

MicroSave Briefing Note #159

The Safaricom M-PESA Pilot Test

David Cracknell

May 2015

There are many success factors for Safaricom's M-PESA, these include that Safaricom held a dominant position in the Kenya mobile market; that it was already a trusted household name; that the regulator enabled a mobile network operator model in Kenya to offer digital financial services; and that Kenya already had high levels of literacy, numeracy and mobile coverage.

Safaricom innovated around agency management mechanisms and quickly developed linkages with the banking sector to facilitate float management. Much more could and, indeed has been, written about the conditions for success enjoyed by Safaricom.¹ However, one of the least recognised success factors was the careful pilot testing of the M-PESA solution. This took place for an eighteen month period prior to the commercial launch of M-PESA in 2007.

Pilot testing within financial services means different things to different people, so in this Briefing Note it is important to differentiate between pilot testing from a technical or systems perspective and an operational pilot test. A systems test is used to ensure that all systems are operational and perform as expected. A limited internal pilot test uses staff members to test the functionality of the solution at a low usage level. Under an operational pilot test for a limited period the solution is tested with actual customers, within a defined geographic area.

Contrary to some perceptions M-PESA was not the first mobile payment solution, others operating in the Philippines and in Zambia had already operated for years and were, at the time, considered successful. So Safaricom could simply have copied Celpay in Zambia, or Smart or G-Cash in the Philippines. It didn't. Instead it chose to develop a solution for operation within a microfinance institution, Faulu Kenya. The intention was to enable the microfinance institution to accept loan repayments through mobile payments. The pilot test took place in Mathare a slum in Nairobi and Thika a town 50km north of the city.

In developing its systems, Safaricom carried out internal tests with amongst staff to test systems, and technology, and then tests with small numbers of market traders in Nairobi to test the interface and usage patterns. However, a longer pilot test was established to carefully study operational issues, such as adoption - could the solution be used by those with relatively low levels of education and literacy - as was more common in Mathare? Under the pilot test Safaricom supplied

low technology handsets to selected groups of Faulu Kenya customers; teams from Faulu Kenya, Safaricom and *MicroSave* taught group members how to use M-PESA and in many cases how to use their new phones. Work was slow but important. The pilot test revealed the importance of:

- a) **Simplicity:** Users needed to have very simple menus on their phones. Menus were simplified and retested.
- b) **Materials:** Faulu customers benefited from simplified pictorial explanations on use of the solution.
- c) **Handset:** The solution needed to operate on the lowest level of available handset if the mass market was to be reached.



The test continued. The Safaricom team moved on to developing agents through whom customers in Mathare or in Thika could load value on their solution. A limited number of agents were selected. It was found that agents were very important in explaining the solution to customers, but that they also required assistance. A telephone helpline was created, and a list of frequently asked questions was developed, and tested, and so a further lesson was learned:

➤ Agent Support

Agents need careful training and support to be effective and they need to be encouraged to be part of the communication mechanism with existing and potential users.

Safaricom carefully studied data from the pilot test. Unusual transactions were observed and the pilot test team then followed up with individual customers to

¹See for example: [Why M-Pesa Outperforms Other Developing Country Mobile Money Schemes](#); [Why M-Pesa Is Hugely Successful in Kenya and Less so Elsewhere](#) and [M-PESA: Mobile Money for the "Unbanked" Turning Cellphones into 24-Hour Tellers in Kenya](#)

trace the reason for the transactions. It was soon observed that some customers coming from Thika to Nairobi were using M-PESA to keep money safe, other customers were transferring value between themselves, sometimes to facilitate loan repayments or to settle personal debts. *MicroSave* ran focus group discussions and what would now be called human centred design sessions to understand the “use cases” that the pilot-test customers had found.

➤ **Customer Value**

The value of M-PESA to Safaricom customers' could not be assumed. However, it could be observed, and once observed it could be communicated back to customers.

For Faulu Kenya, the M-PESA pilot test was also very important. It demonstrated that making mobile money work for loan repayments was not going to be easy. Faulu Kenya had manual record keeping, which had been working for them for many years. However, contrary to expectations, M-PESA did not reduce the level of record keeping required, it increased the work load for the group Chairman, Treasurer and Secretary. There were multiple reasons for this.

Firstly, not all customers would repay their loans through M-PESA, so two sets of records needed to be kept and reconciled. Secondly, during the pilot test customers replicated their existing practices of repaying their loans through others – in this case, through other group members M-PESA lines, thereby creating a need for additional back office entries. Thirdly, if mistakes were made by group members in making the transfer then suspense account entries would be created which would need to be cleared.

➤ **Customer Training**

Using mobile money for repayments involved developing training for customers and would involve re-examining and designing new procedures to support loan repayments.

As the pilot test progressed Safaricom became aware with the difficulties faced by Faulu Kenya that the business case for agents would be difficult to sustain through loan repayments alone; but that in the Kenyan context person to person remittances were very attractive. This was particularly the case for split families where sons and daughters lived and worked in urban locations and parents lived in rural areas. So Safaricom's launch messaging was born – ‘*Send Money Home*’.

➤ **Customer Value Proposition**

A core customer value proposition needs to be developed and explained in terms which are relevant to the core customer market.

As the pilot test progressed further, Safaricom discovered that agents were facing a number of

challenges the first was holding sufficient float for transactions to happen; the second was that despite training agents often required re-training when the person handling M-PESA transactions moved on. So the M-PESA team began to develop mechanisms to monitor agents, this included rule of thumb mechanisms for judging the liquidity that was required based on transaction volumes in the location. They learned that agents could manage float by sending money between themselves, so they developed a requirement for agents to apply as groups of agents.

➤ **Agent Monitoring**

It is extremely important to monitor agents and to develop mechanisms to help agents manage their float.

As can be seen from the lessons learned from it, the pilot test was vital to Safaricom in multiple respects. It enabled Safaricom to polish the customer value proposition and critically to communicate this proposition to potential customers in clear concise and client friendly language.

It highlighted the importance of agents in customer communications. It enabled Safaricom to develop and test the support mechanisms it required to scale up the solution. It flagged areas of difficulty with the SIM toolkit – for example the inability to select payee from address books on customers' phones which led to future redevelopment.

However, unfortunately, the value and importance of operational testing and active lesson learning outlined in this Briefing Note was not fully and immediately recognised by those seeking to replicate M-PESA's success.

This was evident in the subsequent rollouts of M-PESA in other Vodafone countries, in Afghanistan for example, where the successful customer value proposition revolved around payment of remote salaries. The temptation was for Vodafone, and subsequently many others, to think that once ‘the solution’ had been discovered in Kenya, that this solution in its entirety was almost universally replicable in any market. This proved not to be the case. This lack of appreciation between the principles of mobile money and market specific practices continues to constrain the success of mobile money.

Furthermore, whilst exterior product features can be, and are copied easily, the management mechanisms underlying successful mobile money operation are only gradually being learned. [The Helix Institute's Agent Network Accelerator project](#) is designed to improve learning and documentation of these. Pilot testing remains as relevant to launching successful digital financial services today as it was for Safaricom in launching M-PESA.