

**MNS Consulting**  
Management – Technology – Engineering



**MOBILE MONEY:  
AN AFRICA SUCCESS STORY**

## 1. It's started as a frugal innovation

African mobile money story is known to have started in Kenya in 2007 when Safaricom launched its M-PESA solution for peer to peer money transfer. Before that, due to a low rate of banking, sending money to a relative could be a big issue. As counted by Nyagaka Anyona Ouko who claims to be the innovator of this solution, the idea came as a “Eureka” moment. Knowing that most people have a mobile and one can buy airtime to another, Ouko had the idea of setting a business to barter airtime against money.

Ouko's story starts in 2002, when he wanted to send money to his ailing mother in a remote village. Ouko faced limited methods of transferring the money and takes up the story: “The only legal way of sending money by then was through the use of Money Order or Express Money Order which were being offered by the Postal Corporation of Kenya. However those methods required that my mother had to travel some distance to pick up the money. I also had to find time and travel to the local post office where I could do the transaction.”

He continues: “The most popular way of sending money then was by bus. However one had to hang around the bus station for buses plying the upcountry routes. I come from Gesusu village and by then Kisii District, currently Kisii County. So I could hang around and on a good day find a fellow villager whom I could entrust with the money. On some occasions of course the money never got home.”

With this need in mind, Ouko had a “Eureka” moment and realized: “If I send to my mother some airtime, she could probably convert it to money somehow. This is because I had on occasions sent airtime before. This I could do by scratching the number, and read it to the person at the end of the line. The person could jot it down and then load it later.”

So he went on to arrange with a shopkeeper friend of him in his mother's village that he send him some airtime then he in return gives my mother some cash. The shopkeeper agreed and only charged him a 10 % “administration” fee.

With the agreement with the shopkeeper in his mother's village working smoothly, Ouko set out and started planning to roll out a similar method of money transfer across Kenya. The plan as he retells his story, was to have an agent in every town.

“The movement of the money was to be SMS based. The only security in the system by then was the number from which the message was coming from. So long as the agent knew the number used to send the message he went ahead and paid the money.” he said.

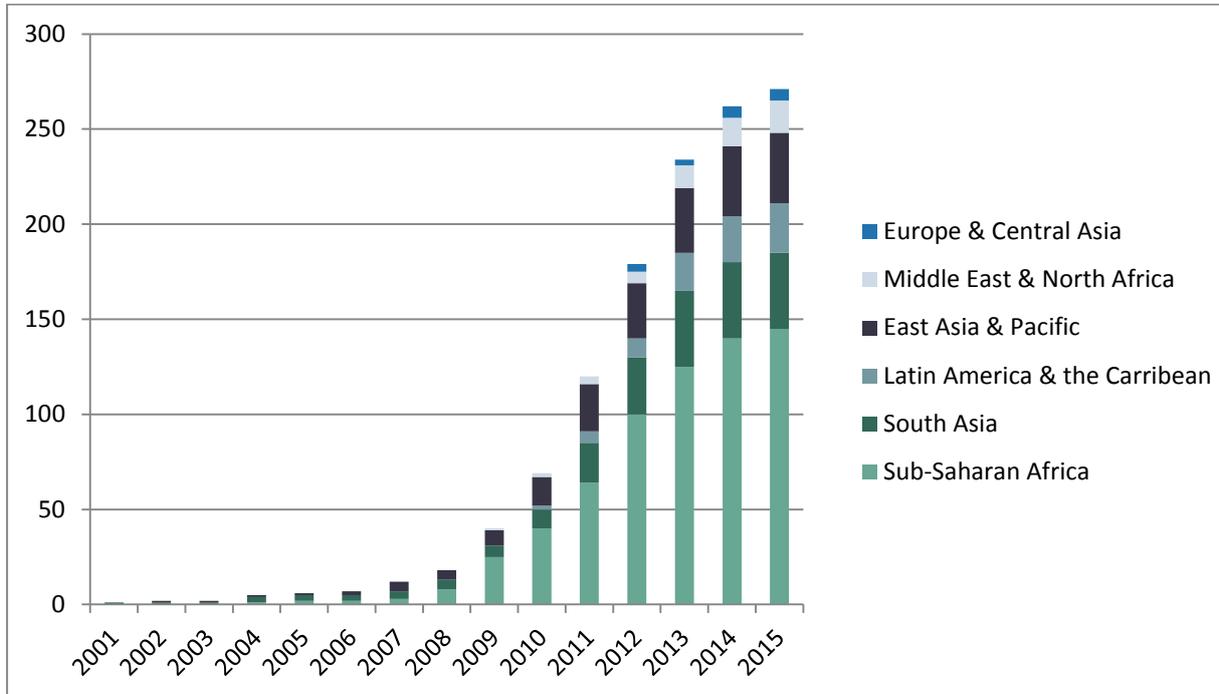
Source <http://mobilepotential.com/inspiring-story-of-mobile-money-transfer-innovator-part-1>

That's how phones became de facto electronic wallets. Safaricom and its parent company Vodafone, who were experiencing a microfinance service pilot, could have taken notice of this and also another user experience<sup>1</sup> and developed the M-PESA<sup>2</sup> solution that was launched in 2007 after 2 years of development and pilot.

<sup>1</sup> Another story counted by Safaricom/Vodafone for M-Pesa becoming the current mobile money service also show an innovation arriving as a solution to local money exchange issues. The other story says “It was a thief, in part, who unwittingly started one of the biggest revolutions in banking. In 2006, in a small village in Kenya, a woman had her bus fare stolen. She happened to be taking part in a micro-finance pilot named M-Pesa being conducted by the British government, Vodafone and Kenya's largest mobile network operator, Safaricom. The passenger's husband realised he could use the service to quickly transfer a small amount of money to his wife's phone as proof of payment for the bus ride”. <http://rachelbotsman.com/work/mobile-money-the-african-lesson-we-can-learn/>

<sup>2</sup> M-PESA stands for mobile and Pesa means money in swahi. So M-PESA means mobile money.

The service spread quickly and most African operators are now providing their “money” solution. This success story is due to a safe and quick money transfer solution to unbanked and underbanked people. As a result, early 2015 there were about 270 live mobile money services in more than 80 markets worldwide, half of them being located in sub-Saharan Africa.



**Fig 1: Number of live money services by region (2001 – 2015, year-end)**

Source GSMA Report 2015<sup>3</sup>

## 2. Competition in a growing payment ecosystem

Mobile money service is characterized by the following<sup>4</sup> criteria:

- Mobile money uses the mobile phone to transfer money and make payments to the underserved.
- The service must offer at least one of the following products: domestic or international transfer, mobile payments including bill payment, bulk disbursement, and merchant payment.
- The service must rely heavily on a network of transactional points outside bank branches and ATMs that make the service accessible to unbanked and underbanked people.

<sup>3</sup> [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR\\_2015.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR_2015.pdf)

<sup>4</sup> From the GSMA MMU group definition

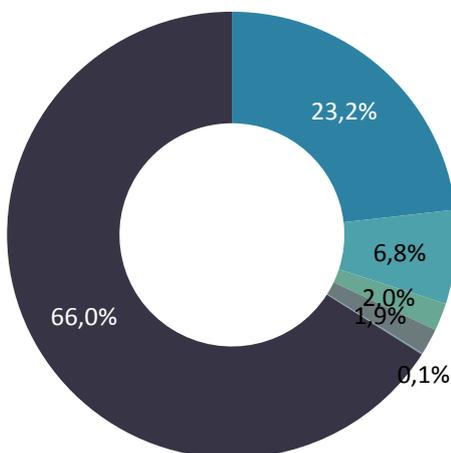
- Customers must be able to use the service without having been previously banked. Mobile banking services that offer the mobile phone are just another channel to access a traditional banking product and payment services linked to a current bank account or a credit card, such as Apple Pay and Google Wallet, and are thus not included.
- The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.

Common mobile money features are:

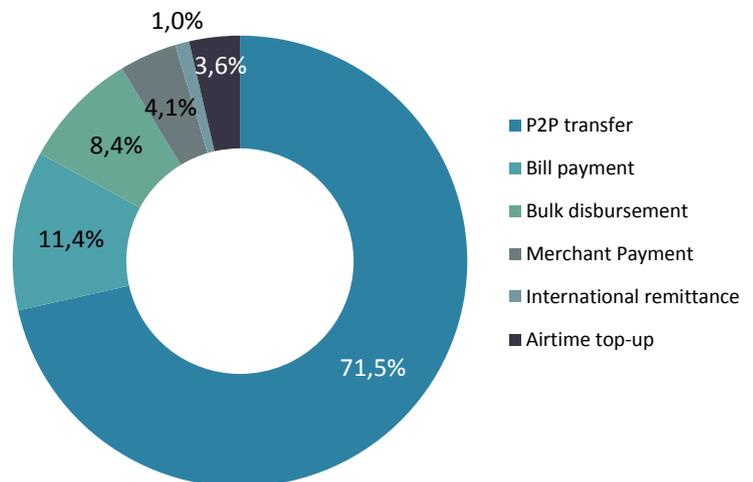
- Cash in and cash out
- Peer to peer (P2P) money transfer
- Voice (Airtime) and data top-up
- Merchant payment
- Bill payment
- International remittance

The following figures from the GSMA MMU group show that if in terms of number of transactions Airtime top-up is the first feature used by customers, in terms of value (total amount exchanged), P2P transfer is number 1. These two features dominate the service usage.

### Transaction volumes



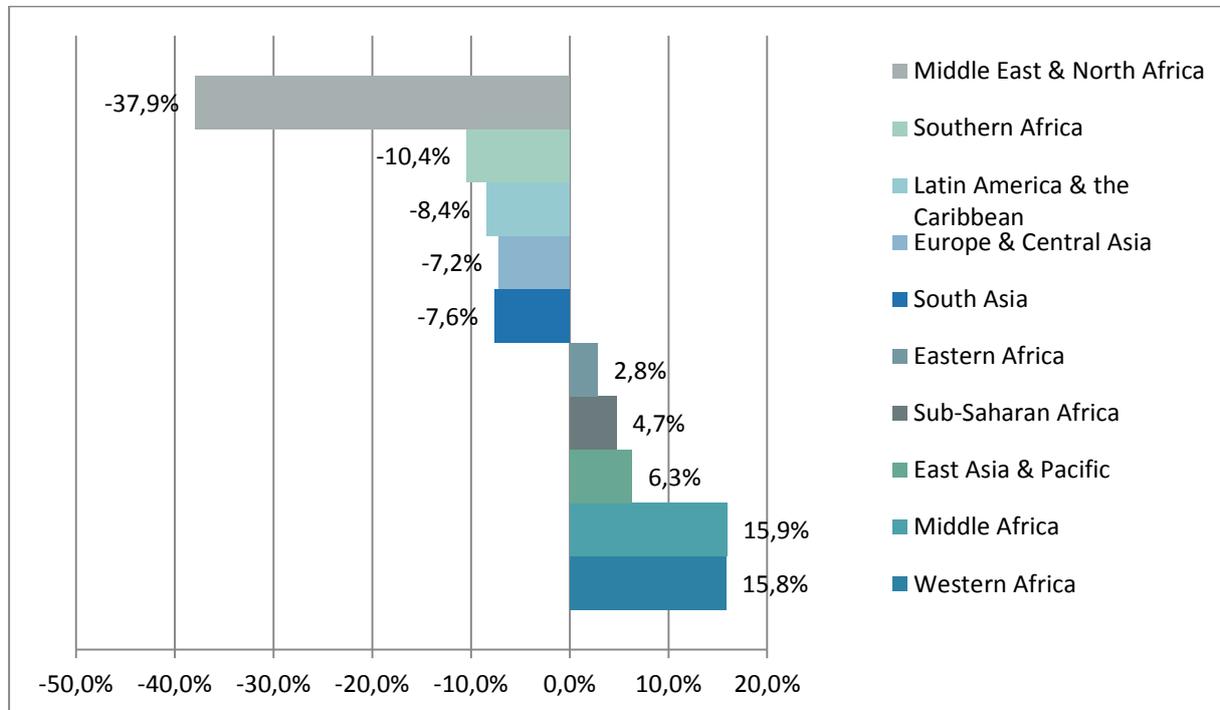
### Transaction values



**Fig 2: Global product mix by volume and value (December 2015)**

Source GSMA Mobile Money report 2015

Knowing the large amount of transactions and their value, mobile money is a very interesting business. Thus mobile money market has been fast growing in Africa (see figure 2 below from GSMA report 2015 about registered agents' growth).



**Fig 3: Difference in annual growth rates between active and registered agents, by region (December 2015)**

The figure 3 above illustrates where growth in active agents has exceeded or lagged behind growth in registered agents (*active growth rate minus registered growth rate*). A healthy mobile money metric is produced when the growth in active agents is equal to or exceeds the growth in registered agents. Sub-Saharan Africa is broken into sub-regions due to the wider availability and more regional variation in this particular continent.

As most regulators allow other third parties to provide mobile payment solution, a competition is ongoing between MNOs linked to banks and other electronic money service providers (for instance, see tab below presenting mobile money providers in Ivory Coast) increasing the number of stakeholders and offers in the mobile payments ecosystem.

Service name	Provider	Type	Launch date
Orange Money	Orange in partnership with BICICI Bank (BNP Paribas)	MNO	December 2008
MTN Mobile Money	MTN in partnership with SGBCI Bank (Société Générale)	MNO	December 2009
CellPaid	CellPaid	Electronic money provider	February 2011
Flooz	Moov in partnership with BIAO Bank	MNO	January 2013
Mobile banking	Qash services	Electronic money provider	November 2013

### Mobile money service providers in Ivory Coast in 2014

The mobile money ecosystem can be described as follows:

**Consumers:** they register and use common mobile money services. Mainly if it is a network operator offer. They may not need to register for single peer to peer transfer if the service is provided by an electronic money provider (non-mobile network operator). In this case only the agents are registered.

**Mobile network operators:** they provide all technological infrastructures (mobile network and service platforms) that allow mobile money services including notifications.

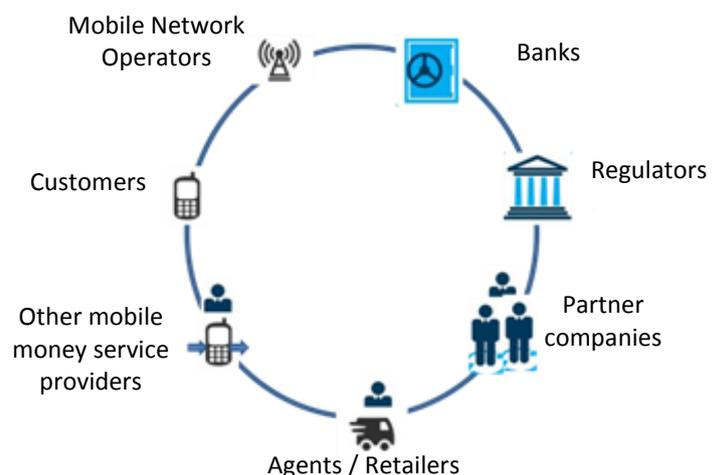
**Other mobile money service providers:** they don't operate mobile networks but have received regulators and central banks agreements to provide electronic money service. They need to use mobile networks infrastructures for notifications.

**Agents and retailers:** they usually facilitate cash-in, cash-out, peer to peer, top-up transactions by converting physical cash to mobile money and vice-versa; they handle account opening procedures and help educate consumers and maintain liquidity.

**Banks:** they facilitate bulk disbursements and assist with Anti Money Laundering and sanction screenings, protect beneficiaries' funds by holding actual cash in a trust account, and provide reports to regulators.

**Partner companies:** they interface with mobile money service providers to facilitate payments for their products: bill payments, wage payments, etc.

**Regulators:** they provide an enabling environment for mobile money, protecting the stability of the financial system and ensuring that regulations are implemented.



### 3. Trends and challenges

#### ✓ Continuing growth of the number of active agents and physical cash points

Thanks to easy interfaces generally by USSD or Sim Tool Kit apps menus, mobile money has been of easy access to most customers even to illiterate people who simply memorize the menu and the UX. But physical contact points with agents and retailers remain the primary mechanism for digitizing and disbursing cash. Thus, for all mobile money service provider with national (including rural areas) and international coverage, increasing the number of agents and retailers as mobile money usage entry point, is a key factor to business success and differentiation.

#### ✓ Cross boarder and inter-operator money transfers to grow

Several mobile network operators are developing intra-regional and cross boarder mobile money transfer. This is the case for Orange, Tigo, Airtel and Moov. The following corridors have been put in place:

- Tigo Tanzania and Tigo Rwanda
- Orange Côte d'Ivoire, Orange Mali, and Orange Senegal
- Orange Côte d'Ivoire and Airtel Burkina Faso
- MTN Côte d'Ivoire and MTN Benin
- MTN Côte d'Ivoire and Airtel Burkina Faso
- Moov Côte d'Ivoire, Moov Benin, Moov Niger and Moov Togo
- Safaricom Kenya and Vodacom Tanzania
- Airtel Zambia, Airtel Rwanda, and Airtel DRC

Orange has also recently launched its wallet-to-wallet remittances in France to target the mobile money-savvy West African diaspora.

As a matter of fact, international money transfers and inter-operator money transfers development are the next step for the market growth.

#### ✓ 3G/4G networks and smartphones generalization will increase customer engagement

3G and 4G network generalization combined to attractive data offers, and increasing smartphones usage will help mobile money applications development. Then the basic USSD menu or operators' SIM dependent menus would be progressively abandoned. Apps development is interesting because they will be a powerful tool to interact with a growing and changing customer base where providers are establishing strong customer engagement strategies.

#### ✓ A need for a more enabling regulatory context

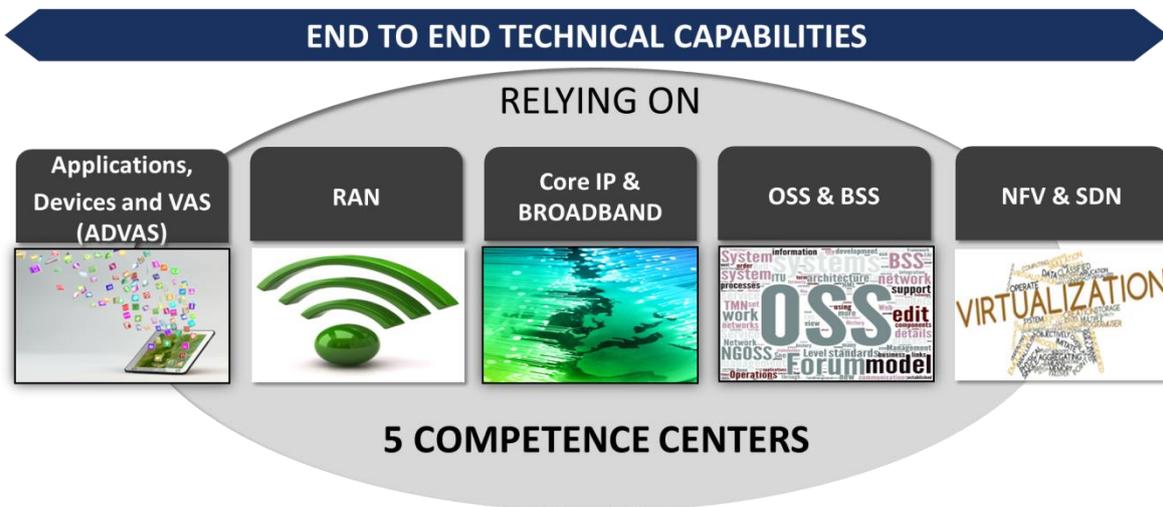
The GSMA reports that 69% of services launched in 2015 are operationally run by MNOs, and 58% of all live services are MNO hosted. This shows that the mobile money market is led by MNOs while banks and other financial companies are fighting for more market shares in the business. In this context, an enabling regulation is needed to allow an open ecosystem and market. This will allow the provision of more valuable services to unbanked people and lead to more financial inclusion. Example of such enabling regulation could be to facilitate for banks and other providers the access to operators' infrastructures (SMS-C, USSD, etc.) and the development of their own mobile money services. At the same time, it will be key to grant electronic money institution licenses to MNOs that would allow them to provide microfinance services. This will enhance and accelerate the access to financial services to unbanked while boosting the market.

In another hand, the need for international money transfer and the growth of this market faces a challenge which is to secure the approval of many central banks with different positions and approval processes, even in some countries that do not inbound remittances via mobile money at present.

## 4. About MNS

MNS Consulting is an international management and engineering consulting firm specialized in the telecommunications and digital industry. We distinguish ourselves with a strong combination of deep technological expertise and strategic vision that allows us to address the challenges of our clients. We are committed to delivering outstanding consulting services and highest value to our clients by helping them to drive growth, manage complexity, and improve operations and performance in a complex and fast changing market. Our engineering consulting capabilities are structured around the 5 competence centers below that allow us to have a full vision of the end-to-end network services management.

MNS is headquartered in Paris and has also operations in Africa and the Middle East.



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