







A SIMulated Experience

Key takeaways:

39% of the audience

says cost of handsets is the biggest problem in trying to get users onto 4G

76% of operators

believe churn is a major problem for them, due to the dominance of pre-paid tariffs.

Three quarters of operators

say great customer service and experience is the key to retaining users.

About Gemalto:

Gemalto (Euronext NL0000400653 GTO) is the global leader in digital security, with 2015 annual revenues of €3.1 billion and customers in over 180 countries. We bring trust to an increasingly connected world.

Our technologies and services enable businesses and governments to authenticate identities and protect data so they stay safe and enable services in personal devices, connected objects, the cloud and in between.

Gemalto's solutions are at the heart of modern life, from payment to enterprise security and the internet of things. We authenticate people, transactions and objects, encrypt data and create value for software – enabling our clients to deliver secure digital services for billions of individuals and things.

Our 14,000+ employees operate out of 118 offices, 45 personalization and data centers, and 27 research and software development centers located in 49 countries



A SIMulated Experience

Africa is one of the most varied and exciting markets for telcos operating in the territory. The reasons for which are founded in the fact that, unlike the vast majority of markets across the globe, it is still relatively nascent. It is nascent because successful technology adoption in the area requires more innovative and lateral thinking due to a plethora of reasons.

As a continent, it possesses a myriad of factors which are so far removed from the norm of Western and Far Eastern markets that it provides both challenge and opportunity in abundance. Established markets are focussing on locking customers into high-value 4G contracts, coupling

mobile services with content to yield a higher ARPU – as evidenced by AT&T's recent acquisition of HBO owner Time Warner for more than \$100 billion.

While that's the case in Europe, America and the Far East, for example, the role of mobile in Africa is a completely different beast.

Sure, 4G, multiplay et al are all elements of a mobile proposition across Africa; mobile is more being viewed as the great enabler of society, with an ability to change the lives of citizens across the country.

There are few greater examples of how mobile is doing so than by looking at mobile banking and mobile payments. Rudimentary mobile feature phones using a 2G connection are enabling members of extremely remote and disparate societies to function in an economy, pay bills, send money to friends and family and more. This is evidenced in the growth of mobile money service M-Pesa, which has developed a substantial proposition being utilised by organisations and individuals in a far greater number of ways than pure money transfer.

According to Vodafone, M-Pesa has been used by a charity in Tanzania to help citizens gain access to healthcare where cost would usually be prohibitive. In Kenya, customers of Water Company are able to buy credits using M-Pesa by transferring credit from their phone to their pay as you go key which allows them to pay for clean water.

The point is not to highlight how great M-Pesa may or may not be, but rather to emphasise how mobile is being used in an adaptable way to ensure that people are benefitting positively from its capability. It's not necessarily about how much video consumers can stream, but more about how it can change lives.

This Telecoms.com Intelligence report, in partnership with Gemalto, will investigate attitudes towards mobile in the African telecoms market. More than 150 telecom operators responded to a research survey launched by Telecoms.com in October, in which we questioned participants on their views related to one of the most important elements of telecoms today, customer experience, acquisition and retention, as well as a broad overview of the African marketplace.

We began the African Market Outlook 2016 with a focus on how 4G is being viewed by our respondents, with the technology still in its relevance infancy in Africa. This nascence is down to a number of factors, which include regulatory, engineering, climate or financial reasons. >

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It's important to remember that, while, we get carried away with talk of value-added services, consumer satisfaction, 4G uptake et al; there is one thing every operator is terrified of today, aside from falling revenues, that is essentially at the very crux of the matter.



The first question sought to gain insight on the uptake of 4G handsets by customers across the continent. Recent numbers from Orange suggest that while mobile penetration is at a high point across the continent – with more than 70% of African citizens owning some sort of feature phone, just 17% are using some form of smartphone. That number is on the rise, generally, with a number of operators and handset manufacturers developing and releasing smartphones at a lower price point more suitable for a higher percentage of African citizens.

As we have now set up the scene, explaining that there is small smart phone and 4G uptake, we can now explain the reason why. It would appear to be the case that 4G handset cost is the single biggest problem operators in Africa face in getting their user-base, which is congruent with our previous assertion regarding the price positioning of smartphones in the premium market. 39% of respondents believe this to be the case. See Fig. 1

A close second place, and also indicative of one of the biggest problems in the industry, is the 37% of the audience which said limited 4G network coverage is limiting 4G data usage. Limited coverage could come down to a range of reasons we mentioned earlier on. Regulatory bodies may not have distributed sufficient amounts of vital spectrum to ensure coverage; complex terrain and meteorological challenges may make laying network infrastructure near impossible; the cost of infrastructure may be prohibitive, or a plethora of additional mitigating factors.

Elsewhere, a lack of awareness of flexible data pricing plans (13%), poor network quality (6%) and multi-Sim handset complexity (6%) were all highlighted as difficulties by the audience.

So how could one overcome such difficulties. and boost data usage? We asked the Telecoms. com audience to identify two possible solutions and along with a smooth transition over to a 4G phone and network (42%) – respondents appropriately saw the promotion of adaptable LTE plans and tariffs as one of the biggest tools at their disposal. The importance of tariff flexibility is not alien to the African continent, as operators the world over continually seek newer and more personalised means of tailoring services to the needs of individual consumers. It's no longer a one-size fits all approach; not even a segmented approach targeting many; but a tactile approach to consumer requirements where the needs of the individual are paramount.

35% of respondents see the promotion of adapted LTE plans and tariffs as important for 4G data usage boosting. A further 32% of respondents believe the answer lies in incentivising consumers to adopt 4G handsets, thus naturally increasing the level of spend from, and the value of, every customer. 29% want to see a greater quality of experience on the network side of things, and 20% are looking towards data-driven value-added services.

It is apparent that too many end users perceive LTE plans as too expensive and believe they cannot afford it, and the same goes with 4G handset costs, which are perceived as being too expensive. With that in mind, MNOs must educate their end users and promote adapted offers at the right time, using the right device management platform to collect data on the user and their behaviour. With that information, and by analysing the customer thoroughly, operators will be able to run contextual marketing campaigns to help promote timely plans and handsets.

It's important to remember that, while, we get carried away with talk of value-added services, consumer satisfaction, 4G uptake et al; there is one thing every operator is terrified of today, aside from falling revenues, that is essentially at the very crux of the matter. Churn.

With that in mind, it is interesting to gather audience attitudes towards churn, and how they plan on combatting it. A somewhat brave 24% of the audience poetically stated "churn is not a major concern", but, logically, the remaining 76% believe it very much is. With three quarters of respondents recognising that churn is indeed a problem for African operators; this is especially a problem given this is predominantly a pre-paid market with frequent switching from one operator to the other and a lack of stickiness.

The difference between the remaining three quarters of respondents is how they plan on meeting the challenge. The chart on the right illustrates just that. See Fig. 2 >>

What are the main factors explaining limited 4G data usage? (please select one)



4G handset cost	39%
Multi-SIM handset complexity	6%
Lack of awareness of adapted data plans	13%
Limited 4G network coverage	37%
Poor network quality	6%

Figure 2

Which of the following statements is the most applicable to your organisation? (please select one)



Churn is a major problem, so we are focussing on acquiring customers12%
Churn is a major problem, so we are focussing on retaining customers16%
Churn is a major problem, so we are focussing on both acquiring and retaining customers48%
Churn is not a major concern24%



With it quite clear that acquisition and retention of customers is a top priority for the majority of operators who responded to our survey; we wanted to understand which elements of a customer experience rank as the most important. With this question we altered the format for respondents, whereby they had to order a list of six factors against each other from most to least important with regards to customer retention strategies. – with there being only one top spot.

Customer experience came out as the overwhelming favourite (74% importance rating). Therefore, customer experience is evidently absolutely crucial, from the moment a customer on-boards and onwards from there. But how does the MNO improve the customer experience? The answer may lie in smooth enrolment, which should be an invisible factor for end users, with smooth configuration of the mobile device. Additionally, operators should look to offer a wide array of value added services, specifically with the right service at the right time based on analytics, as well as non-intrusive engagement with customers throughout the journey.

With that in mind, 41% of respondents consider VAS as the most important element of the customer retention strategy, with 49% also considering adapted tariff plans important. To promote such plans and services, mobile marketing campaigns can assist and 42% recognise these as being vitally important.

The full list of results for these two questions is visible on the chart on the right. See Fig. 3

With customer retention seeming to be a preferred strategy among MNOs, since it is less costly to invest in retaining customers than it is to acquire new ones, thoughts turn to the profile of those customers being acquired.

It's inevitable that a certain percentage of customers acquired by an operator have, at some time, already been a customer, and that they are returning to resume their service. It is interesting to understand how many customers are returning, and as such we asked the Telecoms.com readers what percentage it is likely to be.

To be fair, nearly a third of respondents weren't sure, and appropriately stated so. That is an astonishingly higher percentage of the audience which doesn't know the profile of its user-base. It suggests that operators don't have enough insight into their users, with a lack of knowledge surrounding the consumer journey and background.

However, of the respondents who believe they did know; just over a third of respondents believe more than 40% of on-boarding users are returning to the service provider. That is quite a remarkable statistic, which indicates that, had more emphasis been put on customer retention, expense and resource to regain subscribers needn't have been required.

In the final question of this report, we asked the audience to state their level of agreement with a variety of statements relating to subscriber experience and understanding customer requirements. The statements also touch

upon customer win-back strategies, including real-time SIM activation, simplification of the customer activation process

The results suggest that SIM-card reactivation as well as advanced analytics will help operators increase uptake and benefit the subscriber experience. See Fig. 4

55% agreed that reactivating unused SIM cards can help regain previously lost subscribers; but mobile operators do not know how to do so effectively. However, 76% agree if they had a solution then real-time SIM reactivation of dormant/unused SIM with incentive offers would be a great customer win back strategy.

What are the most important factors for retaining customers?

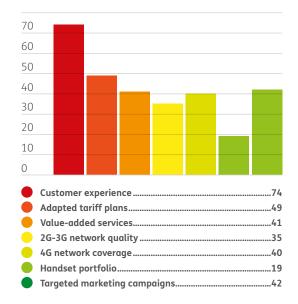


Figure 4

Please state your level of agreement with the following statements

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
Reactivating unused SIM cards can help us regain previously lost subscribers; but we do not know how to do so effectively.	12%	42%	36%	9%
Understanding user behaviour can help us increase the level of 4G uptake in our market.	48%	44%	7%	1%
Knowing more about data network quality for each user can help us improve end user data experience	56%	37%	5%	1%
Real time SIM reactivation of dormant/ unused SIM with incentive offers to regain users	29%	47%	21%	3%
Simplify customers onboarding processes	46%	49%	4%	1%
Differentiate with VAS to create user stickiness	33%	52%	15%	1%

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All MNOs must tackle the issue of churn. In Africa, where 78% of the market is prepaid, the challenges are at their most intense. In response, the study demonstrates that MNOs favor customer retention strategies. Specifically, the headline findings show that 93% of MNOs agree on the usefulness of data on network quality for each user to help improve end user experience, and 92% agree that an understanding of user behavior can help increase LTE adoption.

These figures confirm trends identified throughout the survey. They demonstrate that, in a fiercely competitive market, data analytics has become pivotal to success. As we enter an era dominated by the subscriber experience, only those providers that establish a genuinely customer-centric approach can expect to stay ahead of the curve.

Given such a challenging commercial environment, the use of enhanced device management platforms is becoming central to any successful MNO strategy. Crucially, such platforms can ensure smooth configuration of handsets, and enable collection of data on a user's device, profile, behavior and network quality. As a result, MNOs can accurately prioritize improvements in network performance, and improve retention by delivering an optimum data usage experience.

High quality data analytics also facilitates contextual mobile marketing campaigns. MNOs

can propose and promote LTE plans, devices and value added services that are tailored to the needs of individual subscribers, based on real insight into each customer's journey. Again the headline figures confirm the significance to MNOs with 42% recognizing targeted marketing campaigns as the most important to retain customers.

For mobile operators, the headline message is clear. As the battle for loyalty intensifies, so does the need for an ever-more sophisticated approach to customer experience. To learn how Gemalto solutions can support your customers' retention and acquisition strategies, visit our website www.gemalto.com/mobile.







A Land of Opportunity

Key takeaways:

Nearly half the audience

says IoT is the top technology area for investment at the moment.

More than two thirds of respondents

say there's still a lot more to come from LTE, as many companies struggle to launch a 4G service. 43%

reckons the cost of network infrastructure is the biggest challenge they face today.

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A Land of Opportunity

We've already established how a predominantly prepay market makes for a challenging existence for operators across the continent. But with CEM already established as a major hurdle which requires overcoming, we turned our attention to a broader analysis of the rest of the operator market to gain attitudes towards a variety of technology areas.

We began by requesting operators to identify which technologies would be considered a priority area for investment for operators right now, and of more than a dozen major technologies we're witnessing as trends in the industry today. It is worth pointing out that respondents were allowed to choose all answers

that apply to their organisation today – so answers total more than 100%.

IoT was considered to be the highest priority area for investment right now. 45% of respondents voted that top.

That might not necessarily be a major surprise for operators today, primarily because successful adoption of IoT needn't be something kept exclusively for affluent users in established markets. Smart metering and industrial IoT solutions helping to provide more efficient energy use certainly bring with them the potential to bring connectivity solutions to the previously unconnected. Orange is one such operator; which is currently in the process of developing a pay-as-you-go solar energy product offering which connects a power generator via IoT capable of simultaneously delivering energy to independently power a small property on a sliding scale.

That's just one possible use case of IoT across the continent, and helps shed some light on the potential it possesses to help transform the lives of African citizens in the future. Also, with that in mind, that is just one customer-facing use-case of IoT. If, hypothetically, Orange can successfully leverage its IoT network (say over LoRA or LTE), the operator should theoretically be able to highly optimise its delivery of energy services,

thus diversifying its product range and reaching new markets in a genuinely compelling way.

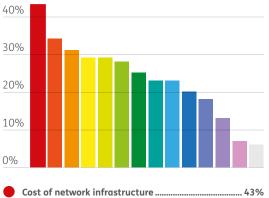
Big Data is often considered to be the great enabler of IoT, and 44% of the audience is prioritising sophisticated analytics of vast quantities of data for investment today. This, presumably, is with more than just an IoT focus. After all, big data, when used in an educated and ambitious fashion has the potential to impact a variety of areas in a telco's business – namely CEM and general tactility with the customer.

LTE continues to be a priority area of investment for a significant percentage of the audience – 37% and 36% respectively selected LTE-A rollout and LTE network optimisation as major areas they're further developing at the moment. This synchronises perfectly with the previous section of this report, in which we discussed how LTE/4G uptake across the African market is yet to take off. As such, it is perhaps unsurprising to see LTE being prioritised over a plethora of other areas in the market, such as content (33%), VoLTE (31%), Security (26%), BSS (23%), 5G (23%), Small Cells (16%), SDN (15%) and NFV (12%).

The audience compounded that message in its response to the next question, in which 43% of respondents said the cost of network infrastructure is the most prohibitive challenge they believe they will face over the next 12 months.

Figure 1

What would you consider to be the biggest challenge for your company in the next twelve months? (please select all that apply)



Cost of network infrastructure 43%
Declining ARPU34%
Customer service & support31%
Broadband performance29%
OTT competition29%
Inter-operator competition28%
Customer churn25%
Regulatory climate23%
Wireless coverage23%
Spectrum availability20%
Network and information security18%
Geographical/terrain challenges13%
Societal challenges7%
Not Applicable6%



Indeed, the majority of respondents consider network-related issues to be the biggest challenges they face. 29% said broadband performance is an issue, which explains why such a significant percentage of the audience is targeting LTE network optimisation. Additionally, 23% said wireless coverage is an issue, presumably in line with the 20% that identified spectrum availability as a problem; finally, it looks like network and information security is still an issue, as it is globally, with 18% of responses.

All of that is just considering the networking perspective, and the audience also believe there to be issues stemming from the broader industry, with churn, ARPU, competition, regulation and others all featuring as major considerations. See the accompanying graph for info on who voted for what.

The next question we asked while attempting to fully survey the operator landscape across the African market related to the emerging services soon to be gracing the industry. More than one in three respondents see bundled data offers as the next big service offering in their portfolio, as 34% believe multiplay service offerings of content and data will be launched in the next 12 months. VoLTE and IoT both came in a close second, with 29% and 28% respectively showing there were very few votes separating the two.

VoLTE is one of those baffling trends in the telecoms biz. The industry has been talking about VoLTE for years, and apparently everyone wants to be in on it; yet while a number

of operators the world over have already launched the high-definition calling technology, with just 93 commercially-live deployments of VoLTE according to the latest numbers from the GSA. In the UK alone, only half of the four main telcos have deployed VoLTE solutions in a very limited number of regions across the country. Across the entire African continent, there are just four live VoLTE launches, with a further five currently in deployment or trials.

Additionally, expansion into less-traditional industry verticals for telcos is something that is being targeted by operators in Africa. Mobile banking financial services, is being planned by 20% of all respondents, following the spectacular success of M-Pesa. Elsewhere, eHealth and energy services are being eyes up by respondents. (As a side note, when we asked about feasibility instead of concrete plans, finance is still considered to be the most feasible new market to move into for operators – with 46% of respondents identifying this. Energy received 21% of votes, and healthcare 18%.)

The difficulty with a lot of these services being deployed, particularly those we mentioned in the early part of this segment, is the availability of LTE network services. In fact, not just is it about the availability of LTE, but also the uptake of LTE by customers. We've already established that LTE uptake is a challenge in and of itself, and so we wanted to understand attitudes towards LTE maturity.

It turns out that more than two thirds of the audience feels there's still so much more

to come from LTE, which is reflected in the selection of two particular statements. 25% selected the answer which said "We're only scratching the surface of LTE's potential", with 42% - just under half - saying "There are a lot of customers we haven't yet reached with 4G, and a lot more revenue we can generate."

Just 15% of respondents say either LTE has peaked in maturity or that they are now far beyond LTE. Indeed, that seems to corroborated by the audience in our next question, which asked what the current status of LTE-Advanced is on their network. 18% of respondents say they're in the process of commercially rolling out the souped-up LTE technology, with an additional 16% saying they are currently undergoing trials.

Conversely, however, nearly half the audience say they have no plans to launch LTE-A any time before the end of 2017 – and another 23% said the question is not applicable for them, which suggests the operator is yet to roll out LTE, let alone LTE-A.

Considering the aforementioned issues we highlighted earlier in this report with LTE uptake across Africa, the discussion around LTE-A is largely a running-before-walking topic. It is happening, in a select number of territories, but it will be some time before we see more pervasive uptake of LTE across the continent.

Figure 2

If you are yet to develop an LTE service offering, what is the biggest inhibitor? (please select one)



	Not Applicable	. 40%
Ŏ	Spectrum availability / regulatory issues	. 18%
	Cost of LTE infrastructure	. 18%
	Cost of LTE services	8%
	Lack of consumer interest	6%
	Geographical/terrain challenges	6%
	Other (please specify)	2%
	Dangerous territories for engineers to work in	2%



Just over half the audience responded to the next question, which asked the audience to identify the greatest inhibitor to LTE development, specifically for operators who are yet to deploy an LTE network.

The two single largest inhibitors are, according to our audience, regulatory issues relating to spectrum availability and the distribution to operators, as well as the cost of deploying LTE infrastructure – both of which were identified by 18% of the audience respectively. Beyond that, cost of LTE services (8%), lack of consumer interest (6%), geographical/terrain-based challenges (6%) and dangerous territories for engineers to work in (2%), all received responses from the audience.

The final question of the African Market
Outlook sought to summarise general operator
attitudes towards the future opportunities of
telecoms in Africa.

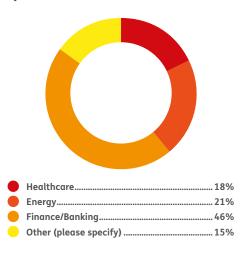
Generally, it's optimistic, and rightly so!
We have discussed frequently throughout
this report how LTE uptake hasn't taken off
yet across the continent, while affluence
is beginning to spread among a growing
middle class presents an abundance of new
opportunity for operators. There's an uncertain
19% of respondents which says the market is
stagnating or that it's turbulent and unsure.

But that attitude is offset by nearly 70% of the audience which is more optimistic – one quarter says the market is growing incredibly quickly as affluence increases throughout society. Just under half the audience, believe there exists a fantastic opportunity to reach a new market of smartphone users and grow 4G user-bases quickly in the near future.

With all of this in mind, a fair conclusion to draw is that this is a land of opportunity, and growth Africa has seen at the hands of mobile will continue to be the case of the next decade, as another generation becomes connected.

Figure 3

Which new business sectors do you as an operator feel well placed to enter? (please select one)







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