Payments
2. Costs of Digital Payments
3. Cost-Saving Analysis

Introduction & Analysis

Purpose
<p>Across the world today, USAID implementing partners disburse millions of dollars in cash payments each year. These payments include salaries, payments to vendors, payments to program participants, such as cash-for-work programs, emergency relief payments, and others. In 2012, USAID announced its commitment to encourage the evaluation and use of electronic payments (e-payments) in development programs including its own, as a member of The Better than Cash Alliance. USAID also has made the use of e-payments a priority in the Agency's Implementation and Procurement Reform.</p> <p>This Workbook is designed as reference tool and guide for organizations to conduct a comparative evaluation of the non-financial and financial costs of using physical cash and e-payments in their programming and administration. The tool suggests categories of costs that organizations may incur in using cash and e-payments. Organizations are encouraged to expand and modify the categories to fit a program's profile. The Workbook also provides an analytical framework for organizations to compare the identified costs of cash with the costs of transitioning and using e-payments.</p>
Definitions
<p>Non Digital Payments: Program related payments made using physical cash or checks.</p> <p>Digital Payments or e-payments: Program related payments made using an e-payment process and not by use of physical cash or checks. Examples include bank transfers (AFT), credit or debit card payments, and mobile money.</p>
Instructions
<p>Cost-Saving Analysis tab: An organization will need to collect and input the quantifiable costs of using cash payments and e-payments to complete the Cost-Saving Analysis worksheet. This worksheet is designed to evaluate average costs on a monthly basis but can be modified to meet an organization's program needs. In order to complete this sheet:</p> <ol style="list-style-type: none"> 1. Identify whether the expense is non-digital or digital in columns A and F. Columns A through E should be used to capture non-digital costs and columns F through J should be used to capture digital costs. 2. Using the tabs titled 'Costs of Digital Payments' and 'Costs of Non-Digital Payments', identify the Cost Type that best captures the type of cost you are quantifying. 3. Document the cost of the specific expense in UGX. This amount in USD will automatically calculate based on the value entered under UGX in columns C and H. 4. Include a detailed description of the event or occurrence related to this expense. 5. Continue documenting each expense related to both digital and non-digital payments. Once completed, the Cost-Saving Analysis tab will produce a summary of costs of using cash payments or e-payments in the program being evaluated.

Costs of Non-Digital Payments

Financial Model for Digitizing Payments: Costs (Non-digital)

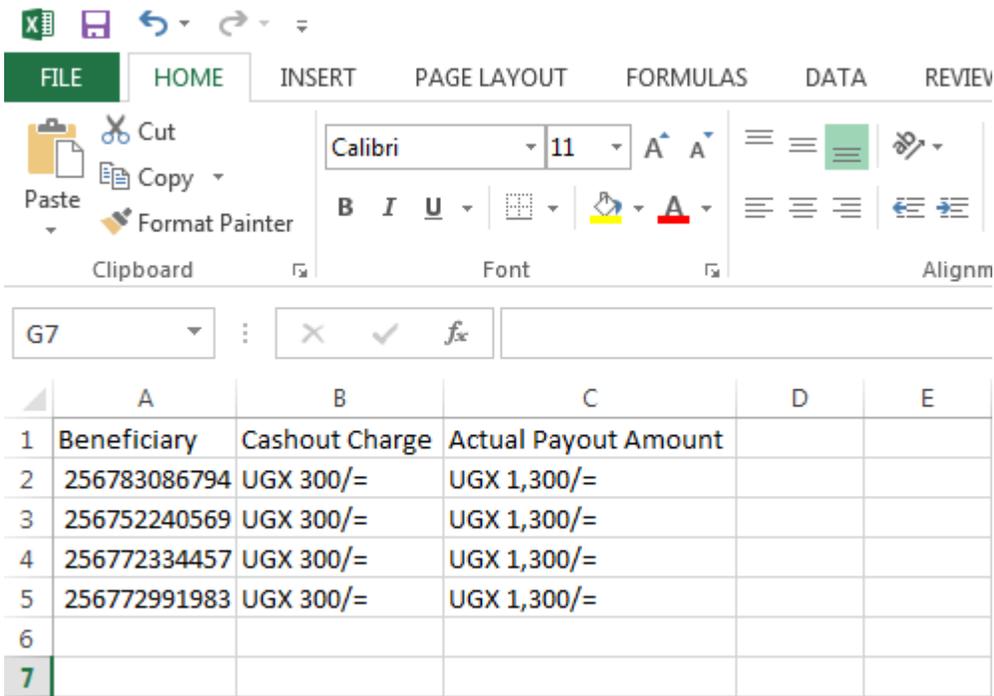
Cost Type	Description
Cash payments: Couriers	Amount paid to individual(s) who transport money to trainings, excluding per diems
Cash payments: Per diems for staff travelling to field	Total value of per diems made to individual(s) traveling to the field
Cash payments: Accomodation for staff travelling to field	Total value of hotel or other overnight accomadations made for staff traveling to the field
Cash payments: Transportation for staff travelling to field	Total value of transportation (gas for motorbike or bus ticket, for example) for staff traveling to the field
<i>Cash payments: Cost of having staff out of office</i>	Additional costs from having core staff in the field. For example, if another staff member needed to work 2 additional hours in a given week to make up for the absence of staff member in the field, please include amount paid to the staff member who remained in the office for the additional 2 hours.
Cash payments: Vehicle hire to distribute money in field	Total cost of vehicle hire used to transport money in the field
Cash payments: Fuel for vehicle to distribute money in field	Total cost of fuel for vehicle used to transport money in the field
Cash payments: Driver	Total cost of driver for vehicle used to transport money in the field
<i>Cash payments: Loss due to fraud</i>	Value of funds lost due to fraud
<i>Cash payments: Loss due to theft</i>	Value of funds lost due to theft
Cash payments: Insurance)	Cost of insurance against theft
Cash payment: Security company fee	Cost of hiring a security company to accompany staff travelling to field with cash
Cheques: Travel to bank	Total value of transportation (gas for motorbike or bus ticket, for example) to bank to withdraw cash
Cheques: Courier charges	Amount paid to individual(s) who transport money from the bank, excluding per diems
Cheques: Head office processing	Amount paid to head office staff for processing payments
Cheques: Field office delivery	Cost of delivering cheque to field office
Cheques: Travel to bank	Total value of transportation (gas for motorbike or bus ticket, for example) to bank to cash cheque
Banks: Transportation costs to bank	Total value of transportation (gas for motorbike or bus ticket, for example) to bank to withdraw cash
Banks: Transfer charges	Bank transaction costs

Costs of Digital Payments

Financial Model for Digitizing Payments: Costs (Digital Payments)

Cost Type	Description
Mobile payments: Bulk payment charge	Payment charged by mobile network operator to make bulk payment
Mobile payments: Withdrawal charge	Withdrawal fees charged by mobile network operator to withdraw funds
Mobile payments: Technology bought	Total cost of technology or software purchased in order to make bulk payments
Mobile payments: Aggregator charge	Total cost of fee charged by aggregator to execute bulk payments
Mobile payments: Additional staff	Total cost of salaries for additional staff hired to manage and facilitate digital payments
Mobile payments: Purchase of phones	Total cost of phones purchased for organization staff or field officers to facilitate digital payments
Mobile payments: Purchase of SIM cards	Total cost of SIM cards purchased for organization staff or field officers to facilitate digital payments
Mobile payments: Beneficiary costs: Transport costs to agent	Total value of transportation (gas for motorbike or bus ticket, for example) for staff or beneficiaries traveling to agent to withdraw funds

Sample Breakdown of Bulk Payment

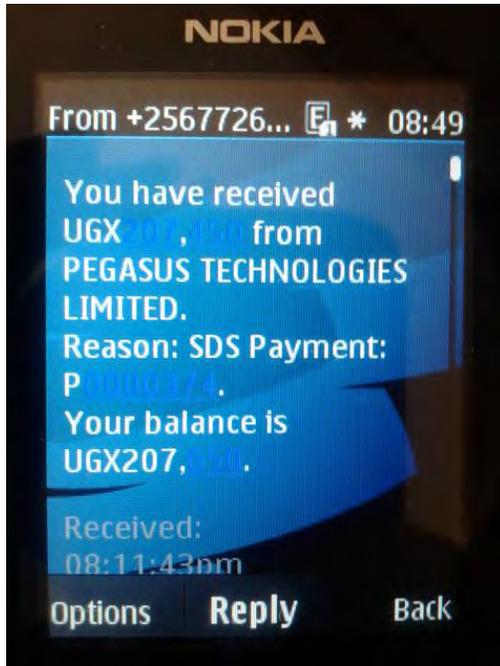


The screenshot shows the Microsoft Excel ribbon with the 'HOME' tab selected. The ribbon includes options for Clipboard (Cut, Copy, Paste, Format Painter), Font (Calibri, size 11, Bold, Italic, Underline, Color, Background Color), and Alignment (Left, Center, Right, Indent, Decrease Indent, Increase Indent). The active cell is G7. The spreadsheet data is as follows:

	A	B	C	D	E
1	Beneficiary	Cashout Charge	Actual Payout Amount		
2	256783086794	UGX 300/=	UGX 1,300/=		
3	256752240569	UGX 300/=	UGX 1,300/=		
4	256772334457	UGX 300/=	UGX 1,300/=		
5	256772991983	UGX 300/=	UGX 1,300/=		
6					
7					

Payment Processing: MNOs

Appendix 3.3 – Screenshot of Message Sent to Beneficiary Phone



Payment Processing: Aggregators

Appendix 3.4 – Bulk Payment E-mail Notification

From: PEGPAY PAYMENTS INTERFACE [<mailto:pegasustechug@gmail.com>]

Sent: 29 January 2014 15:14

To:

Subject: PEGPAY INTERFACE PAYMENT PROCESSED

Hello <name of approver>,

A payment has been processed by <name of verifier> and is pending approval

Payment BatchNo: [29012014-110](#)

Reconciliation and Issue Resolution: Aggregators

Appendix 4.1 – Sample Report

Batch Number	Contact	Beneficiary Name	Amount	MNO Fee	Aggregator Fee	Withdrawal Fee	Payment No	Date	Network	Status
26102013-1	256795925000	OKITO STEVE	100,000	390	130	1750	P00001	11/1/2013	MTN	SUCCESSFUL
26102013-2	256759678944	NYAMBA JAMES	100,000	390	130	1750	P00002	11/1/2013	MTN	SUCCESSFUL
26102013-3	256759678945	ARANYA GRACE	100,000	390	130	1750	P00003	11/1/2013	MTN	SUCCESSFUL
26102013-4	256759678946	SEBUSI JOE	100,000	390	130	1750	P00004	11/1/2013	MTN	SUCCESSFUL
26102013-5	256759678947	MUSCAT AGNES	100,000	390	130	1750	P00005	11/1/2013	MTN	SUCCESSFUL
26102013-6	256759678948	GALISA MOLLY	100,000	390	130	1750	P00006	11/1/2013	MTN	SUCCESSFUL
26102013-7	256759678949	BORGA PIPPA	100,000	390	130	1750	P00007	11/1/2013	MTN	SUCCESSFUL
26102013-8	256759678950	NYAMBA STEVE	100,000	300	130	1750	P00008	11/1/2013	Airtel	SUCCESSFUL
26102013-9	256759678951	OKITO AGNES	100,000	390	130	1750	P00009	11/1/2013	MTN	SUCCESSFUL
26102013-10	256759678952	SEBUSI DEO	100,000	390	130	1750	P00010	11/1/2013	MTN	FAILED - Unregistered
26102013-11	256759678953	MUSCAT DENIS	100,000	300	130	1750	P00011	11/1/2013	Airtel	SUCCESSFUL
26102013-12	256759678954	OKITO MARK	100,000	300	130	1750	P00012	11/1/2013	Airtel	SUCCESSFUL
26102013-13	256759678955	BORGA MARY	100,000	390	130	1750	P00013	11/1/2013	MTN	SUCCESSFUL