# chapter 3
# Value-added services

Brian Richardson, Co-founder & group CEO, WIZZIT International

Financial inclusion is a key enabler of sustainable economic and social development. Initiatives by the United Nations and the World Bank Group continue to drive financial inclusion and it has become a priority for regulators and policymakers worldwide.

Out of 7.5 billion people and a mobile phone in almost every pocket, two billion adults worldwide are unbanked. Financial service providers (FSPs), fintechs and mobile network operators offer superior solutions to bridge the gap. However, despite the size, reach and power of banks and MNOs, little impact is being achieved on the number of unbanked people which remains essentially unchanged over the last decade which is shameful.

Regulation is often blamed as a major barrier. What doesn't help either are statements from European Central Bank executive board member Yves Mersch who has given a spirited defence of cash, praising its ability to facilitate privacy, equality and security, insisting there is "no viable alternative". India has spent more than USD1bn to acquire 500 million mobile wallet users – the majority of whom are previously unbanked. A tightening of compliance regulation means that 40 per cent of these accounts will be closed. Paytm has allocated USD500m to get the KYC (know your customer) correctly done for 280 million users. Perhaps most of these customers will simply say 'it is easier to stick with cash'...

Digitalisation is the key to financial inclusion. Basic transactional accounts should be a birthright, together with a concerted effort by governments to remove cash and to support every effort towards financial inclusion. Illegal and illicit activities such as money laundering and funding of terrorist activities are facilitated predominantly through cash. The sooner we accept this fact the better. What is urgently required is the removal of cash and the enforcement of policies that promote simple and seamless access to bank accounts for all. This provides full audit trails of every single transaction. Digitalisation will go a long way to making a meaningful difference.

So Does this mean the creation of digital only banks? McKinsey believes there are five routes to digitalisation that a bank can adopt:

1. Go it alone and transform existing operations. But this is not easy to do, and is very expensive and time consuming.
2. Build a digital bank which could cost close to USD100m.
3. Partner with a specialist fintech. This can be achieved in a matter of months at nominal costs.
4. Partner with a telco/MNO. There are very few success stories here and failures have been very expensive.

Telcos/MNOs have the reach and understand the power of marketing. Banks understand compliance and systems. Fintechs such as WIZZIT can work effectively with both operators and banks in providing digital financial services.

The bulk of mobiles in developing regions are feature phones and the USSD channel provides functionality that is quick, safe and easily accessible from all handsets. For the vast majority, USSD will remain the clear channel of choice for many years to come – it is the most successfully integrated and widely adopted technology for financial services in emerging markets and the lower end of the market.

However, instead of embracing mutually beneficial partnerships, mobile operators in some countries refuse to give banks access to their USSD gateways. These MNOs think that by denying banks access, they can create a bigger market for their own financial service offerings. This is most evident in countries like Angola and the DRC where the unbanked populations are 71 and 89 per cent respectively. This abuse of power is tantamount to anti-competitive behaviour and is creating a major barrier to financial inclusion, something communication regulators should be aware of. The lack of progress in these and other emerging markets may well be the result of the prejudiced practices of telcos gatekeeping access to the USSD gateway.

As smartphones become more affordable, so will the popularity of app-powered platforms as a channel for financial services. However, until there is a dramatic decrease in the cost of smartphones, the number of feature phones will remain at around 70 per cent in developing markets. USSD is still therefore critically important and banks will depend on MNOs for access – unless (and as has happened in some markets) banks get their own MNVO license and control their own destiny. [Editor's note: such as Kenya, for example.]

"Basic transactional accounts should be a birthright, together with a concerted effort by governments to remove cash and to support every effort towards financial inclusion."

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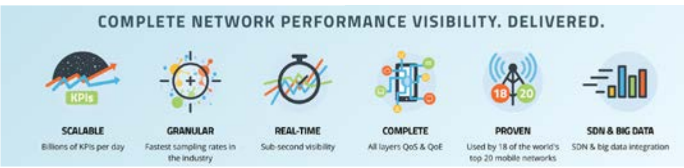


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It will be argued that banks cannot be all things to all people and effectively service all segments of the market. It will also be argued that financial regulators are not there to protect banks from innovative competition from non-banks such as MNOs, Apple, Samsung, Google, Amazon, PayPal and Alipay. However, governments and global agencies are putting enormous pressure on banks to drive financial inclusion and this is taking on increasing importance.

The mobile banking industry globally started some 12 years ago with WIZZIT (South Africa), *M-PESA* (Kenya) and *GCash* (Philippines) recognised as the early pioneers. It is interesting to note that there has not been a single successful partnership between banks and MNOs despite numerous attempts. Perhaps a truly strategic collaborative model is still way off and competition between banks and MNOs is here to stay – at least for the foreseeable future. The question is whether or not this competition is supporting global efforts on financial inclusion through digital financial services.

Customers are demanding digitalisation: they want a safe place to keep their money; they want to be able to access it; they want to be able to make payments; and they want to be able to build a financial track record so that they can avail of credit when they need it. To do this, they certainly do not need to go into a branch. As someone once said *"banks are dead – long live banking"*. If banks do not respond the chances are, much like the post office, they will have great infrastructure with very few customers and relevant products. Some opinion leaders are even giving the banks a lifespan of five years if they do not re-invent themselves and embrace the digital age.

## *The way forward*

Digitisation and mobile penetration will continue to drive the growing trend of MNOs and FSPs infiltrating each other's space to gain traction in new services. However, these rapidly blurring lines are bound to spark territorial claims regarding customers. This could impede financial inclusion if it lacks the required consumer protection measures and regulations.

The next major wave is around e-commerce and online shopping. Retail stores globally are closing rapidly. Almost 50 per cent of the world's population are totally excluded from this convenient and cost effective way of shopping because they do not have the means to pay – e-commerce and online shopping simply do not work with cash. However, of the currently banked people with access to credit cards, 50 per cent do not shop online because of the fear of fraud and their credit card being skimmed. Hence the introduction of a virtual card gives banks and FSPs a massive opportunity.

Governments must regulate competitive behaviour amongst all role players and promote cross-sector collaboration towards financial inclusion. It is essential for countries to enforce policies that promote responsible financial access, financial capability, innovative products and delivery mechanisms. Any initiative that promotes financial inclusion should be praised and much work needs to be done.

McKinsey go on to claim the global benefits of financial inclusion include:

- An additional 1.6bn financially included people
- An increase in deposits of USD4.2tn
- An increase in credit of USD2.1tn
- The creation of 95 million jobs
- A six per cent GDP increase of USD3.7tn

This is surely an opportunity that banks quite simply cannot ignore. And if they do, others certainly will not. ■

*Brian Richardson is the co-founder and group CEO of South Africa-based WIZZIT International. He is recognised globally as a disruptive innovator in the financial services space, and has fostered powerful partnerships with major FSPs around the world to advance mobile banking technology. The above article is based on his blog that was first published at www.wizzit-int.com in February 2018 and is reproduced here with kind permission.*

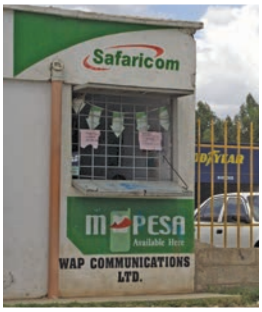
## MFS dominate African VAS

Mobile financial services and mobile money in particular, continued to dominate the continent's value-added services market last year.

2017 was a milestone for **Safaricom** which marked 10 years since the launch of *M-PESA* in Kenya. In early March, the operator published the findings of a study carried out by KPMG which used 'Social Return on Investment' principles to evaluate the impact of the mobile money system. It revealed that the social value generated by *M-PESA* grew from KES83m (USD851,702) in 2007 to KES184bn (USD1.8m) by the end of March 2016. According to the research, *M-PESA* customers were the biggest beneficiaries of this social value, receiving a return in value of KES160bn (USD1.5m) as a stakeholder group in the financial year ending 2016.

Speaking at the time, Neil Morris, climate change and sustainability director at KPMG South Africa, said: "Although Safaricom earns growing revenues from the *M-PESA* product, the social value it has generated for customers continues to exceed the financial benefits to Safaricom in each of the years since its inception."

The study also found that the platform had attracted 20,000 customers when it was first introduced in March 2007. By March 2016, the service had more than 16 million users, while the value of transactions rose from KES10.3m (USD101,764) to KES5.2tr (USD5.1bn) over the same period. Safaricom added that KPMG's report complemented recent findings




**Since its launch in March 2007, it's claimed M-PESA has lifted 194,000 Kenyan households out of extreme poverty.**



### JANUARY 2017

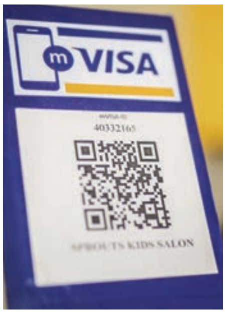
UK-based digital money transfer provider SimbaPay has launched its money transfer service to Ghana and Uganda. Using the SimbaPay app or website, people living in Europe can now send money to users in the two countries instantly. Transfers are credited within seconds to the recipient's mobile money wallet. SimbaPay also delivers money transfers via mobile money and bank accounts to other African countries, such as Nigeria and Kenya, and says that more destinations and partners are being sought for addition in 2017.

### FEBRUARY

Mobile users in Zambia will be able to receive regular updates on their favourite celebrities and sports clubs following Zamtel's launch of Kirusa's *InstaVoice* services. Using the voice blogging feature, celebrities can record voice messages which are delivered instantly to fans, creating what Kirusa describes as a "voice *Twitter*-like experience". Subscribers can also opt for a sports content service to receive daily football alerts and updates from their favourite clubs. Content include team news, pre- and post-match analysis, and quotes from players and managers.

### MARCH

In a study carried out on behalf of the Communications Authority of Kenya (CA), consultancy firm Analysys Mason reportedly recommends a "functional separation" of Safaricom's mobile money service from its core telecoms business. The CA issued a press statement which said that it has no intention of taking such "drastic" actions that would create disruptions to potentially destabilise dominant market players, and that it did not regard dominance in any market segment as an offence.




**Customers use the Ecobank Scan+Pay system with mVisa by scanning a QR code at the point of sale with a smartphone, or entering a unique merchant identifying code into their feature phone.**

by economists from MIT and Georgetown University in the US who found that *M-PESA* has so far lifted 194,000 Kenyan households out of extreme poverty.

Given the need to 'bank the unbanked' in developing markets, two of what could be arguably described as the world's most famous multinational financial services corporations have been ramping up their activities in Africa in recent years.

For instance, **Visa** and Ecobank joined forces in what they said was a strategic tie-up that signals interoperability on a cross-border level. They launched Ecobank's *Scan+Pay* system with *mVisa* solutions across 33 African countries, enabling consumers to use their mobiles to directly access their bank funds for person-to-merchant or person-to-person transactions.

It's claimed the combined system delivers instant and secure cashless payment for goods and services. Customers use the service by scanning a QR code with a smartphone, or entering a unique merchant identifying code into either a feature phone or smartphone. The payment goes straight from the customer's bank account into the merchant's account, and provides real-time notification to both parties.

Ecobank said the new service will accelerate digital commerce and overcome some of the challenges merchants have faced using traditional point of sale systems, such as the cost of installation and the need for electricity and internet connectivity.

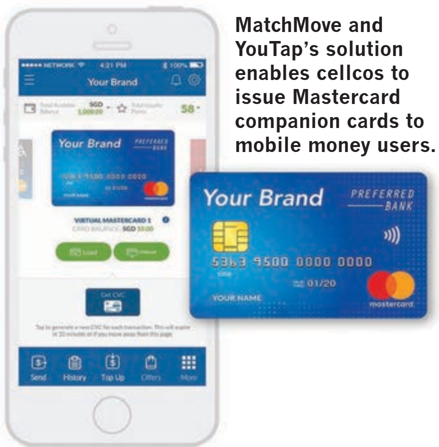
Ecobank *mVisa* solutions also allow users to send money instantly to any Visa cardholder worldwide. The companies said that this was a "major innovation" that serves the need of Africans living overseas, enabling them to send money home quickly and securely.

Not to be outdone by its rival, **Mastercard** promised to "empower" more than 150,000 micro, small and medium enterprises (MSMEs) in Kenya in 2017 by giving them access to its *Masterpass QR* system.

The company said MSMEs have traditionally struggled with the cost of installing payment infrastructure such as POS devices, as well as with issues of security surrounding payment. It claimed *Masterpass QR* (Quick Response) combats these challenges in a "simple and user-friendly" manner, helping to stimulate the economy by digitising a sector previously solely dependent on cash-based transactions.

In Kenya, the company began introducing its mobile solution via various mobile banking applications in February. This enabled consumers to pay for in-store purchases by scanning a QR code displayed at the checkout on their smartphones, or by entering a merchant identifier into their feature phones.

Mastercard said *Masterpass QR* can be used at any supported location across Africa. Along with Kenya, the system is already available in Rwanda, Tanzania, Uganda and Ghana, as well as in Nigeria which was the first market on the continent to see the launch of the platform in September 2016 following a partnership with the Ecobank Trans International Group.




**MatchMove and YouTap's solution enables cellcos to issue Mastercard companion cards to mobile money users.**

Mastercard's global goal is to connect 40 million micro and small merchants to its electronic payments network by the end of 2020. By then, it reckons *Masterpass QR* will have been rolled out to 33 countries across Africa.

In a separate move, Mastercard is helping **MatchMove** to provide **Youtap**'s customers in Africa and Asia with an off-the-shelf payment acceptance solution for mobile money wallets. Founded in New Zealand in 2007, Youtap is a global provider of contactless mobile money payments and financial services software. Airtel and MTN are listed as among the MNOs in Africa that use *Youtap Pay*, its mobile money payment processing platform.

The firm has integrated MatchMove's secure mobile wallet solutions with its platform for the acquisition, processing and settlement of credit, debit and pre-paid cards linked to a mobile money wallet. The combined solution enables MNOs to issue Mastercard companion cards to their customers. Cards can be branded and integrated with the cellco's current mobile wallet app, and allows users to buy products online and in stores.

According to the partners, there is growing global demand for Mastercard companion cards connected with mobile money accounts. Shailesh Naik, CEO of Singapore-headquartered MatchMove, said: "Our partnership with Youtap will expand the availability of our secure cashless solutions for mobile operators around the world, thus creating a new channel to bridge the gap between mobile money and end users."

As well as offices in Asia and the US, MatchMove planned to open new premises in South Africa and Dubai to support its global growth.

In a separate development, Mastercard also launched **2KUZE**, a digital platform that connects smallholder farmers, agents, buyers and banks in Kenya, Uganda and Tanzania.

### APRIL

FreeConferenceCall.com has launched in Tanzania to give families, businesses and communities instant access to simple conferencing services for free. The cloud-based technology aims to save users money in long-distance fees. Once they have created and activated an account using their email and password, users can invite up to 1,000 participants via phone or VoIP with in-country dial-in numbers. Video conferencing and screen sharing can be added by downloading a collaboration tool to host free online meetings. The firm said there are no hidden charges and participants can talk for as long as they want, paying only standard local rates.

### MAY

x-Mobility is helping to drive a major East African network operator's quest to extend its subscriber base beyond its national boundaries and increase revenues. According to the UK-based mobile virtual network aggregator, its platform will enable the cellco to offer an OTT app that gives subscribers a local mobile number – wherever they are – through a virtual SIM. Local or international users can then make and receive calls or texts from anywhere in the world at a flat rate without roaming charges and without the need to replace their existing SIMs.

### JUNE

Tigo Rwanda has gone live with Ericsson's 'as a Service' model for its complete BSS needs. The solution covers charging, billing, provisioning, mediation and roaming functionality, combined with advanced customer care and self-care solutions for management and ordering of services. Ericsson claims the partnership will enable Tigo to better serve its customers with new and innovative offerings together with

*2KUZE* (Swahili for 'let's grow together') enables farmers to buy, sell and receive payments for agricultural goods via their feature phones. The platform aimed to bring the benefits and security of mobile commerce and payments to farmers in the three countries.

In an initial pilot scheme at the start of the year, *2KUZE* was launched in partnership with non-profit organisation Cafédirect Producers Foundation. The trial saw 2,000 small-scale farmers in Nandi Hills, Kenya using the solution to sell their produce and working with farmer-friendly agents to ensure they reach the right buyers for the best price.

"80 per cent of farmers in Africa are classified as smallholder farmers having less than 1-2 acres of farming land, making it extremely difficult to drive growth and prosperity within this community," said Daniel Monehin, division president for sub-Saharan Africa and head of financial inclusion for international markets at Mastercard. "We believe that by using mobile, a technology that is so ubiquitous among farmers in Africa, we can improve financial access, bring in operational efficiency and facilitate faster payments."

*2KUZE* was developed at the Mastercard Lab for Financial Inclusion in Nairobi which was set-up in 2015. Through an USD11m grant from the Bill and Melinda Gates Foundation, the lab is working with East African entrepreneurs and other stakeholders to develop local products rooted in what Mastercard says is its "global knowhow".

Meanwhile in Nigeria, even legendary footballer Kanu Nwankwo signed up for some mobile money action by becoming the brand ambassador for Azimo. According to the UK-headquartered online digital money transfer service, as many as three million Nigerians receive money from overseas every year, with more than GBP20bn sent back home in 2015 alone. But it said that the fees charged by legacy providers were "very high". Azimo claimed that it offers the best rates and zero fees to Nigeria, saving customers as much as 10 per cent. The company added that users can also send money from their mobiles, tablets or PCs to any bank in Nigeria in as little as six seconds.


**Kanu, known as 'Papilo' to his fans, claimed Azimo was enabling Nigerians living abroad to send money back home faster and at "radically cheaper" rates.**

To celebrate its partnership with the former Nigeria captain and Arsenal striker, Azimo pledged to make a donation to the Kanu Heart Foundation for every transaction sent to Nigeria.

March saw the launch of a new app in Uganda in an effort to drive what was described as a "crucial need" for insurance on the continent. **SureBüddy** works on *Android* devices and is designed to be simple and easy to use. The app renders advertisements and the developer then uses the revenue this generates to reward the user directly with cover. The company claimed that the ad images are non-intrusive, use very little data, and disappear with a click.

SureBüddy initially started with a non-insurance product in order to build up consumer trust, as spokesperson Johan Basson explained: "Starting with screen cover means that clients will feel immediate gratification – when their phone screens break, they can have them repaired immediately. The only thing the user will ever pay for is an administration fee to the repairer of a maximum 10 per cent of the repair value."

Basson reckoned this will make users feel "more comfortable" with the idea of insurance, adding that the initial purchase decision is easy because it's free. "Over time, they can change to insurance products such as life cover, as their trust increases from this experience."

SureBüddy implemented the first phase of the service by providing screen cover in conjunction with Phone Doctor. It has also partnered with Africell in Gambia, Sierra Leone, DRC and Uganda.

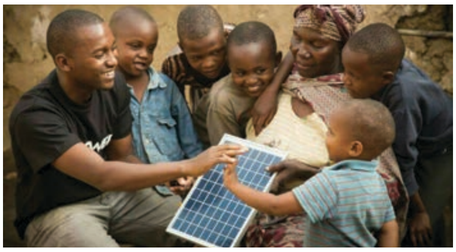
## Bringing power to the people

In early 2017, **Orange** and France-based energy specialist **ENGIE** began work to deploy around 1,000 solar kits in Senegal, Côte d'Ivoire and Cameroon. Several villages in rural areas were identified to participate in the first phase of a pilot programme prior to a larger-scale rollout.

The kits include a solar panel connected to a battery that can be used to power LED lights, small electrical appliances, or recharge mobile phones. ENGIE is supplying the solar kits and is also responsible for installation and maintenance.

The kits also contain a remote control solution and a mobile payment system. Orange is ensuring the commercial deployment and management of billing via *Orange Money*. This enables customers to pay the rental charges for using the equipment, and allows them to pay by instalments rather than through an upfront investment.

The companies said the kits offer a low-cost alternative to kerosene lamps, disposable batteries or diesel-powered devices, which are all potentially dangerous pollutants.



**The kits include a solar panel connected to a battery that can be used to power domestic appliances. Billing is managed via Orange Money.**

In what was claimed to be a world first, in July we reported that a new solar electricity service was being pioneered in Nigeria. Designed and operated by Abuja-based **Lumos Mobile Electricity Service**, the *Y'ello Box* was launched earlier in the year and provides solar electricity which consumers pay for using their **MTN** mobiles. Customers can sign-up for the service at their local MTN shop. After paying a one-off fee, they receive a kit that comprises a large 80W

shorter time to market, improved customer experience and increased operational efficiency.

### JULY

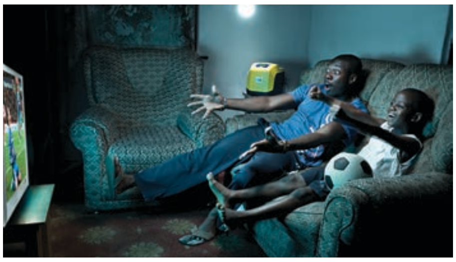
Sub-Saharan Africa accounts for more than half of all mobile money deployments worldwide, according to the GSM Association. In its latest *State of Mobile Money in Sub-Saharan Africa* report published in July, the GSMA says the number of live mobile money schemes in SSA reached 140 across 39 countries at the end of last year, accounting for more than half of the 277 mobile money deployments globally. It says that there were 277 million registered mobile money accounts across SSA at the end of 2016, plus 1.5 million registered agents.

### AUGUST

Safaricom has announced the availability of revamped APIs for its *M-PESA* service, providing the capabilities for anyone to build and deploy their solutions on top of the platform. The operator reckons these enhanced capabilities for developers will usher in an age of increased interconnectivity for the mobile money platform, which will support a wider range of capabilities for several different partners.

### SEPTEMBER

TerraPay and Instant Cash have teamed up to enable real-time cross-border money transfers to mobile wallets. A B2B company incubated by Mahindra Comviva, TerraPay has developed an interoperability engine to enable real-time transactions to be sent and received across diverse payment platforms and regions. Instant Cash customers can send remittances to mobile wallets run by rival operators in Tanzania, Nigeria and Uganda.



**Thousands of people are using Lumos' system in Nigeria to power lights, TVs, mobiles, etc.**

solar panel and cable, an eight-socket power unit, USB mobile phone adapter, and two LED lights. An "easy" self-installation kit enables users to mount the solar panel on the roof and connect it to the indoor power unit. They can then access electricity from the unit by making a payment via their mobile airtime. Once the payment has been credited, the service unlocks and customers can access electricity 24 hours a day.

Lumos claimed it was already benefiting more than one hundred thousand people in homes, clinics, schools and businesses across Nigeria. The company's CEO Yuri Tsitrinbaum said: "The *Y'ello Box* saves customers money all while providing better and more reliable electricity. It's time we did more to harness the power of the sun. That is why the *Y'ello Box* is changing so many lives. It is affordable, it is reliable, and paying by mobile phone makes it easy."

In a separate development further south, **MTN** extended its partnership with energy and financial services firm **Fenix International** to launch pay-to-own solar home systems in Zambia.

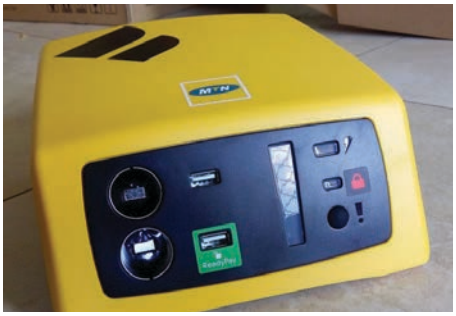
The Swedish Embassy in Lusaka has committed nearly USD3m (SEK24.75m) to Fenix between now and 2020. The funding is provided as part of the *Power Africa: Beyond the Grid Fund Zambia* (*BGFZ*) initiative which is managed by the Renewable Energy and Energy Efficiency Partnership. *BGFZ* has been setup to accelerate private sector growth in clean energy generation and enable a million people to access such energy. USAID is contributing an additional USD750,000 to Fenix. Its support is provided as part of the *Scaling Off-Grid Energy: Grand Challenge for Development* programme which aims to create up to 120,000 new connections in off-grid communities across Africa.

The Zambian launch represented Fenix's first step to expand the availability of its *ReadyPay Power* system across the continent. This provides what's described as "ultra-affordable" solar power to people living off-grid. They can buy the system with instalments of as little as USD0.20 per day via *MTN Mobile Money* until they have paid in full. Fenix uses these continuous micro-payments to generate a credit score, enabling customers to access additional system upgrades or financial services.

The two companies had already been working together in Uganda where it's claimed that Fenix's more than 120,000 customers have so far generated in excess of three million payments via mobile money.

Wane Ngambi, MTN Zambia's head of mobile financial services, said: "In the past, MTN was focused on voice and then data. We've been working on unlocking the potential of *MTN Mobile Money* for many rural consumers who have gone without access to basic financial services for far too long."

Fenix expects to reach 850,000 people living in rural Zambia by 2020. According to the firm, around 15 million inhabitants live without access to the electrical grid, representing 80 per cent of the total population and 95 per cent of rural residents.



**At the heart of Fenix's technology is the ReadyPay Solar Power system. Customers can purchase it by paying low-cost instalments via MTN Mobile Money.**

"Over 90 per cent of rural Zambians lack access to electricity and have no options other than dangerous candles and kerosene lanterns to light their homes," said Lyndsay Handler, CEO, Fenix International. "Ten years from now, we hope to eliminate the use of candles and be an important part of our customers' lives across Zambia."

She added that with MTN's distribution networks, Fenix will be able to reach unbanked and off-grid customers. "Once power and credit are established, the possibilities to bring other life-changing products – from smartphones to financial services – are endless."

## m-Health

The **Vodafone Foundation** introduced a pioneering mobile-based HIV programme in Lesotho, where an estimated 23 per cent of the population is HIV positive.

The programme was developed in conjunction with the country's Ministry of Health and was initially rolled out in the Maseru and Leribe districts. It combines Vodafone's *M-Pesa* mobile money service with travelling clinics and a smartphone app designed for healthcare professionals which enables the tracking of patients in remote areas.

The clinics use a fleet of 4x4 vehicles and provide on-site HIV testing in remote areas as part of a wider effort to provide basic primary healthcare. When people are identified as HIV positive, they are immediately registered with the *M-Pesa* service and receive the funds needed to pay for transportation to a treatment centre.

At the same time, their details are recorded, via mobile, on a central database so that their future treatment and care can be planned and recorded. These details can then be recalled in real-time by healthcare professionals in the field using a smartphone app developed by the Vodafone Foundation and Vodacom Lesotho.

Following the first rollouts, the Lesotho government committed to launching the programme across all other districts and

### OCTOBER

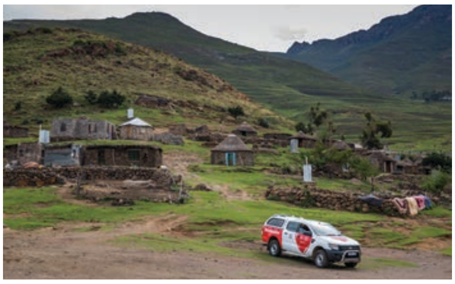
Accra-headquartered IT solutions specialist Subah reckons its *Mobile Money Monitoring Suite* (*M3*) protects consumers against fraud and identity theft, and tackles tax evasion, money laundering and revenue leakage. The standalone software is installed at the operator's NOC and is designed to capture, analyse and record all mobile money transactions, including information about the sender, receiver and operator.

### NOVEMBER

Lumitel has claimed a "giant leap" for Burundi's economy as subscribers can now pay government duties and fees via its *Lumicash* mobile banking service. Developed with the country's Office of Revenue, the operator reckons *Riha OBR* via *Lumicash* will make life "easier" for citizens. It says instead of "waiting all day" in front of the OBR offices, subscribers can use their mobiles to pay taxes and fees remotely. But it adds that the service can only be used for "small" sums.

### DECEMBER

Econet's new pan-African media division has launched a new IPTV video on demand service. It claims *Kwesé Play* will be "slicker and faster" than anything currently available on the continent. The firm will leverage Africa's largest fibre network available through sister company Liquid Telecom which acquired Neotel in 2016. According to Econet Media, Neotel holds "leading-edge" 4G and 5G spectrum capability which is being configured to carry video. The company promises more than 100 VOD services including content from Roku, Netflix, YouTube, RedBull TV, *et al*.



**The travelling clinics use a special mobile app and a fleet of 4x4 vehicles to provide on-site HIV testing in remote areas of Lesotho.**



integrating it within the country's primary healthcare strategy. It was expected to be fully funded by the government from mid-2017.

Meanwhile in West Africa, the local **Red Cross Society of Côte d'Ivoire** (RCSCI) launched a mobile app to spread awareness about its mission and activities. It also provides resource mobilisation opportunities to increase the organisation's membership and volunteer base, as well as tools to improve community engagement.

Founded in 1960, the RCSCI now has 12,000 volunteers throughout the country. It operates 50 local branches with an additional 26 first aid teams capable of rapid deployment in emergency situations.

Its new app supports mobile devices with *Android* and *Apple iOS*, and offers users a variety of features, including membership access to the organisation's services and benefits, as well as volunteer opportunities in local projects. It can deliver up-to-the-minute emergency alerts, both nationally and locally, as well as information such as locations of blood donation centres. In addition, users can register for training courses and events, access the organisation's news, purchase Red Cross equipment through a dedicated marketplace, etc.

The app was built in partnership with Connectik, a UK-based company that develops digital services for enterprise and large member organisations. Connectik also helps governments in the development of their digital policies. The RCSI said it was encouraged to digitise its


**The RCSCI App offers users a variety of features to support the Red Cross in Côte d'Ivoire.**

operations and improve its services following the success of the apps Connectik developed for the Red Cross in Kenya and South Africa.

## Boosting business and services

**MTN Rwanda** is using a system from **Digitata Insights** to enable new digital marketing channels on its network. Called *MeMe*, the platform has been developed to offer brands, advertisers and digital agencies the ability to reach out and engage with consumers.

It delivers selected marketing messages to MTN's subscribers on their mobile devices in "an unobtrusive manner", according to Digitata Insights. The company said its system has the ability to target consumers based on demographics, time of day and location, and that its "advanced" profiling capability ensures that the right person is targeted to help ensure messages are not viewed as spam. *MeMe* is also said to offer various engagement options including 'call me back' messages, surveys, app downloads and voucher offers, as well as customised methods such as bespoke gamification campaigns.

MTN's use of the platform came amidst heightened enforcement in Kigali of a 2013 by-law aimed at regulating outdoor advertising. This requires agencies to modernise billboards to improve safety, aesthetics and functionality. Digitata said *MeMe* therefore provides a modern digital advertising solution for MTN Rwanda.

In Egypt, **Orange** deployed **Openet**'s *Real-Time Offer Manager* (*RTOM*) along with reporting tools in a bid to improve subscriber experience and increase data revenues. Openet claimed that the platform enable the operator (formerly Mobinil) to better target upsell offers to its users, thereby increasing uptake rates and reducing churn. The Ireland-based BSS specialist said its solution allows real-time offer presentation via intelligent contextual offer mapping.

Upsell offers are triggered by real-time customer context (e.g. usage information, application access, location, profile, etc.) in order to enhance their relevance. These are then sent in real-time to the subscriber's device and are presented by push notifications via Orange Egypt's self-care mobile app.

Openet believes the ability to deliver contextually relevant and highly targeted offers will play a pivotal role in improving the operator's profitability. It claimed that by deploying *RTOM* combined with real-time reporting capability, Orange has "significantly" cut the time to market for developing and launching new offers and customer packages. It added that this has further enabled the operator to react faster to competitor deals.

In May, we reported that **Opera Software** plans to invest USD100m over the next two years to facilitate the growth of Africa's digital economy. The

**Opera's Africa VP Richard Monday (third from left) said the firm will build a platform to strengthen the continent's internet ecosystem. Also pictured from left to right: Jørgen Arnesen, global marketing head; Folarin Komaiya, business development director, Opera Nigeria; and Song Lin, COO, Opera Software.**

Norway headquartered web browser specialist said its aim was to speed up internet adoption on the continent and strengthen the digital ecosystem with local partners.

According to Opera, Africa is on its way to transforming itself into a digital continent with the rapid adoption of the mobile internet. For the past five years, the firm claims its *Mini* browser has been a "key facilitator" in bringing more than half of the region's internet population online by featuring tools for lowering data costs.

Speaking at the time, Richard Monday, Opera's VP for Africa, said: "We aim to invest heavily in Africa, to build a local platform and grow with the local business partners. This platform will expand the user base for content providers, e-commerce businesses, operators, OEMs and others to strengthen the African internet ecosystem."

Opera said its focus was now on making the next generation of browsers to cater to the needs of local web users. For example, to bring more first-time internet users without the fear of high data costs or lack of local relevant content, the company planned to invest in developing what it described as a "state-of-the-art" AI engine for smartphone users. It claimed Opera users in Africa will get fully personalised and localised content delivered to their browser, the entry point for their internet experience, while data usage can be reduced by up to 90 per cent.

The company said it is working with more than 47 top tier African publishers covering 107 websites as part of the initiative. It was also seeking local partners to integrate value-added services, mobile payment and data bundling into its browser product. Furthermore, Opera said it was expanding with new offices in Lagos and Nairobi to support business and product development. These will add to the premises it currently has on the continent in Cape Town and Johannesburg. The firm aimed to hire around 100 people for its new offices over the next three years.

According to Monday, nine of the top 20 countries globally that use Opera's *Mini* web browser are African. In November 2016, the company announced that it had notched up 100 million monthly users on the continent, and claimed that *Mini* was now the region's most popular mobile browser. This was partly corroborated by separate research by Jumia. In its *Mobile Africa Study* published in April 2017, the Nigerian online retailer carried out surveys in 15 countries which generate more than 80 per cent of Africa's GDP: Algeria, Nigeria, Morocco, Tunisia, Egypt, Mozambique, Ghana, Côte d'Ivoire, Cameroon, Rwanda, Uganda, Tanzania, Kenya and Senegal. It revealed that while 50 per cent of customers on the continent access its mobile site using *Google Chrome*, that figure falls to 28 per cent in Nigeria. Here, *Mini* is more popular, with 41 per cent of Jumia Nigeria's mobile traffic coming from the browser.

**Telma** (**Telecom Malagasy**) is hoping to fuel its mobile growth and enable innovative VAS, such as its *MVola* mobile banking application and pre-paid online reload service, with the help of Sicap.

Part of Axian Group, Telma is said to be Madagascar's leading telco and offers services delivered via its nationwide mobile, fixed and fibre networks. It is now using Sicap's mobile *Device Management Centre* (DMC), USSD and USSD *Menu Browser* solutions. Citing 2015 data from the GSMA, the Switzerland-based vendor said Madagascar's mobile broadband and SIM penetration is only around 30 per cent. It said that despite providing a "great" revenue growth opportunity for local operators, the prevalence of low-cost handsets in the market makes it hard for cellcos to make profits.

**Telecom Malagasy CTO Jerome Valentin said Sicap will enable the launch of VAS that can be used with low-end devices.**

"Low-cost devices are costly for operators as they are more difficult to connect to a network and the owners frequently seek for support from operators' care centres," stated Sicap. "The under-developed mobile device base also makes implementation of value-added services challenging for mobile operators."

Telecom Malagasy CTO Jerome Valentin said using the vendor's USSD and *Menu Browser* solutions will enable the implementation of innovative VAS which can be used by low-end features phones as well as smartphones. He added: "Sicap's *DMC* automatically detects and configures most device brands in the African market and handles devices with fake device identification code (IMEI)."

**Movicel Angola** is protecting its SMS network and aiming to maximise revenues with the help of **Sparkle**, the international service arm of Italy's TIM Group. It is using the company's *SMS Booster* which is described as a "sophisticated" all-in-one solution that allows mobile operators to take control of their SMS incoming traffic. According to Sparkle, *SMS Booster* detects and blocks messages delivered via unauthorised originations which turn into revenue leakage. It said the system not only helps to fully monetise SMS traffic but also improves customer satisfaction as it blocks spam and all fraudulent SMS traffic.

As Movicel's exclusive SMS international application-to-person gateway provider, Sparkle said it boosts revenues for the operator by collecting SMS traffic from its wide customer base which comprises SMS providers, OTT players, and enterprises. This latest solution from Sparkle is in addition to the existing voice interconnection and other mobile data services it has implemented for Movicel in Angola.

In May, **Facebook** said that the number of people connected to its platform across Africa had grown 42 per cent since 2015 to reach more than 170 million monthly active users. Of these, it said 94 per cent access the services via mobile devices.

"Facebook is deeply committed to Africa, a mobile-first continent where seven in 10 of all connected people use the platform," said Carolyn Everson, VP of global marketing solutions. "Many people in Africa are coming online for the first time, unleashing new possibilities for people and businesses alike. We're also seeing growth of small- and medium-sized businesses that are driving economic development, companies that Facebook wants to help grow locally and regionally across the continent."

As a result of the expansion, Facebook moved its Johannesburg offices into new premises. Everson said this was part of the company's "ongoing commitment" to invest in the African market and work with innovators across its key target countries.

Nunu Ntshingila, Facebook's regional director for Africa, reckons the firm has grown from "strength to strength" since first establishing a direct presence in sub-Saharan Africa in 2015. She said: "We have enjoyed working closely with entrepreneurs, partners, developers and small

**The year ahead:** In research published last November, Ovum said mobile data will be the main growth driver in Africa's telecoms market, with the number of mobile broadband connections set to more than double from 419m at end-2017, to 1.07bn at end-2022. It said this increase in data connectivity is accompanied by rising data revenues for operators, and is creating a platform for new, digital services.

The firm believes it is also shaking up Africa's telecoms, media and technology (TMT) market. Facebook said earlier last year that it had 170m active users in Africa, which means it has more customers on the continent than the MTN Group which had 165m mobile subscriptions at end-1H17.

"Data connectivity is growing strongly in Africa, and there are also good prospects on the continent in areas such as digital media, mobile financial services, and the Internet of Things," said Matthew Reed, practice leader MEA at Ovum. "But as Africa's TMT market becomes more convergent and complex, service providers are under increasing pressure to make the transition from being providers of communications services, and to become providers of digital services."

The GSM Association would agree here. In its 2017 *Mobile Economy* report for sub-Saharan Africa also published last November, it said that although economic pressures are expected to ease across the region in the coming years, revenue growth will remain subdued for the remainder of this decade due to the increasing "cannibalisation" of traditional voice and messaging revenues as subscribers shift to alternative platforms.

It stated that IP messaging has become the top use case among smartphone users across the region; according to GSMA research, up to 90 per cent of smartphone users in Nigeria, South Africa and Tanzania use at least one IP messaging service, such as *WhatsApp*, *BBM* or *Facebook Messenger*, regularly.

The report said: "Uptake of IP services varies across the region, but the general trend is in the same direction: rising smartphone adoption and mobile broadband penetration rates are fuelling the shift to IP services. With traditional voice and messaging services accounting for more than 70 per cent of service revenues for many operators in the region, this trend is expected to weigh on overall revenue growth for the foreseeable future."

"Slowing growth from traditional services underscores the need for mobile operators to implement new strategies to drive overall growth and ensure the long-term sustainability of their operations. Strategies already in play include consolidation and revenue stream diversification."

**Carolyn Everson, VP global marketing solutions (left) said Facebook wants to help SMBs grow locally and regionally across the continent. Also pictured is regional director for Africa, Nunu Ntshingila (middle) and Nicola Mendelsohn, VP EMEA.**

businesses as they have used Facebook as a platform for growth. It's inspiring for us to learn from the continent and to play a role in helping people and organisations connect with the world."

In September, Senegalese fintech firm **InTouch** announced that it will work with global integrated energy producer Total, and transactional services specialist Worldline, to bring a new mobile payment solution to the continent. *Guichet Unique* ('single window' or 'one-stop shop') has been designed to provide retail networks with what's claimed to be a "unique customer-friendly" device that makes it possible to securely and seamlessly accept all means of payments, including mobile money, cards, as well as cash. The system also enables retailers to distribute third-party services, such as subscriptions to media content, bill payment, money transfer, card top-up, banking and insurance.

Under the agreement, Total and Wordline are supporting the implementation of the *Guichet Unique* platform in Burkina Faso, Cameroon, Côte d'Ivoire, Kenya, Mali, Morocco and the Republic of Guinea. It is already installed in more than 170 Total service stations and more than 600 independent points of sale in Senegal, where the platform is said to manage more than 30,000 transactions per day.

InTouch went on to target deployments to more than 5,000 retail network and independent points of sale in the above mentioned African countries. As part of the agreement, Total and Worldline are funding the first phase, and will also become shareholders in InTouch alongside its founder Omar Cissé. As well as providing its payment expertise, Worldline said it will provide secure, enterprise-class hosting infrastructure to support the rollout and operation of *Guichet Unique*.

## Video future

Video traffic on mobile networks in Africa doubled from 2016 to 2017, increasing from 8.6 to 18.1 per cent, according to research from **Sandvine**. For its *Global Internet Phenomena* report, the network intelligence specialist gathered data from a selection of its 300-plus communications service provider customers in Africa, Asia-Pacific and the Middle East. It found that *YouTube* is driving video growth in Africa, and continues to be the top mobile application in both APAC and the Middle East. Sandvine predicted that the rapid growth of video in Africa will make it the top app on the continent by mid-2018.

The report also revealed that WAP browsing, typically associated with feature phone use, has seen its traffic share cut in half in Africa over the past two years. Sandvine said this is indicative of increasing smartphone adoption in the region.

The vendor believes that the rapid growth of video on mobile networks in Africa underscores the need for operators to have solutions in place that allow them to measure, monetise, and optimise the real-time entertainment traffic that subscribers value. Speaking earlier last year, Tom Donnelly, Sandvine's COO for sales and global services, said: "These strategies have been extremely successful for our customers in both Asia-Pacific and the Middle East, and has allowed them to provide their subscribers a high quality of experience when using the applications they care about most."

**Falcon Media House** (FMH) joined forces with **Media Nucleus** and **Quiptel** to offer an OTT service to millions of users in Africa and Asia. The partnership enables FMH – a UK-based global digital media group – to offer an OTT platform to medium- and large-sized broadcasters, as well as parts of its content portfolio to local content service providers.

Media Nucleus specialises in broadcast and pay TV solutions, and its clients include East African satellite broadcaster Zuku TV. The company is using FMH's *Q-Flow* technology to enable customers to experience high quality video streaming. It's claimed this overcomes the challenges of congested and slow connections to deliver content to the end user using the most efficient and cost effective route. FMH reckons this results in "seamless streaming over even the most challenging networks and mobile conditions".

The two firms are working with Chinese business-to-business OTT platform provider, Quiptel. It has integrated with Media Nucleus' subscriber management software to provide billing solutions to customers.

The partners added that their joint solution will enable broadcasters and cable companies to increase their market share with lower capex, as they will not need to invest in hardware and lay new network cables. ■

**Thomas Chalumeau, MEA strategy director, Orange**

Thomas Chalumeau believes that providing value-added services in Africa is more important than ever because the region is a land of growth.

"If you look at the population, it is younger than other regions in the world. The average age is less than 30, and they are driving a huge demand for digital services. The middle classes are developing and represent a third of the population, and more families are online. Additionally, there is still a low banking rate, and mobile-based services are heavily relied upon given the lack of physical infrastructure compared to the huge appetite for services."

Chalumeau mentioned the continent's low banking rate. But while 'banking the unbanked' remains a worthy quest, when it comes to mobile operators developing VAS in developing markets such as Africa, would he agree that the main focus for cellcos only seems to be around mobile money and mobile financial services?

"Providing mobile financial services has been the most prominent and pervasive of diversified services in Africa. But it is certainly not the only one, and is also not the only one that's rapidly growing. Just based on the countries Orange operates in, we are developing new services and usages in areas as diverse as B2B, e-commerce, energy, e-health, agriculture, cyber security, digital services for education and teaching, just to name a few.

"Take energy for example. In Africa, very few companies have, until now, thought of deploying an electricity grid in very rural areas. But today, for USD50 to USD200, one can buy a kit including solar panels and a battery."

Chalumeau is referring to Orange's partnership with France-based energy specialist ENGIE to deploy solar kits in West Africa (*see Year in Review, p40*).

"We also have a role to play in energy in cities and regions that are already electrified. Smart metering enables Orange to help states combat fraud, which is a big issue today. We are also helping customers to manage their energy spend. For example, it is possible for a bar owner to purchase two hours of electricity so that they can, say, broadcast a football game, which can be paid for by mobile payment."

Moving on to other VAS, Chalumeau said in Mali, approximately 400,000 farmers rely on mobile applications to check weather forecasts or track market prices for selling their crop or purchasing fertiliser.

"Another example is in the growing demand for digital services in teaching and education covering services such as training or mobile learning tools.

With 50 per cent of Africa's population under 15 years of age, Orange has been working to translate the contents of the Khan Academy into French to help make the world's largest e-learning platform accessible to more Africans."

Of course, Chalumeau remains keen to point out that while mobile money services may not have been successful for some operators – such as MTN and Vodacom who both shut down their mobile money operations in South Africa in 2016 – *Orange Money* has been a hit.

"The success of mobile financial services is directly correlated to the unbanked rate in a country which is, for example, lower in South Africa than other parts of Africa. I can't speak for these other operators but *Orange Money* has been very successful for Orange and continues to grow not just in terms of the number of users and transactions, but also in the different types of services that we now offer beyond just payments."

Those successes have not been easy as he goes on to explain that operating on the continent continues to present challenges.

"The regulatory and tax environment remains difficult for telecoms operators. We are still confronted with high taxes – for example, taxation in Guinea represent 75 per cent of our revenues there. Regulatory constraints, such as the identification of customers, can also mean a very heavy burden for operators, and the acquisition of licenses in terms of pricing and terms of payment can be challenging."

For Orange, overcoming the challenges involves ongoing dialogue with regulators and governments. Chalumeau believes that it is critical for African states to understand that a "normal" level of taxation can not only help to generate more revenues for governments but can simultaneously encourage investment in the country so that everyone benefits.

He continued by saying that another criterion to deal with in terms of challenges is having a clear business model and a long-term commitment to the continent.

"Orange's investment in Africa is around EUR1bn each year, making us one of the largest private investors on the continent. We also invest heavily through research and development because we know that by boosting growth in Africa we can create new income, not just for Orange but also helping to generate wealth for the countries to help create jobs, support locally grown talent, help skills development, and create new opportunities and usages for Africans.

"At Orange, our strategy has been to take a more global, ambitious but long-term approach because we see an opportunity and a role to become a major partner in Africa's digital transformation. We are doing this in four key areas.

"Firstly, we are committed to accelerating the digital transformation of usages, services and customer relationships. Secondly, excellence in our traditional business (connectivity, customer services, pricing, network sharing) is key. Thirdly, we are mobilising key growth drivers such as the development of uses, financial services, and services for the digitalisation of companies. And lastly, we're committed to supporting and developing job skills and opportunities created by the new digital society in diverse areas ranging from agriculture and health to e-government or agriculture. There is always more that can be done. Encouraging, supporting and nurturing local, entrepreneurial innovation is essential. That's one of the main reasons why we at Orange created new R&D centres and development teams, including Orange Fab, our seed accelerator in Abidjan, Cairo and Amman."

Orange Fab is a startup accelerator programme launched by Orange that aims to support innovation and entrepreneurship. Born in Silicon Valley in 2013, the programme is now present in 14 countries in Europe, Africa, the USA, Middle East and Asia. Under the initiative, selected startups are given three months of support to enable them to develop their products and services. They also receive advice from Orange innovators and experts as well as a number of entrepreneurs.

"Orange opened incubators in five African countries: CTIC in Senegal, Ebene in Mauritius, Cipmen in Niger, Createam in Mali and Saboutech in Guinea. Designed with inclusive, horizontal governance to unite the public sector, private sector and civil society, the originality of this model lies in this co-creativity which is designed to nurture the emergence and development of very small, small and medium businesses, and startups. This approach is also being deployed in other countries on the continent.

"In June 2017, Orange Digital Ventures also launched a new investment initiative devoted to startups in Africa. The group is committing 50 million euros corresponding to half of the direct investments made via its new Orange Digital Ventures Africa programme; the other half is devoted to indirect investments through specialised funding for Africa."

Jonathan Hoehler, GM of sales & marketing, Digitata

In June 2017, 4Sight Holdings acquired Digitata on a share for share basis for an undisclosed sum. Incorporated in Mauritius, 4Sight presents itself as an international technology holding company and earns its income through its subsidiaries, mainly from licensing intelligent algorithms in an SaaS annuity revenue model. Digitata has retained its operational autonomy, and its management, 150 staff and product offerings remain unchanged.

We caught up with Digitata some months later at Mobile World Congress in February 2018, and asked Jonathan Hoehler what the previous 12 months had been like for the firm in Africa. He was keen to point out that Digitata does not just provide services to African operators and looks at emerging markets as a whole.

"Our established market is and will continue to remain sub-Saharan Africa. But we have customers and emerging customers in South East Asia, Latin America and in the Middle East, each with their own different challenges.

"Global operators are battling with churning subscribers. That has been a common thing for many years. Subscribers are reducing their average usage per month and that is obviously affecting the mobile operators bottom line because they are seeing their customers using less and wanting more."

Hoehler said the challenges that operators are facing in Africa are unique to the region, citing price elasticity as an example. "You have got a subscriber that has a finite amount to spend and you have got all these services that are being piled up. Where does the subscriber get the best possible benefit? How do you create that value for a subscriber while maximising their spend on the services that you're providing? Because 99 per cent of those subscribers have a finite amount of money to spend and you need to look at stretching it as much as possible.

"Multi SIM card usage has been common for many years now. We have seen Chinese and Indian manufactured devices with two, three or four SIM card slots, and subscribers running SIMs from multiple mobile operators simultaneously in the devices. Those subscribers are looking for offers in near real-time to see where the best value is. And that is what we're looking to help mobile operators with. They need to know how to extract that value, how to keep their SIM in the device as the primary one for the user, and how to increase active days for the subscriber.

"So ultimately you need to create the relevance for the mobile operator that enables the subscriber to say this is my mobile operator of choice because I believe I'm getting a greater value proposition by the offers I am being presented with."

Looking back over 2017, how did Digitata perform with this kind of business in Africa? Hoehler said the year was good and that the company saw a lot of engagement with mobile operators. He added that the firm had been very fortunate in that it has actually grown with its operator customers, especially in fiercely competitive markets, such as Malawi and Uganda for example, where there is a high propensity for price elasticity.

"We have seen an influx of many companies coming into Africa because it is still regarded as the untapped mobile market. You have millions of active SIMs in the market in a population of 1.1bn people and the penetration rate is still growing. So as a vendor participating in that space, it is important to be always creating that additional value. We have to constantly ask ourselves if we are being innovative and bringing value propositions to our mobile operator clients that they can pass onto subscribers? That is a big challenge. We see the need to innovate and the need for near real-time personalised offers to help operators increase their metrics.

"And it is not just looking at the quarterly metric and saying we have increased ARPU from this point to this point and satisfied our shareholder value. I have got some mobile operator clients looking at metrics on an almost daily basis now and asking themselves if they are improving active days, minutes of use, and revenues. And as an extension of that, they are putting offers, campaigns and value propositions into the market that are quick and effective in trying to get those returns. That is where I think the market is changing now."

And that, according to Hoehler, is where Digitata comes in. Many operators have stated that they don't want to manage networks as their aim is to engage with subscribers and provide services. Does that work in the VAS provider's favour?

"As is well documented, it is very expensive to run mobile networks in Africa – you have the high cost of diesel, theft, maintenance when you're out in rural areas, etc. So how does the operator maximise its investment? How does it sweat those assets a lot better? These are some of the business challenges that we are also facing. So it is not necessarily about revenue improvement, active subscriber days, increasing subscriber value propositions – it is also about saying to the mobile operators that you have made this investment on your network, so how do we get most out of that investment?

"Some of the value propositions that we are bringing to the market reflect that. For instance, we look at value propositions to subscribers based on time, location and the customer segment that they belong to – high medium or low value. That's our *Dynamic Tariffing* platform. And that is all integrated into our intelligence algorithm of processing that determines what is the right price to deliver to the right subscriber.

"I will give you the classic example (and I am oversimplifying this). The operator has already made an investment in the network which is good when it is humming at 100 per cent capacity at 6pm, but perhaps not at 3am when it is not so busy but still has to be run.

"Let us stop milking our subscribers for everything that they have got and let's actually create value for them."

So how does the operator get the most out of the network at three o'clock in the morning? It is very hard for operators with standard pricing offers to change the price. This is where we come in. We say let's create a value proposition at this time of day and at this location that gets the network being used. It is not going to be used anyway, so let's give the subscriber a 90 or 99 per cent discount, get them loyal so that he or she knows they can actually use that service at that particular time.

"And now, suddenly, you have got subscribers on your network using your services that are not going to waste; you are sweating your assets better and creating a return on investment. That is what we do with mobile operators. So it is not just about the revenue."

Cellcos are likely to want other insights and intelligence about their subscribers that can be offered by not only specialist players but also by the bigger vendors. So why should they come to Digitata?

"Our bread and butter has been Africa and we were built in this market. Of course, Africa as a whole is made up of multiple markets and multiple dynamics, and that means you have to be able to understand what leverages those particular markets. We believe that our home experience and being present in the markets gives us a distinct advantage over new entrants coming in.

"There are a lot of guys offering very similar types of solutions to us, but where is their track record in developing markets? It's very different from, say Europe, where you have unlimited bundles, pay your five euros and get so much. Subscribers in Africa can't afford those five euros. Unfortunately, that is the reality of the subscribers that we're working with. So once again it is about how we create the value propositions that address that? It is our understanding of the market that allows us to do that and compete against the likes of the bigger companies coming in to Africa."

When asked what plans Digitata has for Africa in 2018 and beyond, Hoehler said that it all boils down to that 'Eureka' moment for mobile operators. "If we have done our job properly, we have created a return on investment for our customers which of course means great results for us. We need the mobile operators to take a step back and say 'We need to do this, and we need to do this right. Let us stop milking our subscribers for everything that they have got and let's actually create value for them'.

But that's a longer term view. I think a lot of operators take a short term view on things, but that is just the pressure of shareholder value – you have to show excellent results and always be improving. What they should also be looking at is how they protect that subscriber and how they can grow with customers and take them on a lifestyle journey.

So for me the year is more about mobile operators embracing the idea of working with companies like ourselves in order to give phenomenal value propositions to their subscribers and not just do the same old offerings that haven't worked.

"It is a mindset. Developing this value proposition becomes a very time-consuming exercise and a mobile operator battles with that. So how do we automate it? How do we create that intelligence and that machine learning? That is what we're doing. The operator needs to understand that we are not developing prices in an *Excel* spreadsheet any more. We are using Big Data, we are using all the subscriber's interactions, who they're talking to, etc., and we are combining all those metrics together to be able to give operators the best possible opportunity to be able to achieve their KPIs. This is not the early 2000s. Cellcos can no longer just put a price frame in the market and then, three months later, come and revisit it. The world has changed."

**Magnus Moller Petersen, EVP sales & marketing, Sicap**

Sicap has not said much about its activities in Africa over the last few years but it seems that the company now has a renewed focus on the continent – is that the case? "Yes and no," said Magnus Moller Petersen. "Sicap has been chasing business in Africa all the time but I think we invested too little in the outbound marketing and the messaging. Perhaps Sicap forgot to share success stories that focus on the company and the values that it provides."

Sicap's roots go back to 1997 when a small team of engineers in Switzerland from Swisscom came up with what was the first SIM-based system for pre-paid billing. Although it was successful, the solution eventually became usurped by network-based pre-paid billing technologies. But by that time, the team that had come up with the original idea had built up expertise in USSD solutions as well as device and SIM over-the-air management. This paved the way for Sicap to be setup as an offshoot of Swisscom.

Over the years, the company has seen some changes in leadership and style. In 2013, a management buyout team purchased the company from Swisscom. In 2016, Sicap's CEO Thomas Vontz was diagnosed with cancer and sadly later died. Markus Doetsch has since taken over the company's helm bringing in some new team members including Petersen who joined at the start of last year.

"I was heading sales and marketing at Mobilethink, and had been working there since around 2005 up until the end of 2016. Mobilethink was doing some of the same stuff as Sicap in terms of device management and customer engagement, and I was working with different operators such as Vodacom, Airtel, Globacom, Millicom, amongst others."

Did Petersen see Africa from a different perspective when he arrived at Sicap? "I think there have been some changes over the last year. One of the interesting opportunities for us is the EIR [equipment identity register] and central EIR software solutions that we provide. We have seen a lot of barriers come in from regulatory bodies in Africa, Nigeria for instance, and these are also barriers for operators. They now have to comply with different kinds of regulatory requirements to be able to block stolen devices or ones that have not been imported properly into the country. As well as Nigeria, Tunisia and Tanzania are some of the countries where there are requirements to have a central EIR in place. So we have built up quite a significant business on that side, and we are trying to mature that even further."

He adds that the are also various greenfield opportunities on device management with new newly started operations in some countries, particularly in Southern Africa

In terms of the business mood and climate in Africa, Petersen said that he has seen some stiff pricing competition. "There were a few opportunities where we had to go in and reduce prices more than we like to. Sometimes we do it because it is also a good case study for us. But we have a good cost structure in the company, as well in terms of our resources; we have a big development, support and project team in India, for instance, and no longer have expensive European resources any more."

Earlier, Petersen referred to Sicap's 'marketing silence' and said that the company has been continuing to do business in Africa. So what were its highlights on the continent for 2017?

"Vodacom Lesotho was using a legacy device management system and we swapped it out with a pure cloud-based customer engagement and device management solution that we completely host and integrate. So that is a good case study showing how the market can move forward."

Other customers he talks about include Telma in Madagascar (*see Year in Review, p43*) and Tunisie Telecom. Earlier in 2017, the latter became the first operator to deploy Sicap's *TargetMe* contextual customer engagement solution to expand its 4G network and VAS revenues, and reduce customer call centre costs.

The company used *TargetMe* to replace its previous *Bulk Campaign Management 1.0* tool. According to Sicap, its solution enables MNOs to capture data from various sources, such as network elements, and subscriber and location databases, to visualise and segment a customer base in real-time. The same data can be used for real-time system provisioning actions and personalised customer engagement campaigns. These are said to be performed automatically whenever a subscriber belonging to a certain customer segment is detected in the network.

Tunisie Telecom started using *TargetMe* for real-time promotional customer engagement campaigns. Sicap claimed that this enabled the operator to speed up the adoption of new services and consequently increase revenue. It said that Tunisie Telecom runs an average of 30 customer engagement campaigns each day which trigger a total of five million “compelling” service offers to customers daily.

The operator has also used *TargetMe* to boost 4G service adoption. Each time a subscriber with an LTE-capable handset is detected, the solution automatically instructs the mediation system to activate the 4G service for that subscriber and without asking the subscriber to change the 4G SIM.

So how does Sicap enhance its platforms – what are the things that it can’t do today that it is looking at for future iterations?

“We work with some of our bigger customers like Tunisia Telecom a lot in terms of enhancing our platform,” said Petersen. They come with good suggestions about what it needs to do, and what can we do with the platform. So that is one approach.

“The other is that we tell customers about new features and our roadmap for development. They then say whether or not they would like an upgrade or an activation of these additional features. I place great emphasis on having good communication with the existing customer base to ensure they have what they need and also so that we can bring in what we develop for other customers.”

Looking ahead, Petersen’s ambition for Sicap is to move ahead with one of the bigger groups in Africa and he said that the company was already in discussions with a few of those to deploy a more cost-effective group-wide solution than what they have today.

“So that is one of my targets for Africa. And then I think pricing will be essential going forward and there will be a lot of focus on that. When you talk about a bigger group deal you have to find the right pricing as there is a lot of competition in the device management space.

“Furthermore, you also have to make sure that you have good sales coverage as well, working with the customers when they need it but also going to see them for random meetings. You cannot do business from behind your desk when you are talking about Africa. So it is very good to build up good strong relationships with the key players.”

**Indranil Das, VP, head of digital services, MEA, Ericsson**

With a background in IT and consulting gained from his days at PwC and IBM, Indranil Das joined Ericsson around eight years ago and moved to the company’s digital services business in January 2018. So what does he define as ‘digital’ – isn’t everything all about zeros and ones these days?

“We used to call it IT and cloud but digital has now gone beyond this. Business is moving towards rapid digitalisation – so you have virtualisation, digital transformation, and the digital stack with everything together.”

So as the head of this particular division for Ericsson, what does he see as the company’s mission on the continent? “If you look at Africa’s development in terms of the telecoms revolution, it is a little bit behind compared to other markets, with low broadband and LTE penetration. But I see that as an opportunity because now development will be rapid.”

Citing Ericsson’s *Mobility Report* that was released in November 2017, Das said that the number of LTE subscribers in Africa are projected to rise from 30 million to more than 300 million over the next five years. “So that is huge growth that is going to happen and it will unlock the new wave of digitalisation on the continent. That presents a significant opportunity.”

Das continued by saying that there are needs in Africa that are not evident in other parts of the world which is leading to innovation. “Mobile financial services are a good example. They have become central to the digitalisation strategy of some operators and are championed here with other parts of the world now looking at them. I see more innovation like that happening in Africa going forward, and so the region can become an innovation ground for the rest of the world. Technology such as 4G and narrowband IoT will accelerate all that. So there is a significant opportunity powered by the new digitalisation, and as LTE penetration increases and new devices come in, it will be rapid going forward.”

Ericsson’s presence on the continent is not new and the company has been building networks in the region for decades. And yet the same conversations about vast numbers of people still lacking access to connectivity and a huge digital divide that needs to be bridged persist. As head of a digital services division Das’ main focus is presumably on software, but given the prevailing challenges shouldn’t hardware and infrastructure be the priority here?

“In Africa, you see that divide between countries – let’s say a country like Kenya is a bit more advanced compared to others and mobile penetration is better there. In terms of challenges, I believe the technology solutions are there. But it is also about government policy and you will see a direct correlation between a national broadband policy and the development of mobile and mobility in a particular country.”

He also pointed out that other issues could be about how much the government is investing, its taxation policies, or how they motivate operators to build out to rural areas. “Those are the things that are going to be very important. For me, it is not a technology issue any more; it is about government policy and the kind of incentives the operators are given to roll out the technology.”

Das said that one way to address some of these challenges is to work together with the operators to influence their entire ecosystem which includes government, all consumers, service providers, stakeholders, etc.

He added that Ericsson also conducts social responsibility programmes, such as its *Connect To Learn* and *Technology for Good* initiatives, for example. “We tend to do those more in Africa than any other continent as we see it as our responsibility to bring in technology in order to improve society. But it will be a long and hard journey.

“The other thing is making everything affordable. That is another thing we are investing in. Whatever technology we bring, we make sure that we keep in mind that it should work smartly and that it is not just for the Western market. We are very conscious that it should work in this market and in countries that are not developed.”

While Ericsson’s results reports have not made for comfortable reading for its investors over the last couple of years, Africa is one of the markets where it has grown its net sales in recent quarters, according to Das. “Both in Africa and the Middle East, our operator customers are investing more. While in the Middle East it is 4G, for the African market it is 3G. And once you have 3G networks, subscribers can do a lot more with their devices, so they start on a digital journey.”

Supporting the customer through this digital journey is clearly key for the operator, and in a similar vein, it is also key for Ericsson. “We value our client relationships and believe that we have a good set of products and solutions to help them on their digital journeys. For example, MTN has our charging solution in all of their opcos, and they are in around 18 countries in Africa.

“I believe we have a 70 per cent market share with our charging solution. So we have the product, we have the solution, the client believes in us, and we value that relationship. But it is not just about a solution for charging.

Our platform also comes with subscription management; it can support 2G and 3G, and we now also have SMS and USSD as a channel built into that. So the customer is able to deploy that charging and subscription management solution together, and that gives immediate revenue uplift. I believe no other competitor comes close to that solution."

In another innovative solution deployment, last June Ericsson announced that it had worked with Millicom to launch a 'Business Support System as a Service' (BSSaaS) for Tigo Rwanda. The platform covers charging, billing, provisioning, mediation and roaming functionality combined with advanced customer care and self-care solutions. Ericsson claimed that the model will enable Tigo to better serve its subscribers with new and innovative offerings, with shorter time to market, improved customer experience and increased operational efficiencies.

As well as BSSaaS, Ericsson has also come up with 'Information as a Service' using its *Hyperscale Datacenter System* which uses software-defined infrastructure. Das said: "This gives the ability to our clients to utilise hardware infrastructure much more efficiently. Normally, you would have to wait for 60 days if you needed new infrastructure. We have now been able to cut down that cycle time to days and sometimes even to just less than a day by unlocking existing infrastructure and virtualising it."

So what does he expect in Africa over the course of this year? "I believe you will see a lot more about two aspects. One is the digital transformation. You will see that some of the operators in Africa will actually have been much more focused on that. It has started already with some of the mobile financial services, but the ecosystem is now getting stronger and more developed. The operators will gradually come to stage where they offer digital transformation as a platform and launch new services on top of that. That is part of the digital journey.

"The second thing you will see is a lot of virtualisation being done. Our business is primarily with telcos, and I would say that many of them will start virtualising their hardware infrastructure, the orchestration layer and the application layer. It is only just beginning but I believe Africa is going to catch up fairly quickly [with the developed markets] and particularly some of the African countries that Ericsson is in. Because many of the things that we have done here – such as the information as a service platform mentioned above – is one of the first in the world.

"Going forward, you will see innovation happening in Africa that we will take to the rest of the world."

**Mariam Abdullahi, Telco industry lead, SAP Africa**

According to Mariam Abdullahi, no industry will remain undisrupted in 2018 and the years to come. And for African telco providers – who she believes have "feasted" on near-uninterrupted subscriber and revenue growth over the past two decades – the need to adapt is paramount.

"In a market where the average business lifespan is 12 years (compared to 25 years in the last two decades), the objective is not to simply improve that which is already working. African telcos need radical transformation of their entire business models in order to become digital supply networks and re-imagine work, resources management, and contingent worker management.

"Since the advent of the internet and the more recent emergence of technologies that include machine learning, IoT, cloud computing, and predictive analytics, businesses with exponential growth models such as Amazon, Uber, Airbnb and *M-PESA* have entirely transformed their industry sectors almost overnight."

Abdullahi said that thanks at least in part to these companies, customer expectations have ballooned, with modern consumers demanding personalised, efficient service at low cost and with added convenience.

"Talented employees have also increasingly gravitated toward these companies, putting further pressure on incumbents who suddenly are outperformed and out-innovated at every turn. 'Too big to fail' in today's market is a near-certain recipe for decline and eventual disaster.

"Telco executives across Africa and other emerging markets have scrambled to reinvent their business models in the face of shifting customer demands and the arrival of agile, customer-centric competitors. Airtel Africa merged its Ghana operations with Tigo Ghana and sold off operations in Sierra Leone and Burkina Faso to adapt to rapidly changing market conditions. South Africa's Cell C is seeking investments into fibre-to-the-home providers to enable its diversification into new service offerings including insurance and media. Kenya's Safaricom is building on its much-lauded *M-PESA* platform by diversifying into new revenue streams, including Uber competitor Little and e-commerce portal Ma Soko to claim a greater share of its customers' wallets.

"These companies have already felt the effects of declining traditional revenue streams as disruption from the likes of OTT players such as WhatsApp, Skype and YouTube put pressure on what were, until recently, primary (and highly dependable) sources of revenue."

Abdullahi said that according to PwC, many telcos globally are seeing revenue decreases of as much as 30 per cent in SMS, 20 per cent in international voice, and 15 per cent in international roaming. "Incremental improvements and operational changes are no longer enough. Those that can adapt to take advantage of technology mega-trends such as hyper connectivity, cloud computing and IoT are far better placed to reinvent their business models and can further incorporate SDN and NFV to speed up the innovation cycle.

"Digital transformation in 2018 is not about cutting costs or optimising existing processes. It is a re-look at the entire telco business model. It is asking the hard questions: am I serving my customers in the right way? Are my operations efficient? Is cost-cutting adequate and sustainable? Am I able to hire the correct staff, attract the best talent, and empower them to contribute to an inclusive and innovation-focused workplace?

"Telco executives must ensure their company's day-to-day culture drives innovation across the entire business. The aim should be on developing personalised services and to deliver such services in a way to meet the demands of an empowered customer base. The only way to do that is to have access to the correct customer insights – such as data usage and consumption habits, call volumes, area of residence – and to act on such insights in a humane and personalised manner. For this, analytics and data are key, especially when matched to an in-memory computing platform that enables real-time actionable insights."

At a time when telco offerings are highly commoditised and there's not too much distinguishing one operator from the other, Abdullahi reckons telcos need to simplify their core business operations to allow for the development of a clear and unique value proposition for sustainable growth that takes local conditions into account.

"For example, with so many African countries not yet fully adopting 4G technology, does it truly make sense to invest heavily in emerging 5G technology?

"The African telco market has moved away from improvement to large-scale disruption and transformation. Telcos who embark on a process of total business model change underpinned by powerful exponential technologies will be far better placed to withstand and overcome the challenge posed by the new breed of disruptors.

"2018 will determine who adapts, maximises on operational efficiencies and leverages innovation for new revenue streams, and who relies on old ways of doing businesses that negatively impacts their go-to-market offerings." ■