

ITU Regional Workshop

“Mobile Payments: The Issues and Prospects for the Development”

- with an emphasis on developments in Africa and Middle East and recommendations

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Three parts:

- **The mobile payment success stories are real but they are also the exception and limited in scope**
- Learning the right lessons calls for clear definition of policy objectives and regulatory frameworks
- Finally, we have to recognize that technology selection plays a major role in achieving maximum success

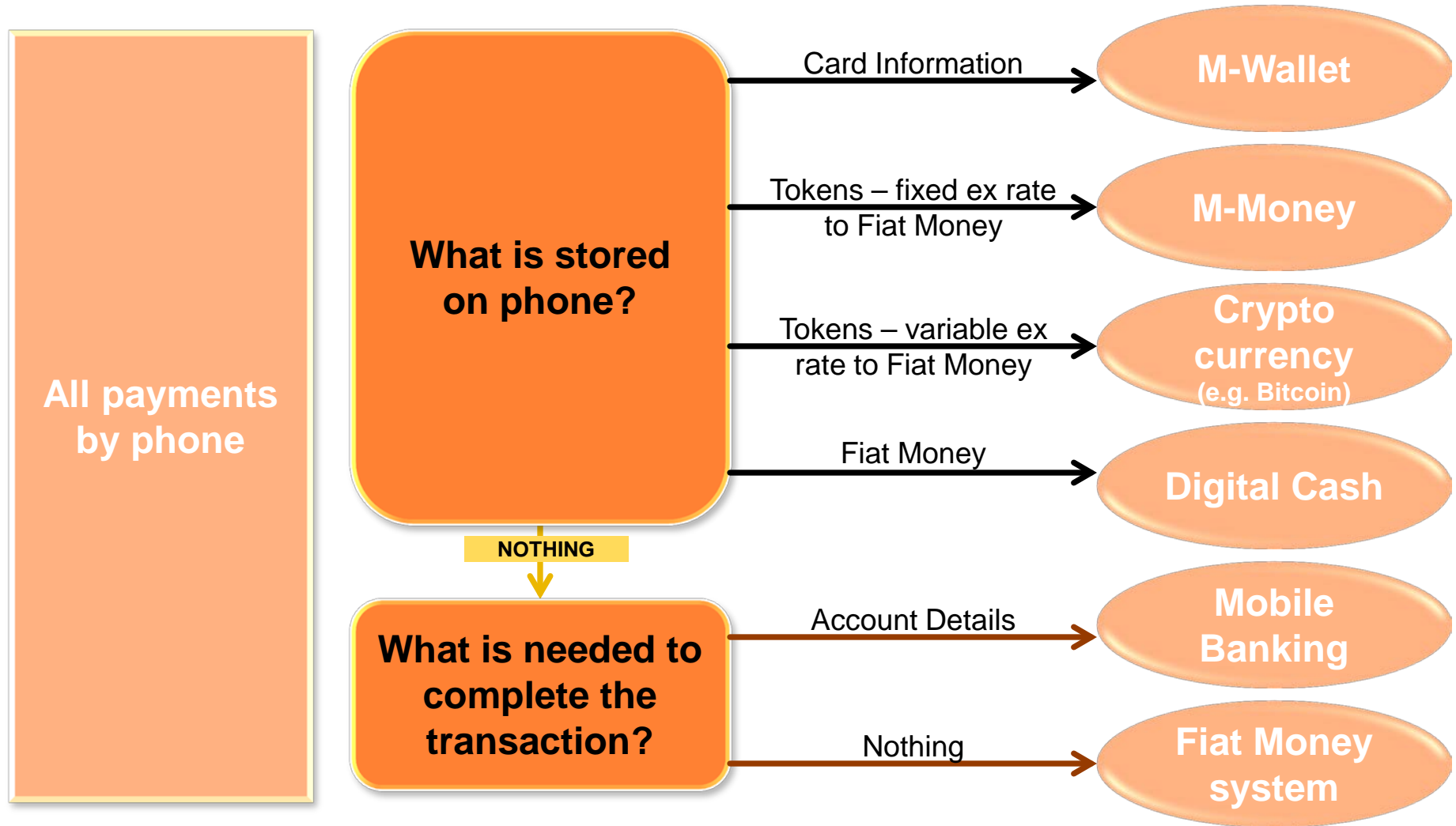
M-Money

- Contingent, private debt owned by the issuer to the user
- Not backed by government of industry guarantees
- Transferred by way of a token or part of a token, cf Bitcoin
- Often implemented on mobiles by SMS
- Regulation restricts amounts due to the dangers presented by such a system

M-Wallets

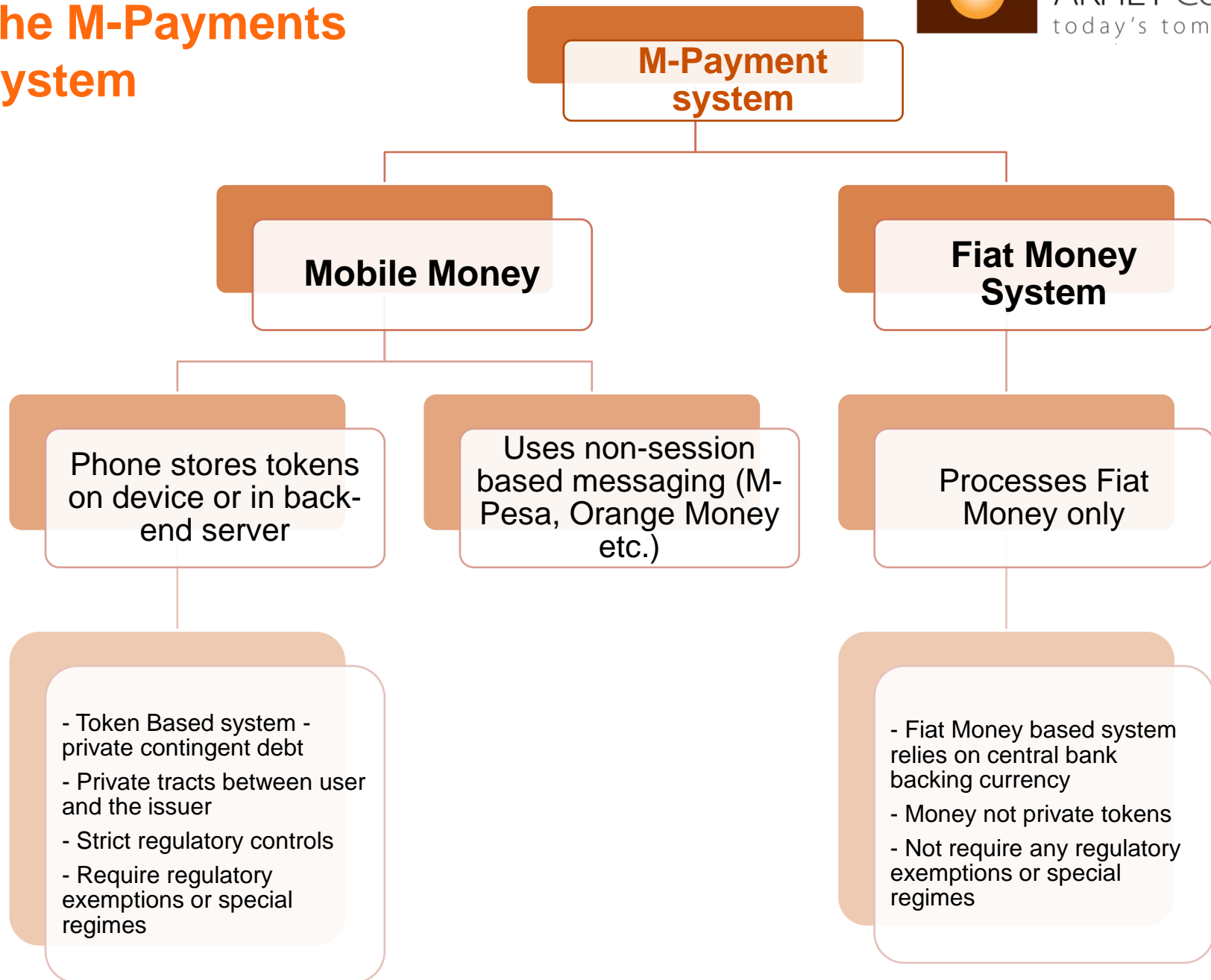
- Facsimile of wallets, namely cards
- Can store card details in the wallet, or can store a token with card details on system provider's server
- Operate using existing payment methods
- Pre-paid m-wallet cards contingent debt in a pre-paid account
- Usually more expensive to use than m-money
- Existing card security issues

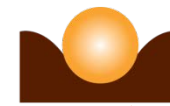
The M-Payments Universe





The M-Payments System





International Experience with Mobile Payments

Apps

- Bank customer checks balances and pay bills
- Only with bank accounts
- User to enter payee's account details
- Personal ID issues

Mobile Wallets

- Payments quicker than swipe
- Expensive particularly for smaller transactions
- Security concerns

Mobile Money Solutions

- Moves money among banked and unbanked and small merchant payments
- Raise monetary policy and security concerns

Real Innovation

- Payments systems designed to meet existing financial regulations and policy requirements

E-Money Enablers

- **Very low cost to operate**
 - No transaction limits except imposed by providers and/or national law
- **Smartphone penetration increasing**
 - enables providers to offer flexible and secure services that target various demographics
 - smartphone platforms provide greater flexibility and power than standard feature phones, and
 - services that provider offers reflect this
- **3G/Wi-Fi is widespread**
 - 4G/4G LTE services/IP networks and interconnectivity
 - enable providers to break free from bottleneck imposed by existing network-based services
 - IP offers a more secure and more robust service
 - security is independent of the network layer and
 - avoids the restrictions presented by SMS and USSD-based services

Mobile Money Solution Providers

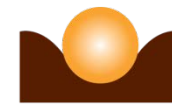
Service perspective - banks (or consortia including banks) are 'natural owners' of payment space:

- Balance sheet efficiency
- Skills in security and regulatory compliance
- Trusted and well-known brands
- Need for partners in many circumstances
- But banks need the right technology platform to support innovation
- Multi-channel delivery
- Security and regulatory compliance
- Integrate with core systems
- Address network requirements of open system
- Cost competitive
- Customizable
- Support continuing innovation into an uncertain future
- Long term – support CRM and roll out of marketing services on segmented basis

As a solution linked to a bank's core systems, Mobile Money Solution Providers can offer significant benefits over mobile wallets and money and meets all relevant regulatory requirements.



Strategic Objectives



- Potential objectives for mobile payments in CIS:
 - Financial inclusion
 - National autonomy
 - Support cross border transactions
 - Full audit trail meeting international Anti Money Laundering (AML)/Counter-Terrorism Financing (CTF) obligations
 - Fiat money or controlled e-money
 - Technology base (cost effective) to support continuous innovation

What is M-Pesa?

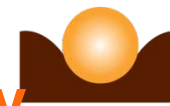
- Launched in 2007
- Initial driver was domestic remittances from worker to family in home village
- Now key part of critical infrastructure
- Supports complete ecosystem of services including – insurance, savings, paying for high priced items like plane tickets etc.

A Business Success

- 40,000 M-Pesa agents across Kenya
- The funds flowing through M-Pesa amount to 43% of Kenya's GDP
- M-Pesa is on 90% of mobile phones in Kenya and has 17 million active users
- Financial inclusion in Kenya is estimated at 80% but drops to 23% if mobile money is excluded
- M-Pesa's owner Safaricom continues to grow strongly despite an 80% market share



The environment is changing significantly



Regulatory

- Central Bank of Kenya (CBK) issues new stringent e-money regulations
- Competition Authority requires Safaricom to open agent network
- Equity Bank, and others, secure MVNO licences
- Payment Systems Management Board (PSMB) in process of establishment by G to include bank and non bank stakeholders
- PSMB to encompass banks and non-bank payment services including MNOs'

Competitive

- Equity Bank announces new capped fee structure
- Safaricom responds with new tariff
- Banks procuring new interoperability capability via KBA (key to ability to compete effectively)



Mobile money in the Middle East

Recent survey showed UAE consumers ready to accept mobile payments, and keen to replace cash with mobile phone payments.

2012 Mobile Money Global Summit highlighted several banks indicated interest in mobile money solutions.

2013 Mobile Money Global Summit highlighted growing need for digital, multichannel payments at request of banks.

Mobile money transfer has already come to the Middle East. Mobile and digital payments are next...

Gulf News, 10 July, 2013

<http://gulfnews.com/business/general/uae-consumers-keen-to-replace-cash-with-phones-1.1207640>

Mobile money catching on as banks join the action

http://www.godubai.com/events/EVENT_page.asp?pr=1359

About Digital Payments 2013

<http://www.mobile-money-gateway.com/event/mobile-money-global-2013/page/about-event>

Money goes mobile!

<http://www.transfer-sendmoney-payroll.com/mobile-money-transfer/>



UAE (1)

- UAE recognizes difference between telecommunications regulation and financial services regulation in terms of purpose and focus
- TRA considers mobile payments non-telecommunications service:
 - Regulates access to networks; and
 - Secures interoperability
- Central Bank of the UAE supervises and regulates all payment and banking transactions
- Still no specific regulatory guidelines on mobile payments
- Services in UAE are modelled on SMS-based systems
- Infrastructure within the UAE supports mobile payments services, but market yet to see any real take-up of services to match success of M-Pesa



UAE (2)

- A number of Smart Government initiatives are introduced to fast-track implementation of advance payment services:
 - NTSM (National Trusted Service Manager) run by TRA; and
 - National Wallet run by UBF (UAE Banking Foundation)
- Addresses customer needs in more developed service environment combining payments, loyalty, rewards, retail promotions, Identity management and transportation in seamless end-user experience
- MNOs active part of strategic initiatives
 - Being showcased in Dubai on 12th-16th October at GITEX
- **Having banks and network operators and other payments service providers to interoperate evolving...**



Today's Discussion – part 2



- The mobile payment success stories are real but they are also the exception and limited in scope
- **Learning the right lessons calls for clear definition of policy objectives and regulatory frameworks**
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Opportunity to Increase Financial Inclusion

Country	Population	% using financial services
Armenia	2.38	9
Azerbaijan	6.27	17
Belarus	8.26	16
Kazakhstan	11.52	48
Kyrgyzstan	3.59	1
Moldova	3.12	13
Russian Federation	122.26	69
Tajikistan	4	16
Uzbekistan	17.77	16
Total	179.17	54

Source: [http://mckinseysociety.com/downloads/reports/Economic-Development/Half the world is unbanked.pdf](http://mckinseysociety.com/downloads/reports/Economic-Development/Half%20the%20world%20is%20unbanked.pdf)

NB: Figures 2011. Awaiting update from ITU



Issues with Mobile Money (1)

1. Regulatory Consistency and Clarity

- For multinationals differences by country e.g. Kenya vs South Africa
- Changes over time e.g. Indonesia
- Uncertainty re future e.g. CBK
- Very different perspectives of telecoms, financial services and competition regulators?

2. Why is this so difficult?

- Half the world is unbanked – widely perceived opportunity
- Perceived trade-offs between management of economy and economic and social stimulus

Issues with Mobile Money (2)

3. The Nature of Money

- Fiat money vs private currencies
- Fractional reserve banking and management of the money supply
- AML/CTF issues

4. The Problem with Digital Form

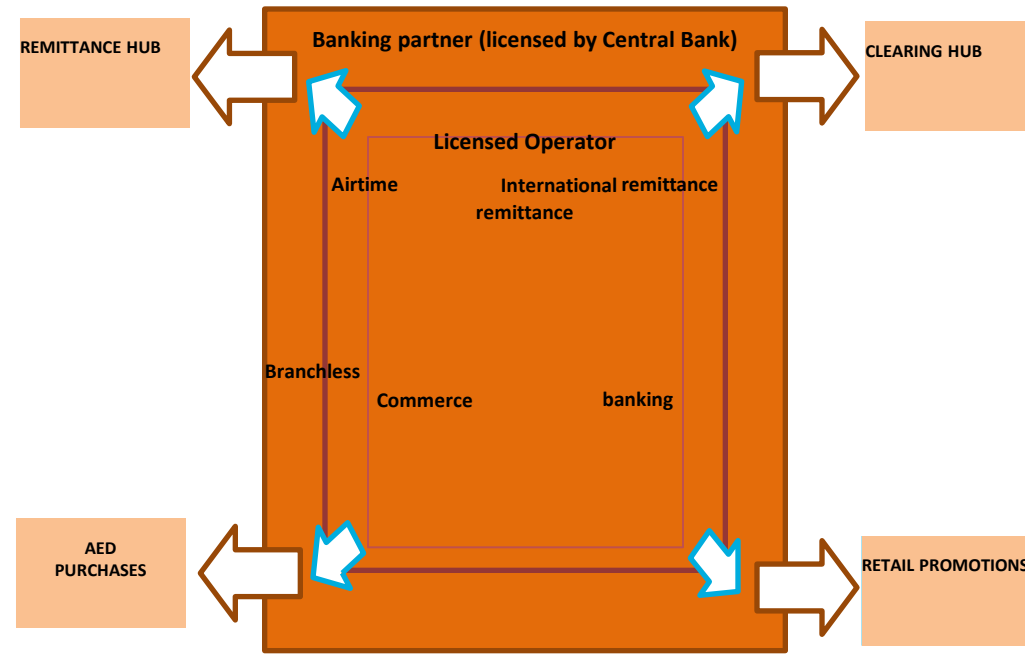
- Security of Mobile Money does not apply
- Physical money offers natural security
 - Cannot 'double spend' physical money or cash
 - Hard to counterfeit so undetectable
 - Easy to track and control amount of physical money issued

Issues with Mobile Money (3)

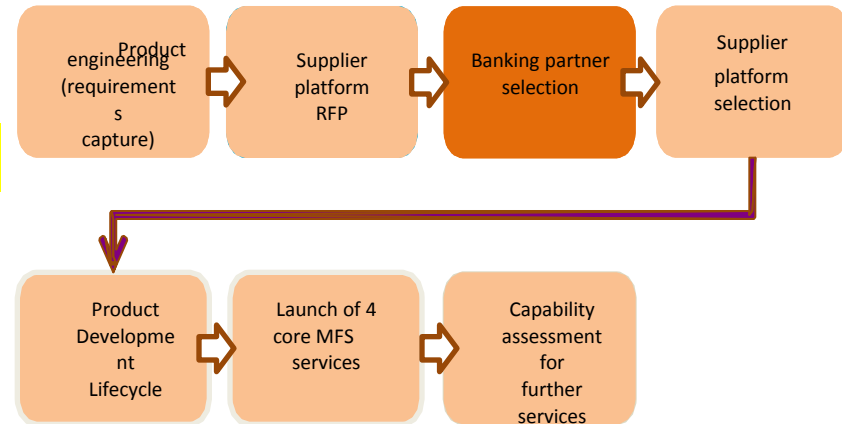
- Much easier to 'print' digital money, and very hard for existing solutions to prevent counterfeiting or double spending
 - Even Bitcoin has issues here and relies on having more honest than dishonest users on the system
- Monetary policy control is at risk due to liquidity exposure of issuers and inability to control or limit counterfeiting
 - Unofficial monetary presses wear out and have a cost of operation; digital counterfeiting by contrast involves very low variable costs

Mobile Financial Services (mWallet)

Telecommunications and banking regulations will directly apply to operator's/banking partner's operations



Commercial deployment pathway (endorsed by CMT)



Regulated services

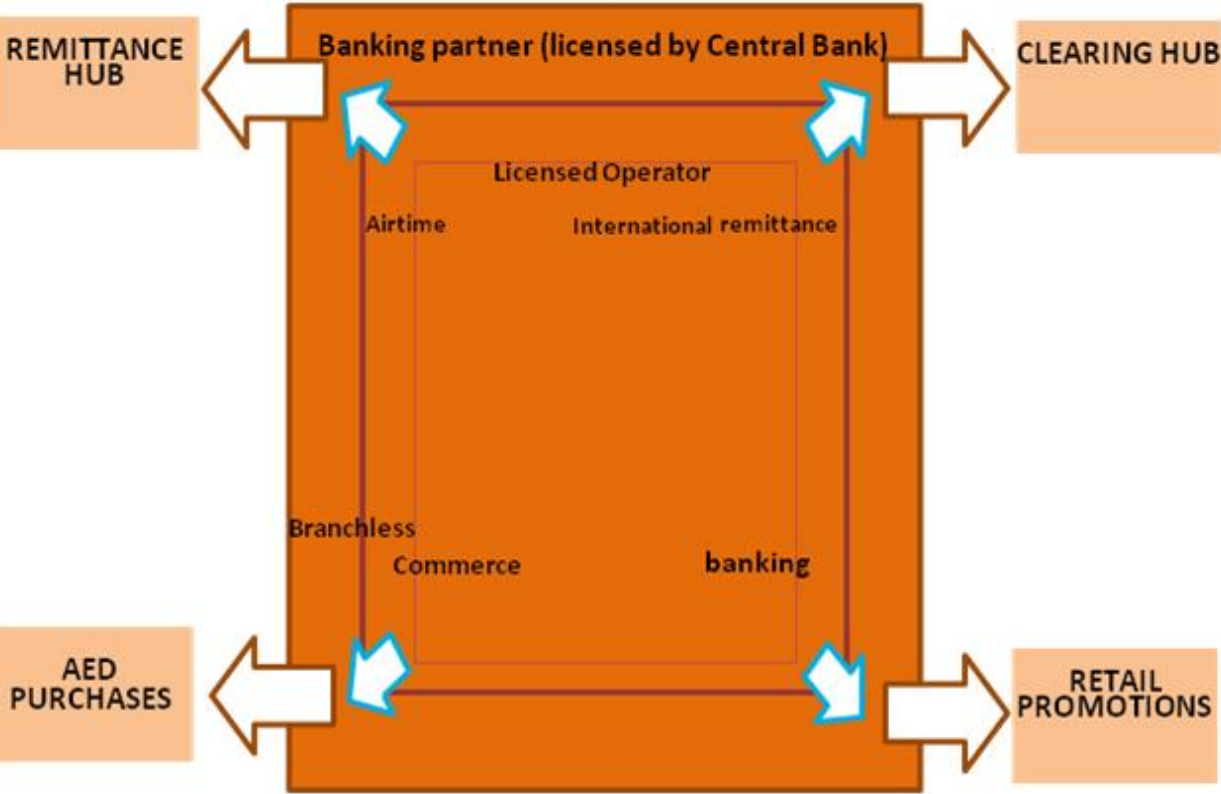
Telecommunications (Public telecommunications licence)

Transmission of MFS services over radio network between Subscribers/ Consumers and banking servers. Backhaul capacity between banking servers LANs/WANs. Network infrastructure.

Banking

International remittance, point of sales commerce, branchless banking, mWallet cash management.

Mobile Financial Services (mWallet)



- Remittance Hub
- AED Purchases
- Clearing Hub
- Retail Promotions

Mobile Financial Services (mWallet)

Telecommunications and banking regulations will directly apply to operator's/banking partner's operations

- Customer Relations
- FRM (Financial Risk Management)
- Privacy of consumer information
- Marketing
- Records retention
- Reporting obligations (TRA)



Mobile Financial Services (mWallet)

Telecommunications (Public telecommunications license)

- Transmission of Mobile Financial services (MFS) over radio network between Subscribers/consumers and banking servers
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- Point of sales commerce
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Regulated services	
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Mobile Financial Services (mWallet)

Commercial Deployment pathway (endorsed by CMT)

- Product engineering (requirements capture)
- Supplier platform RFP
- Banking partner selection
- Supplier platform selection
- Product development lifecycle
- Launch of 4 core MFS services
- Capability assessment for further services

Commercial deployment pathway (endorsed by CMT)





Key activities

- Creating an enabling and supportive regulatory framework
- Establishing a scheme:
 - Establishing a governance model and central utility
 - Drafting and implementing ACH (clearing house) rules
 - Ensuring how this central utility will be funded
- Procuring and implementing technology to empower the scheme

Today's Discussion – part 3

- The mobile payment success stories are real but they are also the exception and limited in scope
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Existing technology focus severely constrains strategic options for MNO's

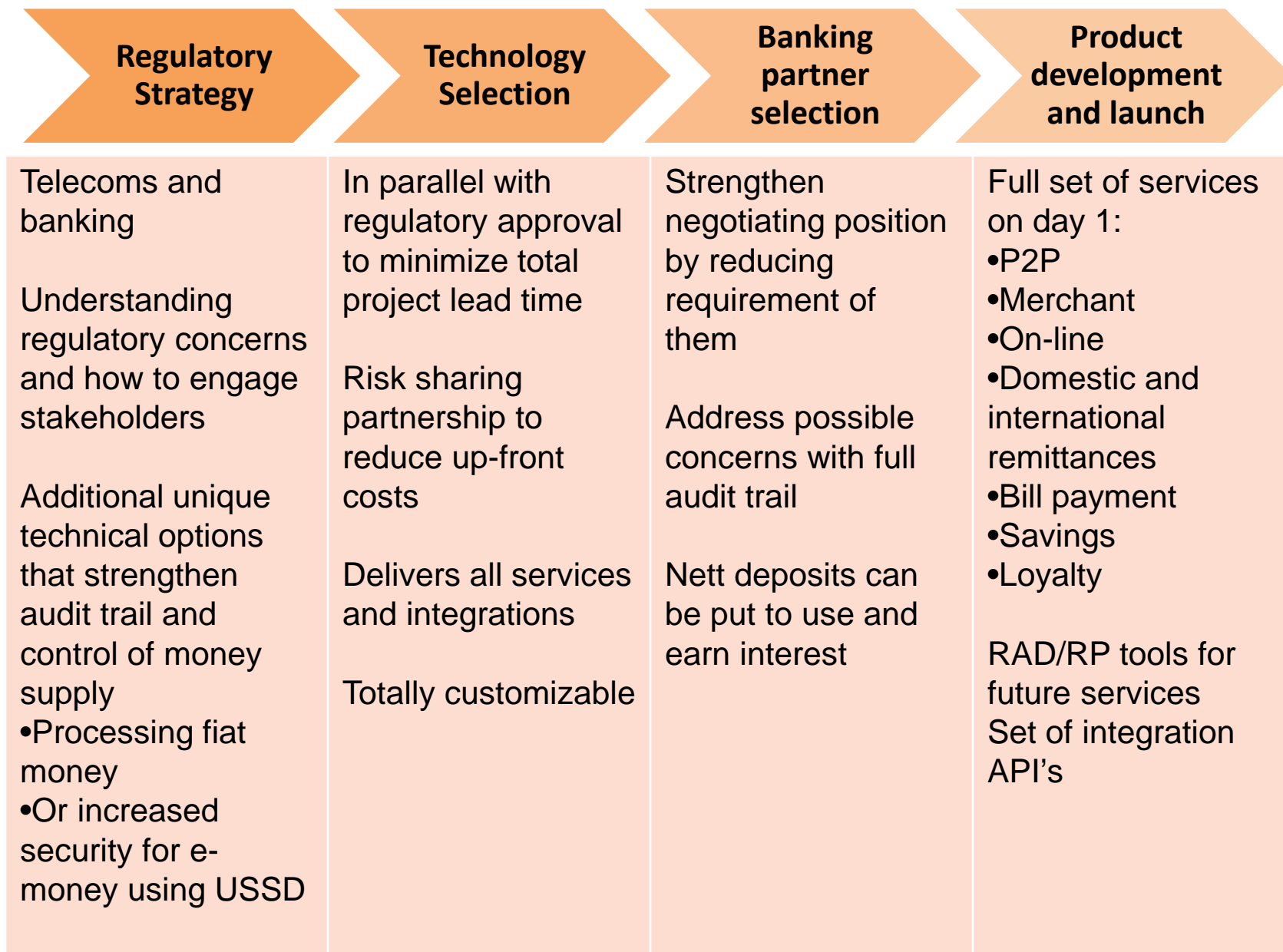
Technology should deliver –

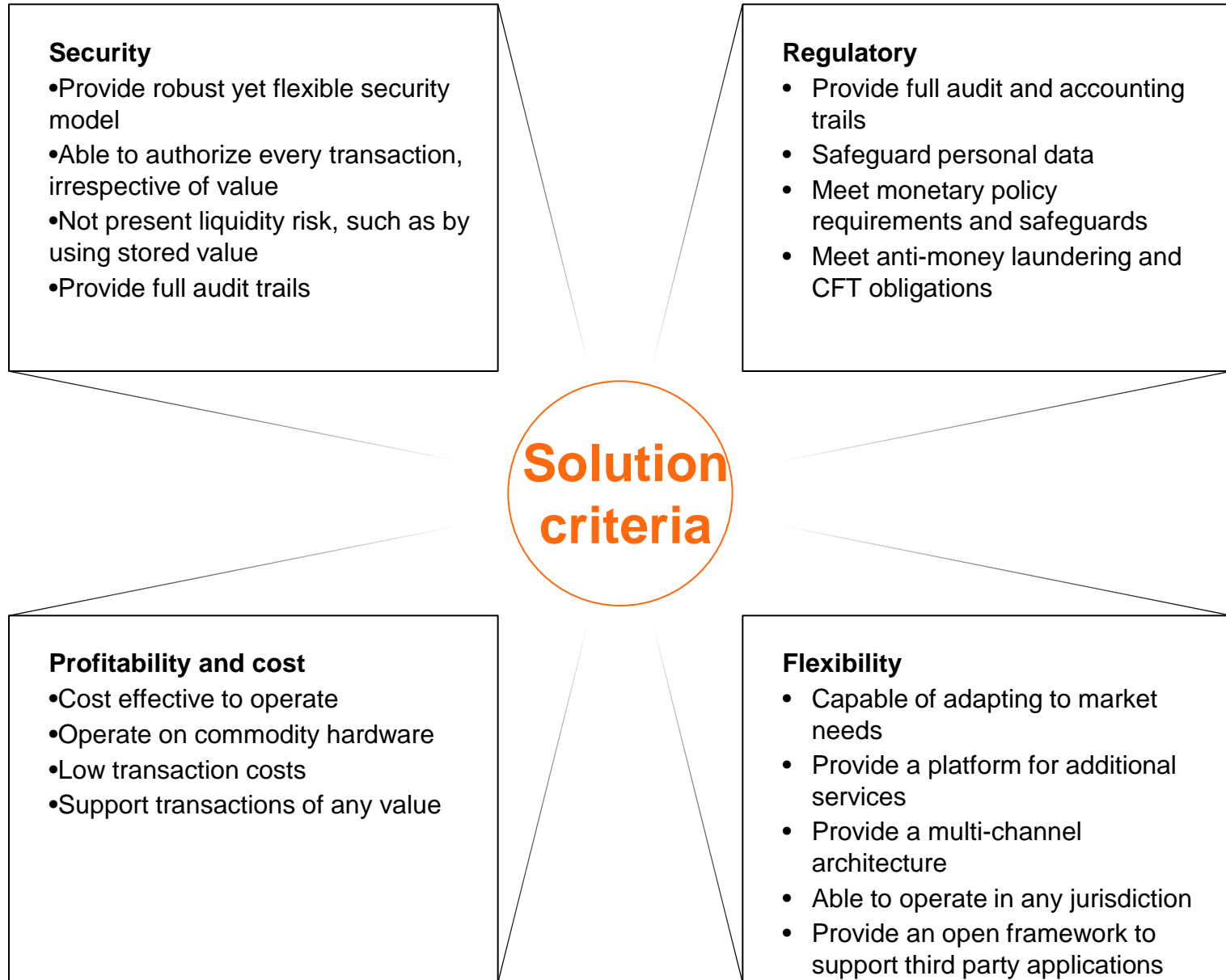
- Real-time processing
- Of fiat money
- From account to account (including temp accounts for the unbanked)
- With a full audit trail
- Bank grade security
- And low cost interoperability
- Using a smart phone or a feature phone

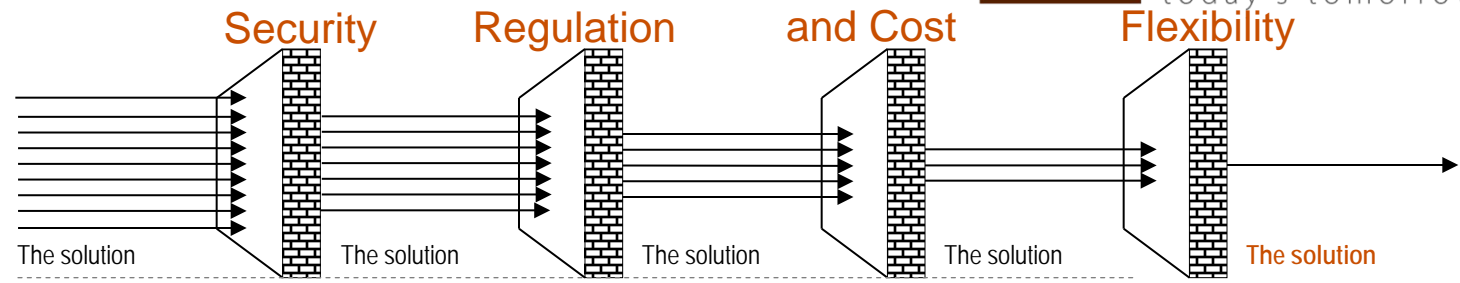
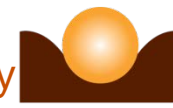


Which opens up strategic options by –

- Meeting current regulatory requirements in full
- Removing uncertainty by designing services to comply with stringent present and future regulatory requirements
- Allowing protection of deposited funds and cost effectively eliminating risks from business case
- Supporting interoperability across banks and other payment service providers not just MNOs
- Supporting launch of sophisticated financial services







The solution

Mobile banking and money transfer solutions

Card aggregators, card emulation, and EMV-based solutions

Electronic money, SMS-based, and stored value solutions

NFC-based and other solutions

The solution

Mobile banking
Mimoney
Instant Money

PayPal

NBAD Arrow
Monitise
Moneygram
Mobilkom
ISIS
Google Wallet

Tpago

Tcho Tcho Mobile
T-Cash
SMART Money
Pingit
Orange Money
Obopay
M-Pesa
m-Nova
Mobi
Luup
Gcash
Digicel Mobile Money
Airtel

VISA payWave

Square
MasterCard PayPass

The solution

Mobile banking
Mimoney
Instant Money

PayPal

NBAD Arrow
Monitise
Moneygram
Mobilkom
ISIS
Google Wallet

Tpago

Tcho Tcho Mobile
T-Cash
SMART Money
Pingit
Orange Money
Obopay
M-Pesa
m-Nova
Mobi
Luup
Gcash
Digicel Mobile Money
Airtel

The solution

Mobile banking
Mimoney
Instant Money

PayPal

NBAD Arrow
Monitise
Moneygram
Mobilkom
ISIS
Google Wallet

The solution

Mobile banking
Mimoney
Instant Money

Key

Name This solution operates in one or more modes that affects the requirements that it can satisfy

Name This solution fails the requirement

Requirement

Solution class comparison



Closing comments

- Main requirements of payments industry
 - Co-operation needed to create ubiquity and scale
 - Regulatory framework promoting mobile payments needs to create conditions for and support of ubiquity
 - Must support interoperability to enable participants to compete within that framework
 - Successful mobile payments framework starts with **clear vision and top-down strategic objectives for any scheme** and **buy-in from critical mass of key industry stakeholders**

Thank you....

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