BEST PRACTICES IN PROGRAM MANAGEMENT FOR CLOSED LOOP AND OPEN LOOP SYSTEMS

MOBILE FINANCIAL SERVICES

The mobile money industry is just about 6 years old and though there have been some success stories, these are few and far between compared to the number of deployments[1] around the globe and given the significant number of people that stand to gain from this convenient service. That said, the industry has had a fair amount of time on the learning curve and there is much to learn from current examples and market feedback[2]. Moreover, innovation has not tapered off and new developments are constantly being introduced. First movers and recent entrants are both vying to create optimal business models to gain traction and reach profitability. After all, one of the key success elements of a mobile money deployment is its ability to reach scale.

THIS GUIDE AIMS TO:

- Explain the necessary ingredients for successful mobile money program management and highlight certain best practices and pitfalls to avoid
- Explore how closed loop services can benefit from open loop systems and discuss key considerations when augmenting the former with the latter

** Please note that all through this guide, "mobile wallet" refers to a mobile money stored value account and "customer" or "client" refers to the end user of the mobile wallet and other products and services attached to the mobile wallet offering.*

[1] The GSMA 2012 survey on the status of mobile money reports 150 live mobile money services, 41 of which were launched in 2012 alone. Only 14 of these services are declared as "sprinters" and have grown quickly since launch.
[2] Out of the 14 sprinters that GSMA reports (see foot note 1 above), 6 services enjoy more than 1 Million active customers including 3 of them who reached this scale in just a year (between June 2011 and June 2012).

A. MOBILE MONEY PROGRAM MANAGEMENT

Introducing mobile money into one's organization can either be a bottom-up or top-down approach. Whether buy-in is solicited by intrapreneurs at an operational level or the management instructs an opportunity study on the subject, one thing must be achieved at least by the end of the business planning phase, and that is Management commitment. Mobile money is not just about a service being introduced among others, but rather a full-fledged business that necessitates engagement and investment, in terms of both time and money, right from key C-level management to other key internal stakeholders.

Each of the 14 sprinters that GSMA reports having a strong commitment from its CEO resulted in providing mobile money with the strategic focus that it needs. Out of the 14, 11 of them developed mobile money as a separate business unit and at least 8 of them have their mobile money heads reporting directly to the CEO.

✔ **Ensure that the intended mobile money business has the right level of management support and commitment.**

✘ **Treating the mobile money business as 'a small project' and neglecting the importance of management's strategic focus.**

Mobile Money Program Management typically involves three phases: Design, Implement and Manage. In each of these phases, specific tasks are carried out that prepare the project for the next phase of activities.

1. DESIGN → **2. IMPLEMENT** → **3. MANAGE**

1. DESIGN

a. Identification of the target client and the market opportunity
b. Review of regulatory framework
c. Product design and roadmap
d. Partner identification and roadmap
e. Distribution network design
f. Financial analysis and business plan

2. IMPLEMENT

a. Selection of a technology platform
b. Agent network rollout
c. Customer Acquisition
d. Pricing and Commission
e. Partnership negotiation and establishment
f. Marketing campaign strategies
g. Customer support set up
h. Organization structure and training
i. Process definition
j. Pilot launch

3. MANAGE

a. Performance evaluation & agent network management
b. Managing risk and fraud
c. Service expansion plan
d. Managing operations and ramp up

1. DESIGN

Getting things right from the very beginning is key. Correct assumptions and estimates in the design phase will constitute an important part of the backbone on which the mobile money service can be built, launched and effectively managed. The main tasks are described below:

a. Identifying the target client and the market opportunity

One of the starting exercises, often down-played by many mobile money providers, is carrying out certain market studies in order to understand the potential client need and the environment he operates in. This exercise helps develop relevant products and services that will provide the client with a strong value proposition when compared to the existing market offering.

Inspired by the success of M-Pesa, many mobile money providers have replicated a mobile-enabled domestic remittance product. But a more refined understanding of the purpose of that transfer and the underlying use case is necessary for the development of a meaningful product offering.

For example, enabling a breadwinner in a family to send money back home in rural Kenya is a different product/customer experience altogether when compared to enabling two small traders, living in opposite suburbs of densely populated Kinshasa to remotely settle business transactions.

1. DESIGN

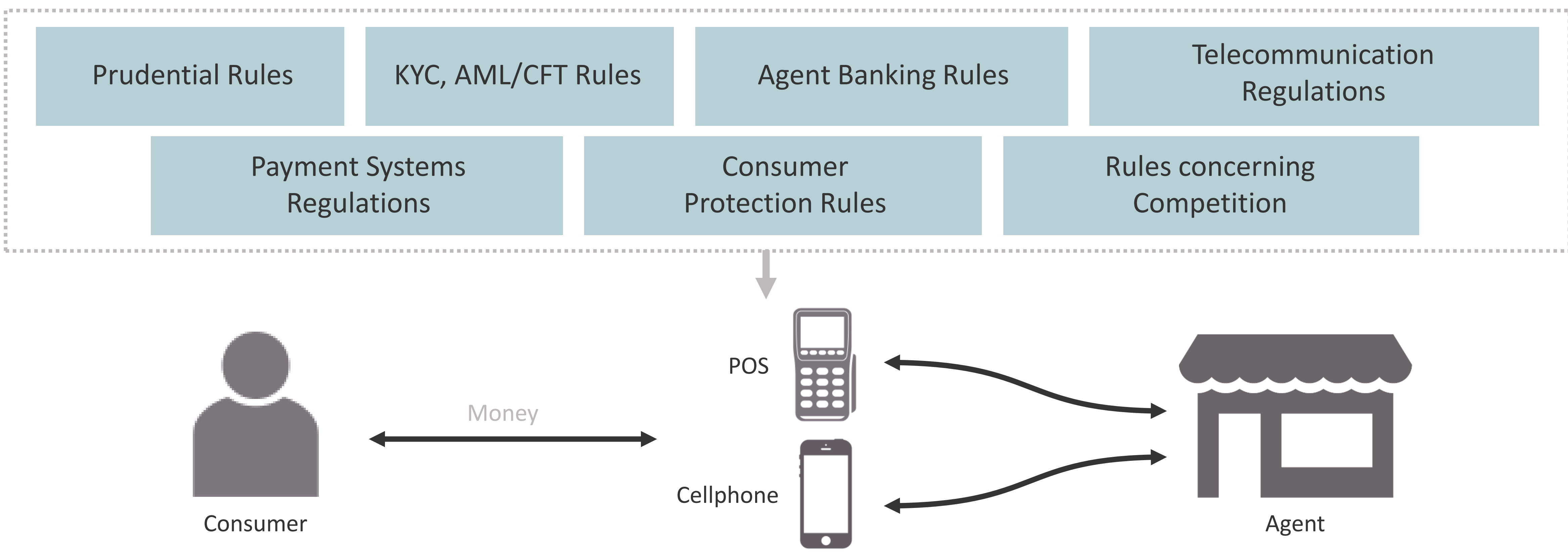
Experience to date shows that in many markets, offering a Person to Person transfer is not sufficient to build traction and create success. Therefore, exploring other consumer services such as bill payments, access to savings and credits, etc. is key and will require an in-depth understanding of customer needs and practices. In Colombia, for example, the design of a mobile-enabled savings product by one of the banks was built on a detailed understanding of how people manage cash at home: savings are generally informal, and managed per intended use (education, housing, unexpected unemployment/health issues, etc.). Furthermore, success may require exploring broader ecosystems to target Business to Business payments, Government to Person disbursements, bulk payments, etc. All these will require a detailed assessment of customer needs primarily driven by market research. As such, understanding the target client segments, their financial behavior, their needs and the existing competition in order to build the target product at the right price and offer it in the right place is the essence of the market study exercise.

Carry out detailed market studies to identify customer demand, analyze competition, evaluate market infrastructure and build a clear product/segment/channel matrix.

Apply one market offering to another market.

b. Review of regulatory framework and creating dialogue with the regulator

There are many regulations that orient the business model choices for mobile money services, as illustrated below:



It is essential to understand regulations and how they affect and determine possible business models. For instance, in Nigeria, regulations don't allow mobile operators to play a major role and require financial institutions to be responsible for the agents that they may use. In Ghana, regulations require financial institutions to share the agents that they set up. In Indonesia, until recently, the regulators had very strict rules around use of agents, stipulating that each mobile money agent had to get a separate license before being engaged by a mobile money provider. In Pakistan, Telenor buying a stake in Tameer Microfinance Bank and Mobilink buying Waseela Bank were also results of regulations in the country which stipulate that only financial institutions (i.e. Commercial Banks, Islamic Banks and Microfinance Banks) can offer branchless banking services.

All these regulatory specificities impact business model designs and business viability. It is therefore important that existing laws are thoroughly studied and understood. There are three main aspects that are critical to mobile money provision:

- Who has the right to issue mobile money: Can a non-bank entity do this? Under what conditions?
- How can the existing distribution infrastructure (like agent outlets or retail chains) be used by the mobile money provider to expand reach: What operations can be performed by these 3rd party entities? Under what conditions?
- What kind of KYC norms have to be followed when registering clients and what are the account and transaction limits for mobile money for products and services?

Dialogue with the regulators is essential, and it is important to understand where the regulators come from and what their concerns are in order to have a meaningful conversation and address them. It is also important to understand their limitations in terms of capacity. For instance, in Afghanistan, Roshan worked hand in hand with the regulator to define their reporting needs and design related dashboards.

The challenge is that regulatory dialogue and approvals are slow to materialize, often causing program timelines to stretch. Good program management, will account for regulatory approval timelines in the overall project planning and ensure that certain project work goes on while regulatory approval is being sought out.

- ✔ **Evaluate business model options in light of market regulations.**
- ✔ **Initiate and maintain dialogue with the regulators in order to adjust business model and offering accordingly.**
- ✘ **Interacting with regulators only when Design phase is done and project owners have defined the business model strategy.**

c. Product design and roadmap

Customer adoption is one of the main criteria for a successful mobile money project. Therefore, providing a "simple" and "easy to use" product or service is of utmost importance. This focus on customer experience is indispensable to facilitate customer behavior change and induce the adoption of the mobile channel for conducting financial transactions. Equally important is the practice of gradually introducing products and services instead of flooding customers with too many messages at once.

Examples:

- **In Pakistan, Easypaisa decided to start with an Over-The-Counter business model before gradually introducing customers to the mobile channel.**
- **M-Pesa, focused on one single 'send money home' message even though they had many other products available in the market.**

Based on market behavior and feedback, the mobile money provider should be flexible to make changes/enhancements to his offering. Hence it is important to design the product or service in a way that changes can be easily incorporated. For example, adding the option of remote registration for existing MNO prepaid subscribers so that they can request a wallet remotely (e.g. via SMS) and start using it subject to reduced transactional and account balance limits[3]. Furthermore, preparing a continuous pipeline of incremental product and service offerings targeting various consumer segments will help keep the momentum going and generate excitement in the market. Having a clear product/client segment matrix will help highlight and market key product/service attributes related to each segment. This will also help define the location/type of delivery channel for the identified products or services.

Finally, pricing the products and services should take into account the customer's perceived product value, revenue expectations and market competitiveness. This will contribute a long way to ensure that customers adopt the service while all stakeholders involved can make their respective margins and stay committed to grow the business.

- ✔ **Have simple, easy to use products and be flexible in product design.**
- ✘ **Having to input too many fields before the customer can validate the transaction instruction.**

d. Partner identification and roadmap

Bringing on board partners will either be necessary due to regulatory constraints or in order to encourage take up/ease of service. For example, in many markets (e.g. Pakistan, South Africa, Nigeria, Qatar, Columbia, Mexico, etc.) regulations stipulate that entities looking to provide mobile money need to have a banking license. In these cases, a non-bank mobile money provider is forced to partner with a bank. A bank, however, may want to partner with a mobile network operator in order to take advantage of its distribution network and its telecommunication infrastructure. Likewise, billers, governmental bodies or employers can bring on significant client/transaction volumes in one shot and add certain brand value to the mobile money service.

[3] This is usually possible in countries (e.g. in Qatar) where SIM registration process is streamlined and the regulator stipulates that KYC documents collected from the mobile subscriber at the time of SIM subscription is enough for a 'small' wallet. For increased transactional and account balance limits, the customer will need to provide additional documents necessary for a full KYC and register, at an agent outlet/MNO shop, for the 'upgraded' wallet.

Strategic partners can largely impact the fluidity, take-up and scale of the mobile money service. Building an extensive pipeline of partnerships in all possible sectors, especially in those that cater to the target/mass clientele (like microfinance sector, utilities, etc.) is very important because of their business activity and customer base which is most relevant to mobile money.

Example: The recent success of M-Shwari (a virtual banking platform that allows Safaricom subscribers to operate savings accounts, earn interest on deposits and borrow money using their mobile phones), is built on the basis that the product fulfills core business objectives of the two partner entities involved: Safaricom and Commercial Bank of Africa.

Determining the right partner is key. There has to be a strong alignment of strategic interests between the mobile wallet provider and its partners, particularly when it comes to a Bank-MNO partnership. It is equally important to correctly evaluate the value each partner brings to the table and the potential costs/commissions that will be associated.

- **Ensure there is a strong alignment of common objectives and strategic interests with the partner.**
- **Build partnerships with companies who are in touch with the target client and who bring on large transaction volumes.**

e. Distribution network design

Designing the distribution network for mobile money service is complex. The distribution network is the client facing entity of the mobile money service and therefore, it needs to be efficiently located, well trained, adequately equipped and sufficiently supported to ensure quality performance. It is important to focus on the agent life cycle right from the beginning. Therefore, while identification and selection of agents is important, equally important are agent reward, agent retention and agent management/monitoring systems.

Leveraging existing infrastructure in the country is a sure way of penetrating the desired market with a lower level of investment[4]. While mobile money providers can use existing main dealer outlets, merchant outlets, retail chains, etc., as part of their distribution network, an appropriate hierarchy structure should be envisioned in order to ensure support, control and monitoring of operations.

It is also important that the initial structure put in place be scalable. Care must be taken to ensure that the network design allows enough room for flexibility and change in the implementation and operational phases of the program, if required. This area will require significant investment and it is important to have it properly thought through in the design phase.

Most agent networks that have been around for a while see their structure changing over time in order to adapt to evolving market and customer contexts. The example of the design of Safaricom's agent network and its evolution is an excellent illustration[5].

March to December 2007	Early 2008	2008 to 2009	Late 2009 to April 2010
• 400 airtime distributors carefully chosen to act as agents under certain controls • 1200 agents as of Dec 2007	• Allowed more smaller airtime dealers to be agents to keep up with customer numbers • Engaged marketing firm Top Image to help train and monitor agent compliance on liquidity, signage, and related matters affecting the customer experience	• A number of agents were sub-contracting with 3rd parties, allowing them to be agents (privately negotiated commission) • Entrepreneurs with several sub agents, called themselves aggregators • Safaricom allowed this to occur under tacit approval and by mid 2009 enjoyed a coverage by 10000 agents, 50% of whom were sub-agents • However, given that rules weren't standardized across sub-agents, a number of issues like lack of training, lack of float, poor branding, etc. was experienced	• Reasserted more control over its agent network and announced that each sub-agent must have a direct contractual relationship with Safaricom • The number of M-PESA agents continued to grow but M-PESA monitored agents carefully and enforced stricter measures to eliminate those that do not meet standards • Started building up further agents through existing retail chains like supermarkets

[4] CGAP estimates that channel set up costs can reduce drastically by leveraging on existing infrastructure in the market. For example, setting up a traditional bank branch is estimated to cost 250 K USD while an agent with a POS connection costs 2 K USD and an agent equipped with a mobile wallet solution costs 400 USD.
[5] Source: http://www.cgap.org/blog/no-single-recipe-when-structuring-agent-networks

1. DESIGN

Similar to its engagement with the marketing agency Top Image (see graphic above), Safaricom uses several other Agent Network Managers (ANMs) to manage, support and control its agent network. It uses hundreds of agent aggregators to help sign up agents and manage liquidity. It has also signed up six banks with extensive branch networks in Kenya to act as 'Super Agents' and help agents in the vicinity manage their liquidity[6]. This distribution network design has proved to be one of the reasons why M-Pesa has been so successful. As of June 2013, Safaricom has a total of 45,540 agents nationwide[7].

✔ **Be flexible in agent network design in order to make adjustments according to market feedback.**

f. Financial analysis and business plan

The financial analysis and business planning exercise should provide appropriate visibility to all internal stakeholders regarding what CAPEX and OPEX investments need to be made. All needed infrastructure, like technology platform, agent equipment, new recruits for the mobile money team, material for marketing campaigns, etc. must be incorporated into the business plan. As such, this exercise should be based on realistic projections and must take into account all aspects of the intended ecosystem (such as partners, agents, biller companies, etc.) and the intended service proposition (what products, at what estimated volumes and price, etc.), including commissions payable, balance sheet implications for banks or customer retention implications for a mobile network operator.

It is important to capture the revenue and cost implications for each stakeholder in the value chain. Financial analysis is essential to understand not only the business opportunity but also how all business partners / value chain participants are going to benefit from it. This will also enable detecting potential anomalies at an early stage (e.g. agents not making enough commissions, etc.).

The final objective of this exercise is to provide project owners with visibility on the project size, the needed investment, level of profitability and also a fair idea of what is at stake for the overall company and its core business (e.g. brand reputational risk should the project fail). It must allow for best case and worst case scenarios so that project owners can make informed decisions.

A good business plan will enable project owners to measure impact of certain strategic decisions that may be taken and select the best way forward in order to achieve optimum results both on the market and on the bottom line.

✔ **Carry out a detailed and comprehensive business plan exercise based on realistic estimates to enable project owners to make informed decisions.**

✘ **Grossly over estimating or underestimating project take up to result in an unrealistic business plan and therefore unrealistic investment versus profitability ratios.**

2. IMPLEMENT

Once the strategic decisions are taken based on a detailed and efficient Design phase, the implementation phase of the project can begin. This phase is the most challenging and it also takes more time, more cost and more resources when compared to Design and Manage phases. The mobile money program manager will have to manage a lot of challenges and mitigate risks especially related to technology, distribution, marketing and partnership streams which will require excellent coordination and collaboration between various teams and partners. A good implementation will ensure that Design phase strategies are translated correctly while Capex and Opex are controlled. Following are the main tasks:

a. Selection of Technology platform

Based on current trends of mobile money implementations, technology platform development can be a choice between buying, building or outsourcing. For the purposes of this guide, we will focus on the first option since the latter two have either not reached scale or are too new to proclaim success.

[6] Article "How Agent Network Managers Have Fueled Mpesa's success"
http://www.cgap.org/blog/how-agent-network-managers-have-fueled-m-pesa%E2%80%99s-success
[7] Article "Equity Bank takes on Safaricom's M-pesa with new money transfer service" dated June 11 2013, quoting Mr. Bob Collymore, Safaricom chief executive officer "We have actively increased our number of M-Pesa agents by 6,000 over the last few months, closing at 45,540 agents nationwide."

The technology platform selection should undergo an efficient RFP process so that all vendor propositions are evaluated based on a set of pre-defined criteria. It is recommended to select a product that is mature with at least 3 previous rollouts in similar market dynamics. This determines the stability of the platform, hence an indicator of a stable business. It is also of supreme importance that the vendor provides a high level of support to the mobile money business. In most cases, issues faced with platforms have been around the vendor not supporting the product roadmap within stipulated timelines, providing weak level of responsiveness, weak technical support teams, etc. Other considerations are:

- The technology platform should be configurable and extensible. For example, adding a confirmation step or adding a new parameter should be a configurable change not a heavy system development.
- Focus should also be on choosing a product that has the lowest possible Capex and Opex without compromising on the product quality.
- User interface and customer experience are important parts of the platform evaluation.
- The system must have open APIs which can be used to connect third parties to the mobile money platform.
- Last but not least, all operations must be backed-up by an efficient disaster recovery system.

Collaboration and coordination with all the teams involved is very important in order to ensure that the business requirements are correctly translated into the technical system functionalities, with no loop holes.

✔ **Select a technology platform that is mature, robust, scalable and flexible; also ensure that the vendor is capable of providing efficient support to the mobile wallet team.**

✘ **Having a vendor selection process that is not streamlined and with no official RFP or careful evaluation.**

✘ **Allowing technical platform/solution constraints to largely impact user experience of the product/service.**

b. Agent network roll out

As discussed earlier, the agent is the primary contact point for the client. Therefore, standards must be set from the beginning while identifying and selecting the agent outlets that form part of the mobile money distribution network. These outlets must be strategically distributed according to their catchment area, business activity, community reputation, etc. in order to have the maximum reach and impact. Correct due diligence must be performed to ensure that the agent is 'serious' and will uphold the processes and functioning of the mobile money supply chain. All the processes of contracting, management, SLA, etc. that are used for the agents must be well documented.

Developing sales incentive programs for distributors and agents that educate them on the program and encourage them to register is vital for them in turn to encourage consumers to register and use the service. This can often make a huge difference in the overall success of the program since agents, if efficiently incentivized, act as sales ambassadors for the program.

Care must also be taken to assist the agent with initial capital and overall liquidity management. An easy and quick process must be established for agents to be able to deposit and withdraw money, so that they do not run out of physical cash or m-money when the client demands it.

Training is another very important component of the agent roll out process. Agents must be educated and trained on: the basics of the products/services offered and related processes, relevant mobile money equipment, systems and how to use them, KYC rules and how to identify suspicious clients/transactions, good liquidity management techniques and how to provide adequate support to the end user.

While any retail outlet can be an agent, partnering with a retail chain can bring on board multiple agents at one shot and if efficiently trained, monitored and managed, they will be very valuable to the business. As discussed earlier, care must be taken to ensure that a robust agent hierarchy structure is put in place right from the initial roll out stage. This structure should have enough flexibility for improvement/changes should the need arise.

✔ **Identify, evaluate, select, educate, train and incentivize agents in a way that they ensure they will be brand ambassadors for the mobile money service; document the agent lifecycle flow in detail.**

✘ **Carrying out agent roll out activities without understanding the agent life cycle and without properly documenting the process, key tasks, contracts to put in place, etc.**

c. Customer acquisition

There are many key ingredients to make customer acquisition a smooth process. These are:

- The customer should be made aware of the service and must perceive value in it. The value proposition must be clear and easy for the customer to understand. This can be done by limiting the number of products at launch and carrying out effective marketing (see "Marketing campaign strategies" below).
- Registration processes should be easy, streamlined and rapid. Many times, customers require hand-holding to understand the documents needed and what information to fill out on registration forms. Field registration camps can be organized to aid the process while educating the customer on the service.
- It is equally important to activate the account and enable customer usage immediately after registration. This will help drive customer usage.
- User experience should be good and adapted to the market context. For example, in some markets, like Pakistan, where there is a high rate of illiteracy, mobile wallet providers chose to provide over-the-counter services where mobile money agents perform transactions on behalf of the customer.

A good customer acquisition and first usage experience will create positive word-of-mouth publicity for the service and this in turn will incite more customers to register for the service.

As stated earlier in the Design phase, it is very important to understand the real pain points and customer need before deciding on the type of product to offer in a given market. For example, while many of the 14 GSMA reported sprinters have opted for a Person to Person transfer product, others have pushed bulk payments, merchant payments or bill payments thereby depicting that the launch product offering highly depends on the market context and customer demand. It is also important to limit the initial product offering to one or two core products rather than a broad range of products. Lastly, in order to efficiently drive customer adoption, the whole supply chain of the business model should be in place and equipped to accept cash-in, transaction instructions and cash outs.

In order for increased customer adoption, product offering and the supply chain infrastructure must be adapted to customer needs in that specific market. For example, many Gulf countries have significant percentage of migrant blue collared workers who send most of their monthly earnings back to their families in their home country for education, living expenses, etc. In Qatar, for instance, money sent represents ~80% of total monthly earnings. While it will make sense to launch a mobile wallet service with a competitive international remittance product, equally important is the choice of corridors that need to be set up. The corridor choice will highly depend on the origin country of majority of the workers.

✔ **Ensure sufficient hand-holding/education to the customer during registration and first usage of the service.**

✔ **Ensure product is adapted to customer need and supply chain is ready to handle relevant transactions.**

✘ **Depending entirely on the agent network to register customer especially at the initial launch phase of the service.**

d. Pricing and commission

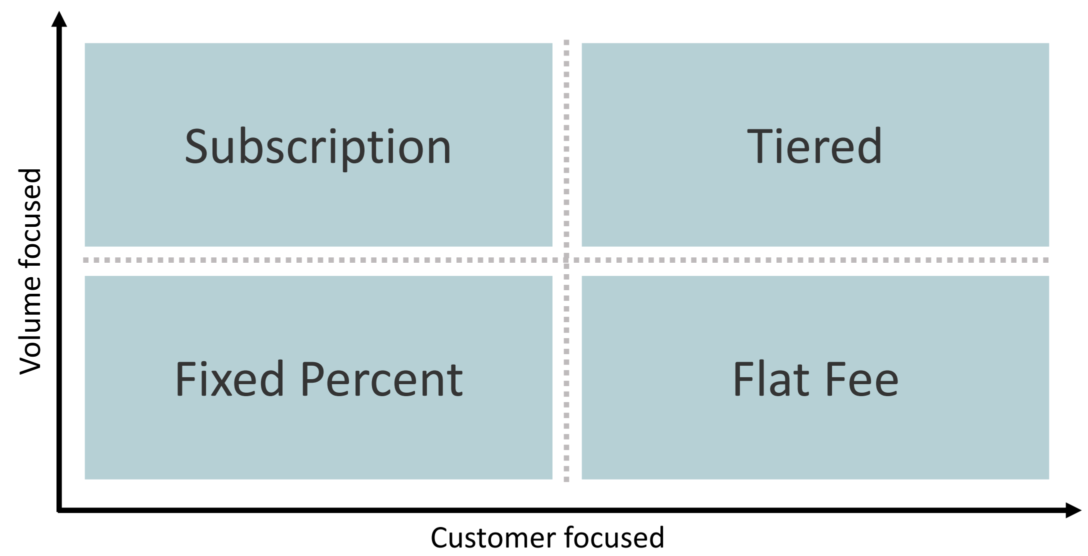
The pricing of a product should be set according the customer's perceived value of the product. However, given the innovative nature of a mobile money service and the fact that it requires considerable customer behavior change, mobile money products should be priced such that they lower the barriers for adoption as much as possible. When we look at most mobile money implementations, we see that:

- There are no registration fees. Account opening is free.
- There is no minimum balance requirement and no monthly fees. The customer is not required to make a long term commitment and can pay for the service on a per transaction basis.
- For transactions, three types of pricing approaches are used: flat rate, percentages based or tiered.

The following is a snapshot of different pricing structures[8]:

[8] Source: CGAP and Amarante Consulting (analysis across 12 implementations)

2. IMPLEMENT



TNX	FREE	%	TIERED	FLAT
Cash in	57%	29%	14%	0%
Cash out	7%	7%	57%	29%
P2P	0%	7%	29%	64%
Bill pay	14%	0%	0%	93%

The choice of the best pricing strategy should incorporate the customer's willingness to pay (i.e. perceived value), price comparison with the next best offering (be it formal or informal) and commission payable to the agent/channel in order to sustain delivery through that channel and cover any other variable costs.

While setting agent commissions, the mobile wallet program manager must carry out a thorough study (usually through on field agent visits/interviews) on the nature of the agent's existing business: What goods and services are sold, which sales are the most profitable, which ones are least profitable, etc. Apart from this, the program manager must also prudently estimate mobile money transaction volumes, sizes, liquidity management implication for the agent, time taken from the agent or his employees to handle mobile money transactions, cost of capital and other alternative investment opportunities that the agent may have. Last but not the least, since mobile money can also increase foot traffic in agent outlets, this increased sales potential for the agent must also be considered. Armed with this information on agent's business model and mobile money transaction volume estimates, the program manager should structure the agent commission and value proposition keeping in mind the financial goals of the mobile wallet business.

Ideally an agent should make money on all transactions/services he performs. This way he will be less inclined to refuse certain operations should the client request it. The following are the best pricing practices[9]:

- Flat fee for customer registration: This helps the agent gain revenues right from the beginning of the project. However, this should be paid to the agent only after the registered customer has activated and used the account for a first transaction thereby ensuring that each registration is genuine.

- Tiered commission approach for handling cash-in and cash-out transactions: Usually the commission values are directly proportional to the transaction values. However, although commissions increase in absolute value they decrease as a percentage of the total. This ensures that agents are paid enough even on small ticket transactions.

Example: In order to avoid agents gaining commission by registering customers who will never use the service, Zain in Tanzania decided to adopt and elaborate commission for agents who sign up new customers to its mobile money service, Zap: a third of the approximately US$1 commission is paid to the agent after customer verification, but the remainder is paid only if the customer does 5 transactions in a 6 month period after registration.

- Other types of agent commissions can be considered to incentivize the agent. For example, paying the agent a commission if the customers use their mobile wallet to make a purchase, etc.

It is important that the mobile wallet program manager keep some flexibility, right from the beginning, in order allow for changes in the commission structure in case the business does not take off as expected. This can be done by informing agents in the beginning that certain commission schemes are for a short period of time or offered as a promotion (e.g. during the first 6 months of launch). Agents can be paid in arrears or immediately after a transaction is made and the money can be paid out in cash, electronic value (into the agent's mobile wallet) or by bank transfer, depending on the business model.

✔ **Lower the barrier for customer adoption by offering free account opening facilities and requiring no payment/minimum balance commitment.**

✔ **Fully understand the target agent's business model and what incentive scheme will satisfy both the agents and the wallet provider.**

✘ **Providing long term commitment on agent incentive schemes thereby rendering commission structures rigid and not adjustable to business take up.**

[9] Amarante Consulting experience and GSMA report "Incentivizing a network of mobile money agents"

e. Partnership negotiation and establishment

Establishing strategic partnerships is a key component of the implementation phase of a mobile money program. As already discussed, having the right partners in the ecosystem not only helps gain the client base and transactional volumes, but also ensures maximum value proposition to the customer. However, the more the partners, the more number of commission split and the thinner the margins for everybody involved. As such, care must be taken to negotiate a win-win agreement so that all partners are vested in the business and work towards making it grow. While commission/cost sharing is one part of the partnership agreement, other collaboration, such as joint marketing campaigns, should also be explored.

Example: Bradesco Bank's partnership with Banco Postal allowed Bradesco Bank to offer their services via 6000 Banco Postal post offices with rural offices being able to transact more than 10K transactions a month. However, in exchange for easy scale, commissions paid to Banco Postal are 5 to 10% higher than those paid to individual merchants (source: CGAP)

Contractual frameworks and agreements put in place between the partners and the mobile money business should clearly state the roles and responsibilities of the parties, commission/cost structure, dispute resolution, timelines/turnaround time for transactions/ operations, service level agreements, etc.

Also, it is preferable to have minimal technical work in partnership integration as this will help ease implementation efforts both in terms of cost and timelines.

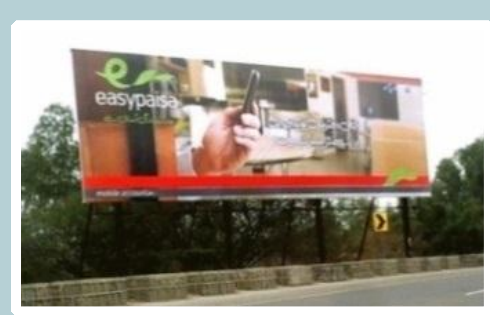
Ensure a win-win arrangement with partners so as to ensure their commitment to make the business grow.

f. Marketing campaign strategies (ATL/BTL)

Given the unbanked nature of most target segments of mobile money programs and the (still) innovative nature of the service, marketing campaigns to publicize the offering must be as educative as they are informative. Best practice is to start with creating a buzz in the target areas and within targeted communities by employing below-the-line activities. This includes: street marketing, road shows, flyers, small posters, leaflets explaining the service, signage, merchandise, etc.

Care must be taken so that the marketing material is: clear and simple, with one or two main messages, adapted to specific target segment, transparent on pricing and other terms, easy to understand and in a language commonly used by the target population. Many times, clients will need hand-holding especially for registration and first usage of the service, so a lot of field activity must be planned for. If possible, account activation should be made immediately after registration and terminologies used should be familiar to the target populations, including wording used on user interface (USSD menus, transaction notification messages, etc.).

Also very important is the material used at the agent site in order to inform the client about the service. It is recommended that agent sites display, at a minimum, the mobile money brand they are associated with, their official agent ID number, a clear tariff grid per transaction type/service, the customer support number (for non-agent supported issues) and use official material (registrars, forms, etc.) for transaction recording/ KYC information registering.



Once the service is up and running, above-the-line (ATL) marketing campaigns can be run in order to create brand awareness on a large/general scale and build brand image and reputation. ATL marketing will usually be more visual with little or no text. This can be in the form of bill board adverts, TV commercials, etc.

✔ **Marketing campaigns should have an educative angle and be easy to understand for the target population; BTL activities are very important.**

✘ **Producing marketing material that has too many messages for the client to digest and/or is not transparent on pricing.**

✘ **Relying only on ATL marketing campaigns to increase customer adoption.**

g. Customer support set up

Once a customer is acquired, that customer can become the program's most cost-effective marketer. Maintaining a good relationship with existing customers increases good word-of-mouth advertising and usage. Providing excellent customer service will assist in this process. Customer support can be provided at agent site for basic information on usage of the service, pricing, USSD menu options, etc. However, for more complex and sensitive tasks such as PIN change request or transaction reversal request, customers must be informed of a "one stop shop" that they can call on for all types of assistance. Care must be taken that the turnaround time for customer query resolution is rapid. For example, customer care processes such as change PIN or transaction reversals should not be made very difficult or cumbersome, else it will be associated with bad service and leave a bad customer experience.

The customer support team must be adequately trained on all products and services and on all use cases so as to provide efficient service to the customer. This will also play an important part in building customer trust and customer satisfaction.

✔ **Ensure efficient customer support is provided through rapid query resolution and by providing in depth training to customer support representatives on all use cases/issues a customer can face.**

h. Organization structure and training

The optimum organization structure for a mobile money program will focus on leveraging synergies from the existing core business (bank or telco) and setting up the mobile money practice with enough autonomy and capacity to build its own operational model without being subject to core business rules and operational norms (such as core business KPIs, marketing budgets, etc.). As such, the best practice is to set up the mobile money business as a separate entity, at least operationally, if not legally. While the core team can be small during the implementation/pilot phase (e.g. less than 10 people), enough room and flexibility must be given to ensure organizational ramp up. For example, Telenor and Tameer bank's "Easypaisa" service saw 150 new recruits for Easypaisa's back office alone[10] at scale.

Capacity building and in-depth training of all resources, be it new recruits or core business resources, is indispensable to ensure efficient end-to-end functioning of the service. Separate training manuals/sessions should be drafted/carried out for different user groups: sales teams, back office, customer support, etc.

Identifying a few key personnel who can be part of the Train the Trainer program is a best practice in that it will help streamline in-house training process for future recruits, as the project takes up and the teams' strength grow.

✔ **Provide specific training adapted to different user groups of the mobile money business and also have a Train the Trainer program to ensure smooth in-house training for subsequent new recruits.**

i. Process definition

Defining the processes for a new operation is a structured approach that helps understand tasks and activities which will be done by the team in charge of managing the operation on a day to day basis. It is also one of the best ways to identify requirements in terms of human resources. Deploying a digital financial service is expensive and the process design phase aims to optimize the operationalization of the service by:

- Identifying each managerial and operational tasks at a macro and micro level
- Identifying the skills required to handle each specific task

[10] Dubai Microfinance Club, roundtable on Mobile Money, June 2013

- Sizing and organizing the team depending on the level of revenue and activity
- Identifying all inputs required to run a particular operation
- Understanding the dependences between the different activities and tasks

Defining and drafting a process manual which includes all tasks will allow managerial resources to have an in depth understanding of what makes an operation perform from a functional point of view. Listed below are some common key groups of processes related to a typical mobile money business:

Customer care	Agent	Operation	Accounting
Customer support	Identification	KYC control and treatment	Reconciliations
Customer complaint	Activation	Account opening	Reporting
Education	Management	Account management	Accountant audit review
Reconciliation	Control	Account deactivation	
Escalation	Support	Audit and fraud review	
Communication	Communication	Reporting	
		Access right management	

The pilot launch phase is the best opportunity to test and optimize processes before going on to the operational phase.

j. Pilot launch

The culmination of the implementation phase is the pilot launch. A pilot is usually launched in a couple of cities/areas and/or in partnership with a particular entity in order to implement the whole go-to-market strategy, test service efficiency and gain market feedback. Pilots are also a way to validate alternative pricing schemes and options, with a randomized controlled trial approach.

Care must be taken that the pilot scope covers a manageable operational size but with a large enough potential customer base so as to get sufficient market feedback and really test the robustness of the system. The size of the pilot will depend on the market size and the financial/business goals of the provider. Fine-tuning of the service proposition and business model can be done all throughout the 3 to 6 months of the pilot phase. Depending on the results/issues faced, a full-fledged roll-out can be carried out earlier or later.

✔ **Launch the pilot across a controlled perimeter while ensuring sufficient potential customer base in order to really test the system.**

✘ **Rolling out services when distribution network is not yet ready.**

3. MANAGE

Managing a mobile money business requires specific expertise and experience as it is a relatively new business when compared with the traditional telecom or bank business. Apart from continuous monitoring, it also requires a lot of flexibility in order to constantly change the service according to client and market feedback. Following are the critical tasks to focus on:

a. Performance evaluation and agent network management

Managing a mobile money business is a lot about performance evaluation while expanding the activity's footprint. Customer acquisition is only the first step of the customer engagement process since repeated customer usage of the service is what constitutes the operation's utility and success. As such, performance evaluation should ensure that end-to-end processes are functioning as planned and more importantly, that the individual agents are performing quality and healthy transaction volumes. A few key best practices when managing agents:

- Know the agent life cycle. According to the phases of business growth, the interaction and key messages to give the agent will change.

- Ensure that the size of the agent network is well adapted to the client base size in order to avoid saturation of agents outlets or having a surplus of agent points.
- Ensure proper communication channels so as to send key messages to the agent and also get their feedback and incorporate this into business practices.
- Ensure that the agents are well rewarded for their performance and that this is done in a timely manner to avoid agent dissatisfaction or demotivation. Similarly, ensure proper penalties for under or bad performance.

And last but not the least, to manage the agent network efficiently and ensure healthy performance, one must put in place good governance and introduce monitoring/supervision (through systems or by physical site visits). It is critical to ensure that quality control and performance evaluation processes are performed by separate teams than the one that handle the agent recruitment process.

The mobile money business must have a dedicated sales department that will define, execute and manage the entire agent network strategy and coordinate with all entities involved.

✔ **Build and efficient agent hierarchy structure; monitor and control performance and quality through field visits and system checks.**

✔ **Keep quality control of agents separate from agent recruitment.**

b. Managing Risk and fraud

The risk and fraud in mobile money businesses are similar to the ones in the payment or the banking industry. These can originate from internal or external factors. The mobile money business must ensure adopting the following best practices in order to mitigate these as much as possible:

- Ensure that access rights (recording, editing, reading, approval, etc.) can be set and strictly related to the person in question (no multiple access per individual).
- Ensure that each transaction is secure with a PIN / password so that the initiator, the sender and the beneficiary of the transaction can be authenticated.
- Have the ability to provide notification / receipt on the transfer status to both the client and the agent.
- Ensure that the systems follow safety standards and audits required by international regulators, partner banks and regulatory authorities.
- Allow integration / communication between information systems of the stakeholders in the ecosystem; ideally in real time.
- Provide tracking and reporting of all transactions carried out in the system.

A combination of knowledgeable mobile money representatives and robust real-time systems significantly increases the security and the take-up of service.

✔ **Ensure proper rules and controls for risk and fraud management, based on global industry experience and partner bank advice and demands.**

c. Service expansion plan

As already prepared for in the Design and Implement phases, the mobile money program manager must ensure that there is a constant expansion in the service proposition and in the footprint of the mobile money service. This will ensure continuous buzz in the market and also allow for constant growth, evolution and reach of the service. As such, service expansion includes:

- Distribution network expansion by bringing more agents on board and partnering with companies which have a healthy distribution network that the mobile money service can leverage.
- Product portfolio expansion (refer to appendix 1 for case study on Easypaisa).

- Partnership expansion in order to expand the breadth of services proposed. For example, bringing on board more billers, more employers for salary payment and governmental organizations for government to person disbursements.

Maintain a constant evolution in the service proposition by introducing new partners, expanding agent footprint and/or expanding product portfolio.

d. Managing operations and ramp up

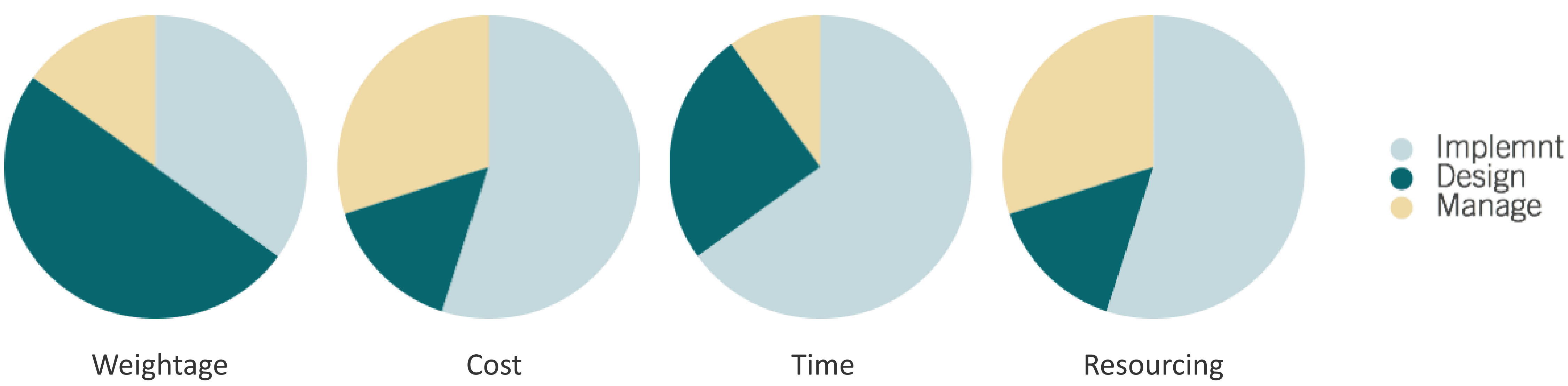
Overall, care must be taken to constantly evaluate the capacity and quality of all front office and back office in order to ensure that the organizational growth is adequate for the level of mobile money take up and activity in the market.

Ensure organization ramp up is done in accordance with business take up.

Having no visibility on the capacity and bandwidth of the mobile money teams, thus being incapable of adjusting team size according to activity take up.

The mobile money business is very challenging with each player's profitability largely depending on the partnerships and business model that is put in place. Moreover, since transactions are often of small values and achieving scale is a challenge, margins are often wafer thin. It is important to achieve scalability to become successful. Scalability can be achieved only if the business model is designed rightly, with the right partners on board and with the right service proposition to the end customer while paying attention to the functioning and development of all project and operational streams.

The below pie charts illustrate the weight of each of the afore-mentioned phases in the overall mobile money project management, based on Amarante experience.



Indicative estimates in terms of timelines and investments costs across the three phases can be provided as follows:

- Design Phase: Approximately 6 to 9 months with an investment of ~500K USD
- Implementation phase: Approximately 1 to 1.5 years with an investment of ~2 M USD
- Manage phase: ~200K to ~400K USD of annual operating costs
- Average break even timeframe: 3 to 5 years

B. AUGMENTING CLOSED LOOP MOBILE FINANCIAL SERVICES PROGRAMS WITH OPEN LOOP SYSTEMS

As discussed in the beginning of this paper, one of the key challenges that most mobile financial services are facing today is the slow customer take up and the lack of scalability. The GSMA 2012 survey on Mobile Money Adoption reports that a majority of the 14 sprinters are mobile network operators but that their market share in the country did not necessarily have a correlation with the success of their mobile money service. In fact, the 14 sprinters represented just 10 countries. Moreover, of the 14 sprinters, only 8 were the first to launch mobile money in their market, thereby indicating that successful mobile money deployments can also materialize in competitive markets, and that new entrants sometimes benefit by leveraging work already done by their competitors.

So what of the vast majority of the deployments that has not been successful? What are they missing for operations to take off?

The mobile money industry is still in the nascent stages of its evolution. However, some data collected over the past years, and our experience working with multiple mobile money projects, point us to a few elements that can foster a viable and scalable business model:

- The right value proposition for the client
- Creating maximum opportunity for clients to access and enjoy mobile money services
- An ecosystem where in all actors benefit from transaction volumes and revenue generated thereof
- Systems and integration requirements that do not demand significant, repeated time and money investment

Having looked at various closed loop mobile money ecosystems and how they function; we can identify three focus areas that can really help gain client adoption and scale:

- A service offering well adapted to customer demand/need
- A widely accessible distribution network
- Key strategic partners that bring on board big transaction volumes and client base

Ensuring good program management, as discussed earlier in this paper, will help closed loop systems build on the above focus areas in order to achieve successful deployments. However, there is one other way in which closed loop systems can reach scale, and that is to augment them with an open loop capability. If clients from one mobile wallet provider were able to transfer money to clients of another mobile wallet provider, the potential increase of overall market size and transactional volumes would be quite promising. How would this work though?

Unlocking closed loop systems and introducing interoperability will essentially mean **enabling closed loop mobile wallets to interact with each other**. This would mean that a client from one wallet provider could transfer money from his wallet to a wallet supported by another provider and vice versa. This can be achieved in two ways:

- Get mobile wallet providers to integrate with each other (one-to-one or many-to-many, if there are multiple players in the market) so that their wallets can transact with each other
- Associate individual mobile wallets, across different closed loop wallet providers, with an open loop prepaid account solution so that they become interoperable via the card networks

If we take this a step further, and really unlock closed loop systems to the next level, we are essentially looking at connecting mobile wallets from different providers to a whole payment network thereby **enabling Person-to-Merchant/Biller/MOTO/E-commerce payments**. This would mean that individual client wallets will each be linked to an individual open loop prepaid account, thereby allowing for purchases and payments at as many open loop-accepting payment locations (including online) as possible. Another valuable advantage would be the increased accessibility to cash points from where clients can deposit or withdraw money using their card enabled mobile wallets.

So how can interoperability be achieved? There are a few key factors that encourage interoperability. These include: Good market dynamics (important market size, shared motivation by a few actors to collaborate, etc.), enabling regulations and support and encouragement from relevant organizations and associations who want to foster interoperability and increase financial access to the customer. Contexts where interoperability will be hard to achieve include market dominance by a single actor (who would not welcome any competition and who also may have invested a lot of time and money into a proprietary solution that it would not want to share with new entrants) and objectives of enhancing customer loyalty.

As of today, interoperability, especially on a pure wallet to wallet level, is not something that is easily adopted in the global mobile money industry. Major players still tend to regard it as a threat to their business success and to their existing client base. The reason for this threat stems from one of the key mobile money business cases for MNOs, which is to increase loyalty in their current customer base and thereby reduce churn.

AUGMENTING CLOSED LOOP MOBILE FINANCIAL SERVICES PROGRAMS WITH OPEN LOOP SYSTEMS

Opening the loop and allowing customers from different MNOs to transact with each other's wallets would seem counter-productive given this customer retention objective.

There have, however, been some recent attempts to achieve scale by joint collaboration. For example, in Czech Republic, a consortium based interoperable service was launched in September 2012. MOPET, a consortium of three of the largest brands in the mobile space – T-Mobile, Telefónica and Vodafone – and four major banks – Ceská sporitelna, GE Money Bank, Raiffeisenbank and UniCredit Bank - launched MOBITO, a service available to all mobile users across the country regardless of who they bank with and which mobile network they subscribe to. Innovative structures such as these are beginning to see the light of day with the mobile money industry showing the same signs of evolution that the payment industry experienced back in the 1970s[11].

That said, mobile wallet providers tend to be receptive to open loop solutions that enable wallets to link up to an open loop prepaid account solution. This is because there is a clear complementarity between the wallet and the prepaid account, and all stakeholders share the objective of increasing transaction volumes in order to enjoy increased revenue generation. In the following section, we will discuss key considerations when augmenting closed loop solutions with open loop systems powered by payment network providers.

[11] Case study of "Citibank and the Evolution of Bank ATM Networks", source: CGAP report, June 2013 "Interoperability in Electronic Payments: Lessons and Opportunities"

C. KEY CONSIDERATIONS WHEN AUGMENTING EXISTING CLOSED LOOP SYSTEMS WITH OPEN LOOP SOLUTIONS

Given what we have stated above, the open loop systems that we will refer to in this section focus on network/system interoperability where wallet providers and payment processors agree to collaborate in order to make their services interoperable and widely accessible. As such, this means that over and above acceptance to work together, mobile wallet program managers will need to ensure that the infrastructure (e.g. agent/merchant registration and equipment), system connections and relevant settlement processes are put in place in order for the partnership to work. MNO's with existing bank partners will often find that the same bank will ensure connectivity to the payment system either via the bank's internal processing capability or by introducing the MNO to a relevant payment processor present in the concerned market.

Please note that whether taking the form of a physical card, mobile virtual card number (VCN), P2P transfer or a remote payment (e.g. inter-MNO airtime top up or expanded billpay) the underlying open loop network vehicle that is the engine behind the open loop solution is the prepaid account.

a. Value proposition

Open loop mobile financial services (MFS) systems have the following value propositions:

- **Offering the client an open loop account**: This will enable the client to:
  - **Send money (domestic or international remittance) from one mobile wallet to another, irrespective of the MNO or wallet provider**: A client from one MNO or mobile wallet provider can send money to a beneficiary who has a contractual relationship with another MNO or wallet provider. The transaction will be processed from one wallet to the other via the card system that will recognize the prepaid account numbers associated with both sending and receiving wallets. Thereby providing the customer with a convenient, reliable and secure person-to-person payment solution. This entails:
    - Getting the MNO/wallet provider to register and participate in the program

> **Example: "Wanda," the joint venture between MasterCard and Telefónica, was created to lead the development of mobile financial solutions in Latin America. Wanda will provide mobile payment solutions to the over 87 million Movistar (Telefónica) customers in the 12 markets where it will operate. These mobile payment services will be linked to a mobile wallet or prepaid account that will allow for money transfers, mobile airtime reload, bill payment and retail purchases, among other services, for both banked and unbanked populations.**

  - **Pay for goods and services at as many card payment locations as possible:** The customer will be given a plastic card which is linked to his mobile wallet. Here the client can use his card-enabled wallet to pay for goods and services thus being able to transact not only at the MFS provider's agent outlets but also, a) At any merchant outlet that is equipped with a POS/ATM machine or card accepting system and b) On any payment platform that accepts cards (e.g. for e-commerce). Alternatively, limited use VCNs, also known as Mobile VCN (see subsection (n) later in this section for further details), can provide consumers access to shop online even when they don't have a card. This entails:
    - Getting the merchant/payment location to register and be part of the service
    - Ensuring that the point of payment (be it in the merchant's shop or any other location where card payments are accepted), is equipped and connected to the processing system so as to allow card enabled mobile wallet transactions to be processed seamlessly
  - **Pay bills and top up airtime remotely:** The consumer is enabled to use his phone to top up mobile airtime with many MNOs and pay more bills remotely. In some instances, this also provides the consumer a new layer of security as payment credentials are not shared with the MNO or biller. This also entails
    - Getting the MNO/biller to register and be part of the service
  - **Cash In and Cash Out:** The customer will be able to add funds to his mobile wallet either by handing cash over to the agent (i.e. an over-the-counter transaction) or by signing up for direct deposit with his employer to receive his pay or with the government to receive his social benefits. The customer can then:
    - Go to his own MNO/wallet provider agents to withdraw his money
    - Withdraw the money from an outlet which is equipped with the required tools and powered to handle the necessary transaction reception (this includes ability to withdraw money from ATMs or POS machines using a prepaid card that is linked to the mobile wallet)

[12] The main drawback of the virtual card mechanism is that it cannot be used unless the entire infrastructure gets upgraded. However, it enables online purchases and other transactions and so can definitely broaden use cases and increase scale.

C.

KEY CONSIDERATIONS WHEN AUGMENTING EXISTING CLOSED LOOP SYSTEMS WITH OPEN LOOP SOLUTIONS

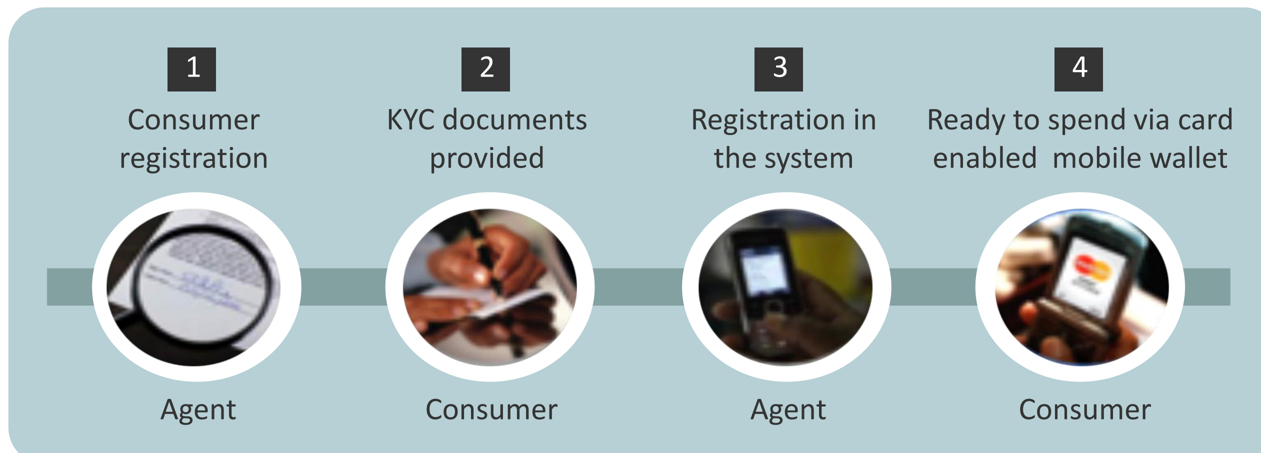
Select the best value proposition for the target market segment. Take into consideration client behavior/usage and required open loop infrastructure for use cases specific to the market in question.

Introducing an open loop component without a solid business case of estimated client usage and infrastructure to leverage.

b. Registration

Consumer registration is the gateway to gaining access to all open loop services. The following is an example of the registration process for a companion card:

Registration



Consumer visits an agent to request a MasterCard-enabled Mobile Money account and card.

Consumer provides information to the agent, which is forwarded to the financial institution for verification. Once verified, the financial institution authorizes the MasterCard prepaid account number, which is then linked to the consumer's mobile number.

Consumer receives a request via SMS text message on their phone to authenticate KYC approval with the Issuer. The consumer authenticates their account using an M-PIN. Once the M-PIN is authenticated, the card is activated and ready for use.

Consumer receives card from the agent and pays merchant at POS or withdraws cash at an ATM machine.

c. Illustrative Use Case

The following is an example to illustrate:

Product: A mobile companion prepaid card, issuable by an agent instantly and linked to the customer's current stored value account immediately[13]

Target segment 1: Youth

Primary use case: Purchases at POS / E-Commerce

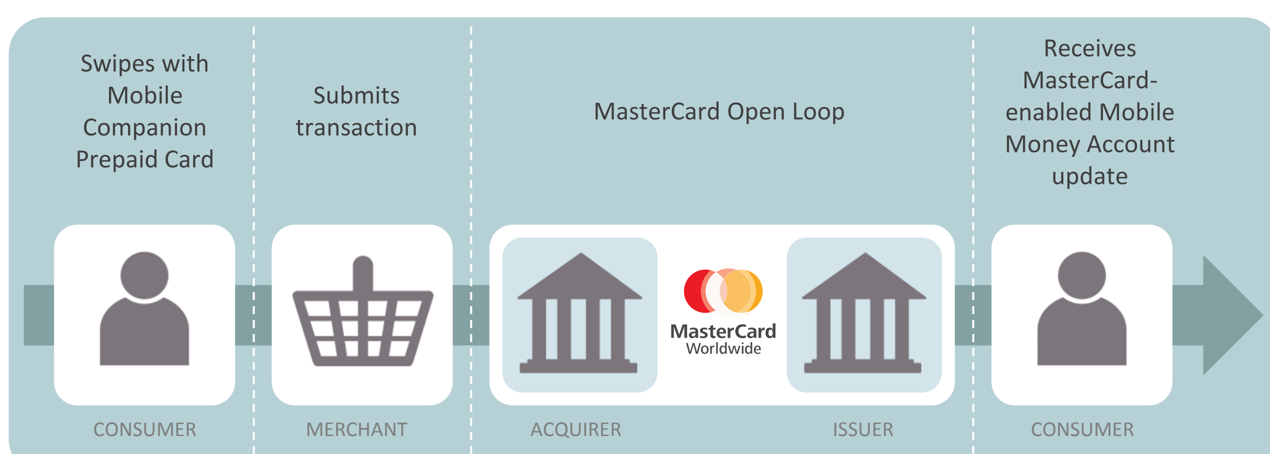
Secondary use case: ATM Withdrawals

Target segment 2: Small business owners, supervisors, clerks, salesmen

Primary use case: Cash out at ATM/ Agent locations

Secondary use case: Purchases at POS

Mobile Companion Prepaid Card



d. Product development

All effort should be made to design a flexible and easy to use/explain product adapted to specific target client segments and deliverable through existing infrastructure in the market. Segment variables can include destination country, travel frequency, demographic information, geographic residence, affinity preferences, spending habits, income levels, etc. Best practices, as already discussed in section A of this paper, should be followed.

Ensure that the introduction of the open loop component will enhance the user experience and customer journey and not render it cumbersome for the client.

[13] Use case provided by MasterCard

e. Choosing partners/vendors

Choosing partners/vendors is a critical component of the open loop ecosystem build-up. Mobile wallet program managers should look to partner with either a bank providing prepaid card processing services or a prepaid card processing entity. Key considerations when looking for prepaid processors:

- The partner must have a solid reputation of reliability and stability in their field of business and have a demonstrated history of being able to scale without negatively impacting platform or account support (i.e. people) performance. Mobile wallet program managers should ask for client references including a large successful program (this is particularly important to prove scalability) and a newer start-up (e.g. a 6 to 12 months of activity).
- Prepaid processor capabilities should include: Core processing, networks, reporting, user interfaces (cardholder, partner, program manager), platform flexibility, process/time to configure new and modify existing programs, channels (in branch, online, payment acquiring, 3rd party networks), risk and fraud (transactional fraud screening, payment fraud screening, KYC vendor integration, sanctions screening, issuer and acquirer-side 3DS), chargeback processing and ancillary services (card production, personalization of companion cards, vendor management, customer care, chargeback management, etc.)
- The processor should have the required licenses from concerned authorities for prepaid card processing and should be PCI (Payment card industry security compliant) certified.
- It is also important to look for processors who have a track record of service expansion and innovation. This will ensure that their systems, processes and even resources/management attitude are all well adapted for product and service expansion. Also, these companies are usually abreast with understanding changing customer needs and react by developing products that meet these trends.
- One must look for processors who are known to provide excellent customer and partner service.

When partnering with an issuer, mobile wallet program managers should ensure the following:

- Understand the issuer's CIP (customer identification program) as part of the due diligence process to ensure it will support the mobile wallet program requirements. For example, the issuer's CIP should allow for collection and registration of specific KYC documents that are needed by the mobile wallet provider.
- Negotiate with the issuer for a share in float and interchange fees.

In an ideal scenario, the mobile wallet program manager should have a choice of issuers/banks, processors and card vendors who are already integrated.

Understanding who owns the customer and who has the right to cross-sell is critical. The mobile wallet program manager will find that this is a hard negotiated point since the issuer will also want control and the ability to cross-sell or even potentially monetize this asset. In some markets, regulations may dictate the owner, while in others ownership may come with heavy regulatory oversight that is too onerous for the mobile wallet provider to manage. In the case of the latter, best practice would be to leave the ownership with the issuer, but negotiate the right to cross-sell.

The best practices for partnership establishment include:

- A clear responsibility matrix that carefully defines roles and responsibilities of the processor so that the mobile wallet program manager can ensure strong participation of the processor in the development of the card enabled mobile wallet services
- Clear SLA's built into the contract for approval times of programs and materials
- An explicit governance structure: Dedicated teams on each side is necessary to ensure partnership success and smooth operations
- Contracts with shorter lock in periods: Many processors will try to lock in the partnership for at least 5 years. This is quite risky from the mobile wallet provider's perspective as it reduces options of flexibility that is necessary to adapt to business take up and other potential strategic decisions. Another thing to look out for is who the contracting entity is. Many times an issuer or processor may front for the other one when contracting with the wallet provider. This may be attractive at the initial phase of the mobile wallet business, since only one contract has to be negotiated and it may offer better pricing (that the contracting party will be able to get from the other party). However, once the mobile wallet program has reached a level of scale, best practice would be to negotiate its own direct contracts with each of the entities. Direct contracts have the benefit of the mobile wallet provider being able to directly address all potential issues with the concerned partner and thus avoid having to go through a third party.

- Commitment for rapid deployment: Implementation rapidity is also a key consideration. Launching a new program rapidly can be critical to its competitive success in the marketplace. This also lowers the investment costs.

Other best practices for partner identification and partnership establishment, as discussed in section A of this guide, can be considered.

✔ **Ensure that open loop partners have a solid reputation of handling large volume, scalable and innovative projects without compromising on performance quality or client service. Ask for references and certifications.**

✔ **Ensure that partnerships are established based on clear terms regarding who owns the customer, who can cross-sell and what is the commission/revenue share between respective stakeholders.**

f. Distribution Network and Accessibility

The advantage that a well-established payment processor brings to a closed loop MFS system is a robust solution and a wide network of agents and cash reception points that are accessible to the end customer. The more established/global the processor is, the wider its network and reach will be. As we have already seen in section A, getting agents/merchants on board is a complex and time consuming task for a mobile money provider. Therefore, any easy way to multiply the number of reliable transaction/cash points is beneficial.

Also, utilizing multiple outlets for card/wallet reload or for transactions can facilitate take up. Options can include: at agent outlets, via ATMs, direct deposits (like salaries), bill payment, etc. Care must be taken to ensure that all relevant outlets that can be leveraged, are developed/equipped with required infrastructure and systems to enable successful transaction processing in a controlled and secure manner. Best practices (as already explained in Section A of this guide) regarding identifying, selecting and incentivizing agents to register for the program and also encourage customers to use the service should be followed.

Example: In November 2012, MasterCard, Comviva and Tutuka put in place a strategic collaboration that combines Comviva's mobile payment platform, Tutuka's prepaid processing platform and MasterCard's global electronic payments network. The consumers will be able to engage with their specific Mobile Money Operator (running on Comviva platform), who will register and link their mobile number against a unique MasterCard Prepaid card which will be issued to the consumer. This new solution offered by this collaboration has potential to benefit over 750 million consumers across the continent.

✔ **Ensure that existing open loop infrastructure (e.g. POS/ATM machines) functions well in the market so that the mobile wallet activity can safely leverage these channels. Correctly estimate additional infrastructure equipment requirements, if any.**

g. Commission structure/ revenue share and impact on customer price

Traditionally, electronic payment networks like MasterCard and VISA have had to work with taking a margin on transaction fees processed which is used as a measure to compensate them for services they provide in enabling card transactions. The agreement is generally between MasterCard or VISA and their member bank. The fee is usually charged to the merchant who accepts the payment, via his banker, and paid to the card issuer's bank.

When we talk about mobile money and prepaid cards, mobile wallet providers will need to understand the aforementioned business model, the commission structure involved and also understand the overall prepaid card business case. Bringing on board an open loop card payment system will present implications for the mobile wallet providers at many levels. When mobile wallet holders use prepaid card channels (POS/ ATMs etc.), the mobile wallet provider is likely pay a fee to the POS/ATM provider/processor instead of paying commissions to its own agents. And depending on the customer usage, the mobile wallet provider's business case will be impacted. Therefore, care must be taken to ensure a complementary/healthy usage between the ATM and agent channel. For example, if too much of the cash-out flows through the ATM channel, it may result in traffic diversion away from agents. This may make the agent network unsustainable causing the wallet provider to figure out ways to compensate agents for the loss (e.g. give more responsibilities to agents etc.). However, if the introduction of the ATM channel augments the market and total number of transactions, it should benefit all stakeholders. Additionally, the ATM channel can help smooth liquidity management challenges since ATMs complement the agent network and reduce liquidity pressure on agents (e.g. this is the effect Paynet had on Mpesa).

When negotiating commercials with processors, mobile wallet program managers will have to make a decision between paying high setup costs accompanied with low per transaction costs versus paying low setup costs with a higher per transaction cost. Best practices for pricing strategy will depend on the type of product. For example, if the product in question is a reloadable card, a lower per transaction cost is generally preferable. For non-reloadable cards, it is best to negotiate a one-time flat fee per account.

Mobile wallet program managers will do well to keep three other key elements in mind when negotiating with processors:

- Looking out for any hidden costs (e.g. pass-through brand and switching fees, telecom fees, etc.). A sample invoice showing all potential fees types can be requested to get visibility on these.
- Timing of fees: This is something that many players overlook. For example, most processors have some form of a monthly "account on file" fee. The mobile wallet program manager will do well to negotiate that this should not apply until the account/card has been activated by the consumer (and not when the account/card was initially created). This way, one can avoid paying the processor monthly fees on unused inventory.
- Everything is negotiable: All avenues to arrive at the optimum win-win agreement must be explored.

Since the mobile wallet-holder is the provider's client, the provider can stand to enjoy margins on all transactions made by former[14], be it a pure wallet transaction or one that involves a card (e.g. cash out performed at an ATM and not at the mobile wallet provider's agent). However, the overall fee structure should take into account the nature of the transaction sizes, which are usually small in value and care must be taken to structure the commissioning without the service getting too expensive or dissuasive for the customer. For example, in Pakistan, most banks already charge customer fees for cash withdrawals in order to cover their own costs. Here the mobile wallet provider has two choices, a) Negotiate to take some share of the bank/processor's margin or b) Forgo its share of margins on those transactions. This may make more sense than increasing the fee for the customer. One must note that regulations can also impact the pricing structure. For example, in Vietnam, until recently, card issuing banks were not allowed to charge their customers for cash-out at their own ATMs.

Partners can also explore other fee structures that enable risk and revenue share (e.g. proportionally increasing commission rates or revenue share rates based on the take up of the business). Furthermore, according to the time and money investment made on systems integrations and development, other types of considerations can be looked at: maintenance fees, provision/subsidizing technical resources to help with system development, providing advisory services to assist in the marketing, product development tasks, etc.

Whatever the commission structure and partnership agreement may be, care must be taken to price the product according to the customer's perceived value of the same. Consumer sensitivity to the price of new products is likely to be high and there may be a tendency to go back to using tried and tested channels (sometimes informal channels) that appear more convenient and cheap especially since there is no customer behavior change involved.

✔ **Follow the motto "Everything is negotiable" and ensure payment terms and timelines are clearly agreed upon.**

✖ **Neglecting to look for hidden costs, some of which may start being invoiced even before the customer starts using the service.**

h. Marketing the service

Enabling open loop transactions in a closed loop scenario will usually entail partnerships with reputed and global brands. As such, marketing the open loop service must leverage this brand value. Mobile wallet providers should consider the possibility of co-branding the product and having marketing work done on merchant points of sale and agents outlets (both receiving and sending). Co-branding will help increase reputation and enhance the security image, especially when partners bring on board positive brand value and goodwill.

Moreover, coupling a prepaid card and a mobile wallet account will enable the mobile wallet provider to develop a more holistic relationship with the end customer as opposed to prepaid being a one-time use instrument (e.g. gift vouchers linked to one merchant). As such, the more the number of opportunities to load and use the card enabled mobile wallet, the stronger and more lucrative the relationship between the issuer/wallet provider and the client becomes.

Distribution channel type and typical customer touch points should be considered when designing the customer communication strategy along with designing specifically targeted marketing for specific segments and use cases: internet savvy users, youth, travelers, etc. It is important to incentivize customer usage. Various marketing and schemes can be prepared to benefit all the partners and to boost the overall mobile money transaction volume and customer base. For example, an MNO can offer airtime bonuses when customers use their mobile wallet/card, it can also market the fact that

[14] This is subject to negotiations between the wallet provider and the issuer on who owns the client and who has the right to cross sell. Refer "Choosing Partners/Vendors," Page 18 of this report

customers who are enrolled on a mobile wallet-payroll program will save costs related to cash in (if any) and can directly access their salaries to pay for goods or transfer money without having to load the mobile wallet. Other loyalty programs and cash back schemes can be thought out as well. These offers can be made at various stages of transactions (e.g. on registration, upon using ATMs, payment at certain merchants or sending money to a specific branded mobile wallet, etc.).

As already discussed in section A, marketing campaigns must be educative and informative while being transparent on pricing so that the customer is clearly informed of the value proposition and fees for the products and services.

Optimize on co-branding opportunities with the open loop partner. Market the card as an integral part of the wallet so that the customer perceives it as one complete offering.

Having too many messages and unclear pricing schemes resulting in poor customer visibility on pricing per transaction type.

i. Customer experience/Technology

Apart from best practices already discussed in Section A of this guide, while augmenting closed loop systems with open loop solutions, care must be taken to instill customer trust in the service offered. The user experience with the additional card (virtual or plastic) linked to the mobile wallet should be simple, rapid and efficient. Customers must be able to make transactions easily and conveniently access information on their account balances, transaction status, etc. This can be provided through various channels: SMS, IVR, USSD, etc.

Additionally, apart from using merchant POS machines for purchases/payments, ATMs also can be used as an extension of the network of mobile money agents, especially for customers seeking to withdraw money (cash out). This typically requires either issuing prepaid ATM cards that are linked to their mobile money account (e.g. the option adopted by SMART Money in the Philippines) or deploying a software upgrade to ATMs to allow customers to initiate and authenticate a withdrawal with their PIN (e.g. the route taken by M-PESA in Kenya).

Provide a similar, if not enhanced user interface/convenience for mobile wallets with open loop capabilities so that customer trust and service convenience are not negatively impacted.

j. Roles and Responsibilities

Given that in a closed loop mobile money system, the sending entity and the receiving entity are the same, roles and responsibilities are drawn up within various internal departments of the mobile financial service provider entity with a strong focus on agent network management, platform vendor coordination, operations quality control and coordination with strategic partners for relevant services/transactions. This ensures the supervision and timely processing of all tasks undertaken in the business. In countries where the regulator demands that a Mobile Financial Services provider gain a banking license, roles and responsibilities with regards to fiduciary pool accounts and settlement are drawn up with a bank partner. The following graphic illustrates how Telenor (a Telco) and Tameer (a microfinance bank) split roles in a mobile money value chain[15]:

	Product, Marketing and Awareness	Customer Acquisition and Mgt.	Distribution and Agent Network	Technology and Infrastructure	Treasury, Float Mgt. and Compliance
Telenor Pakistan	• Product • Pricing • Branding and Campaigns	• Call Centre	• Distribution Management • Physical Distribution	• Customer and financial transaction systems	N/A
Tameer	• Endorsed Brand • Credit Product Design	• Customer Registration and Know your customer	• Branch Distribution • Cash Management • Agent Certification	• Transaction Switch • Billing Servers • Banking Operations	• Accounting, Treasury • Float liquidity mgt. • Compliance • Audit

[15] Source GSMA: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/03/mappingandeffectivestructuringfinal2643.pdf

When introducing open loop payment systems, however, care must be taken to ensure that all stakeholders have clearly defined roles and responsibilities especially with regards to transaction handling, dispute resolution, settlement of financial obligations and customer support. Specific accountability and penalty clauses can be levied to stakeholders in charge of key tasks. Below is an illustration of the prepaid stakeholder value chain[16]:

Roles	Sponsor	Distributor	Mobile Wallet Provider (Program Manager)	Processor	Network	Issuing Bank
Responsibilities	• Originator of the program • Introduces the product to potential cardholders • Often has existing consumer relationships	• Product distribution • Channel management • Activation • Reload • Funds transfer	• General contractor, managing vendors for sponsors • Drives the business strategy • Fraud and Risk Services • Oversees regulatory compliance (KYC) • Sales and Marketing	• Performs authorization, clearing, settlement • Customer service functions (IVR, statements) • Passes information to marketing/rewards programs	• Switch/auth./settle transactions among members • Set rules, including processing, interchange, exception processing, etc. • Define products and manage brand	• Holds funds in account • Receives and disburses settlement funds for network items • Ultimately is responsible for regulatory compliance • Generally is holder of MC license
Possible Players	**Issuing Bank/ Mobile Wallet provider/ Distributor**	**Mobile Wallet provider/Issuing bank**	**Mobile Wallet provider/Issuing bank**	**Issuing bank/ Prepaid processor**	**Players like MasterCard, VISA**	**Partner bank/ another bank handling prepaid**

When non-financial mobile wallet providers already have a partner bank, the key is to ensure that the bank also issues prepaid cards. If it doesn't, the ideal scenario is to find an issuing bank with prepaid experience and not become the partner bank's first implementation of a prepaid program. In most cases, it is easier and more efficient to use one of the prepaid processors that the prepaid issuing bank already has a relationship with. This will save considerable time and incremental cost. As already discussed earlier on, it is recommended that the processor provide auxiliary services (such as training, second level customer support, etc.) in addition to processing services.

Since the closed loop account needs to be accessed by the open loop processor when there is an instruction to debit the former, the mobile wallet program manager should ensure that a secure communication channel/process be put in place for one system to access information from the other. An API should be built in order to connect the mobile wallet system to the prepaid processing system securely. It is important to note that only one of the two entities can hold the accounts of record and it is usually the mobile wallet provider who does so. The mobile wallet provider can also support/provide: transaction reconciliation (clearing, reversals, refunds chargebacks, fraud management, etc.), decision on disputes, enabling business correspondence relationship between mobile wallet provider and the issuer in order to support cash-in/cash-out facilities, etc.

✔ **Clearly define roles and responsibilities for all stakeholders involved and, in particular, clearly designate who holds the accounts of record.**

✔ **Build APIs to ensure efficient and secure system connectivity.**

k. Risk, security and fraud management

Many of the existing open loop financial systems (checks, bank transfers, etc.) have been built on sound banking rules and regulations. While these are effective, they are sometimes too stringent for mobile financial services context. That said, if correctly adapted to the mobile money transaction sizes and clientele, they can serve very well in order to rigorously control and manage operational and fraud risks.

[16] Participants can play multiple roles in the value chain

When bringing on board card payment processing companies, mobile wallet program managers must ensure that security features existing around the prepaid account funding and transaction authorization (withdrawals, transfers, payments, etc.) are put in place. The risk around system connectivity between the prepaid processor (who is PCI complaint) and the mobile wallet provider (who is usually non PCI compliant) should be managed. Care must be taken to ensure either one of two things:

- The mobile wallet provider obtains a PCI compliant certificate (which usually takes time and can be a costly process) or
- The bank partner involved assumes the liability of the potential risk of fraud.

Introducing Mobile Virtual Card Numbers (VCN) (see subsection n for more detail) creates additional risk of these numbers being stolen from one's phone. In many cases, simple measures can be taken to mitigate these risks. For example:

- When available, send consumer his virtual card number, expiry date and CVC via text using an encrypted channel.
- If not available, limit use of Mobile VCN to one transaction
- Notify consumer when his virtual card number has been used.

Best practice is that the mobile wallet provider works with the bank to understand best practices for fraud mitigation and ensure that it adopts the needed checks, limits, alerts, etc. that the bank requires.

That said, all risk, security and fraud management aspects discussed in Section A of this guide (regarding transaction validations, account limits, KYC rules, regulatory compliance, traceability of all transactions, reporting, etc.) must be retained and intelligently merged between the different systems.

✔ **Gain in depth understanding of bank partner risk management and compliance requirements and integrate these into the respective connected systems.**

✘ **Neglecting certain risk and control mechanisms and relying on partner bank for liability management.**

l. Customer support

Customer support is a crucial function and stakeholders must clearly define the channels by which the customer can reach out should the need arise. As such, informing the customer about these channels and the type of support provided is essential. The fewer number of separate entities providing customer service, the more efficient customer query resolution will be. In closed loop systems, customer support is usually handled by the mobile money provider and it is this entity that will follow up with relevant departments/partners concerning eventual customer encountered problems relating to the mobile money platform, the USSD interface, support around PIN/language change, activation, customer account limits, wrong transactions, etc.

As much as possible, in open loop systems as well, one customer support point should be defined so as to allow a seamless customer service experience. This is especially valid in cases there is no clear product differentiation. For example, a virtual card being linked to a mobile wallet will appear as one product to the client and therefore providing just one support number/channel for this product will be efficient. In most cases, this first point of client service is provided by the mobile wallet provider's customer service team. Should some issues need escalation, it is generally the payment processor who takes up the issue, if specific personnel in the mobile wallet provider's team have not already been trained to do so.

✔ **Ensure one single point of contact for all customer queries. Issue resolution can be escalated to relevant qualified personnel in the back end.**

m. Organization structure and training

Apart from recruiting resources and/or outsourcing certain key tasks pertaining to open loop systems, the closed loop mobile money organization structure will not change. As such, all best practices discussed in section A of this guide can be followed to ensure that the organization structure of the mobile money services adapts to and grows with the size of the business and its operations.

✔ **Ensure sufficient knowledge sharing between processor, issuer and wallet teams so that each organization understands the overall business model, business case and process flows involved.**

n. Mobile Virtual Card Number (VCN)

Mobile Virtual Card Numbers provide secure, limited use, prepaid account numbers for ecommerce transactions and phone or mail orders. Consumers can request and receive a Mobile VCN via their mobile phone making for a great consumer experience. This capability not only provides underserved mobile money consumers access to shopping online or over the phone when they don't have a card, but also provides both banked and unbanked consumers greater security by masking real account details with a limited use number. It can also be a solution in regulatory environments prohibiting the online use of debit cards. This has great potential in Asia Pacific markets where such debit card use restrictions are common. Adding a Mobile VCN capability is a nice enhancement to any open loop ecosystem with a relevant online merchant base-. Key considerations in setting up a Mobile VCN offering:

- Mobile wallet program managers should look to partner with a provider that offers them great configuration flexibility to meet the needs of their markets. For example, the program manager may want to set limits on use such as velocity, cumulative amount, frequency, validity period, etc. Other best practices for partner identification and partnership establishment as discussed earlier in this section and in section A of this guide can be considered.
- Best practices for mitigating risk and fraud can be found earlier in this section.
- Conduct a balance inquiry upon a VCN request to make sure funds are available to avoid a decline at time of use and a poor customer experience.
- As some online merchants will decline a transaction when detecting multiple VCNs from a single IP address, best practice when using an encrypted channel would be to issue limited-use VCNs as opposed to single-use. This will also allow online merchants to send test authorizations (as is common practice in many markets) without exhausting the single use. If, however, an encrypted channel is not available, single-use is recommended.
- In some markets, online merchants will test a VCN with a few dollars (or local market equivalent). In these markets, best practice would be to set a minimum value for each VCN a few dollars (or local market equivalent) above this threshold.
- As some online merchants will decline VCNs that expire within a week it's important to educate customers that a decline at first use does not necessarily mean the VCN does not work. They should try another site or two before declaring it unusable.
- A best practice would be for a program manager to obtain (in compliance with local laws and other applicable requirements) the ability to communicate with consumers about their VCNs, including:
  - In the case of VCNs that are about to expire, monitor for initial transaction failures from merchants that do not accept such VCNs, and follow with a promotional text message highlighting the acceptance of VCNs at various other online merchants.
  - Advise customers that many merchants will not ship internationally.
  - Remind customers to use the VCN within the validity period.

✔ **Proactively educate customers about the benefits of Mobile VCN while also properly managing their expectations around its use to create a rewarding online shopping experience.**

✔ **Use an encrypted channel to send Mobile VCN to consumer and require mPIN for authentication.**

✔ **If an encrypted channel is not available, it's best for issuer to define a code in lieu of mPIN for authentication. Also, in this case, only single-use numbers should be issued.**

✔ **Set expiration date at least two months beyond the validity period.**

✔ Be mindful of local laws and applicable requirements, including data/consumer privacy requirements.

D. CONCLUSION

Open loop systems, if integrated efficiently, will generally tend to augment closed loop solutions to make them more scalable and sustainable. It is, however, important to correctly estimate the potential scale/client usage that the open loop component will induce and also the type of infrastructure and systems that can be leveraged in order to achieve the intended scale. A few key business cases that are direct results of successfully augmenting closed loop scenarios with open loop solutions are:

- Larger transactions volumes and/or larger transaction ticket sizes
- Unlocking and expanding payment/transaction points
- Enabling clients to enjoy both mobile wallet and card capabilities

As such, mobile wallet providers, processors, banks and global electronic payment networks will all stand to gain from successful and scalable open loop card enabled mobile wallet propositions.

D. APPENDIX 1 - EASYPAISA CASE STUDY

The success factors of Easypaisa:

- MNO and MFI Partnership: A perfect joint venture between a bank and a Telecom operator (both owned by Telenor since Telenor bought out a majority stake in Tameer Microfinance Bank)
- Complementary partner strengths: Huge distribution network with large existing customer base from Telenor and in depth banking experience of Tameer Bank
- Supportive Regulatory Framework for Branchless Banking
- Incremental Product Offerings targeting various customer segments.
- Efficient distribution network strategy: Started with 2000 agents in urban areas and incremented over a period of time to cover rural areas.
- Effective Marketing and Promotion of service

Easypaisa product evolution:

- September 2009: Easypaisa Launch, only agent initiated money transfer and bill payments via approx. 2000 agent points
- February 2010: Easypaisa Mobile Account for all Telenor Subscribers
- June 2010: Easyload – Top Up
- August 2010: Donation
- September 2010: International Money Transfer
- March 2011: Easy Pay
- July 2011: Easypaisa Re-launch
- January 2012: EOBI (Employees Old Age Benefits Institute)
- February 2012: Benazir Income Support Programs
- April 2013: Kushaal Munafa (savings product)

Status as of end 2012:

- Serves more than 5 million customers a month.
- 25 thousand Easypaisa merchants spread across more than 700 cities in the country. (Twice the number of total bank branches and four times the number of total ATMs.)
- More than USD 1.4 billion has passed through Easypaisa and more than 100 million transactions have been processed.

For more information, look up detailed GSMA case study: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/07/Telenor-Pakistan.pdf