Triggering mobile internet use in Côte d'Ivoire and Tanzania

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Executive summary

Spreading the benefits of mobile internet adoption and use

The internet has transformed the lives of billions of people around the world. Communication is quicker, information more available, commerce more efficient, and entertainment and education more easily accessible than ever before. 3.35 billion people now subscribe to mobile internet services—the primary way those living in low- and middle-income countries get connected to the internet and digital services. However, access is still uneven, with Sub-Saharan Africa experiencing the lowest levels of mobile internet adoption in the world.[1] Limited mobile network coverage is part of the problem—36 per cent of the region's population currently live in areas not covered by a mobile broadband network—but there are other major barriers to getting online.[2] Even though a growing number of people live in areas with mobile internet coverage, they have not begun using it. This is for a variety of complex and often related reasons that include, but are not limited to: the affordability of data and mobile devices, low levels of literacy and digital literacy, safety and security concerns, and the perceived relevance of digital content and services.

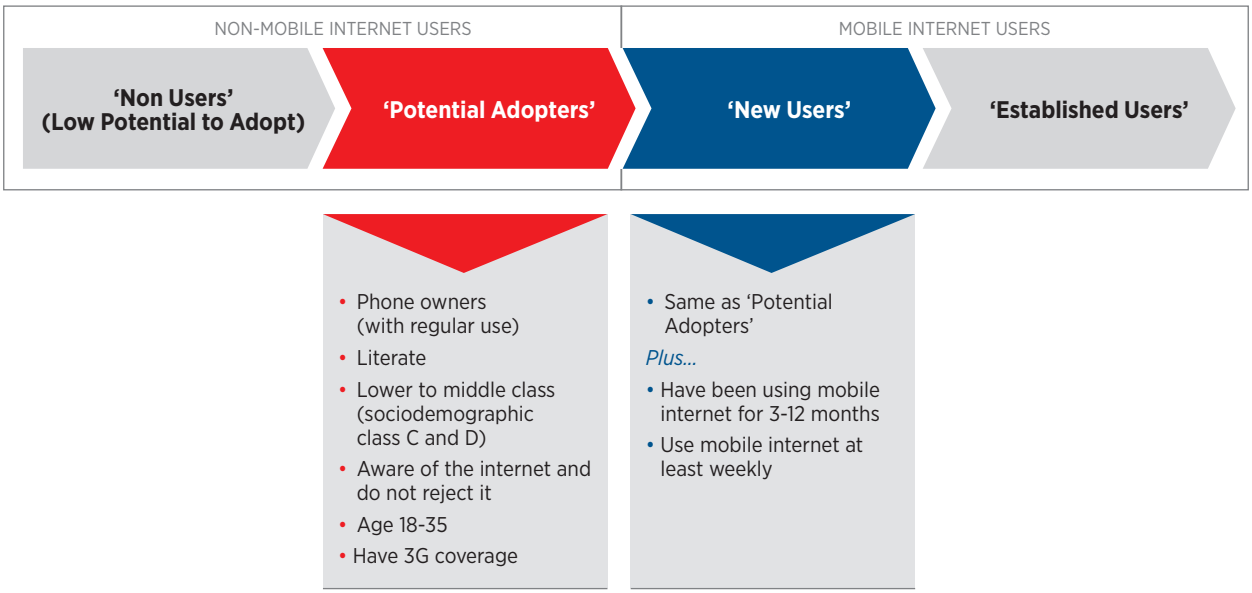
Triggering mobile internet adoption in Côte d'Ivoire and Tanzania

This study set out to investigate how the mobile industry can trigger mobile internet uptake among those who are not currently using it, but appear economically and technically able to do so. Two distinct countries in Sub-Saharan Africa were selected: Côte d'Ivoire and Tanzania. As in the rest of the region, mobile internet adoption in these countries is lagging behind network coverage. The findings in this report are drawn from qualitative research conducted in urban, peri-urban and, in Tanzania only, rural locations. The research focused on two unique segments of the population: 'Potential Adopters' and 'New Users' (see Figure 1). Caution should therefore be taken extrapolating findings and recommendations to the general population or other groups or similar markets, as the relative importance of these suggestions is likely to vary (depending, for instance, on one's social or financial situation).

1. GSMA Intelligence, Q1 2018. 22% of sub-Saharan Africa's population are mobile internet subscribers (compared to 44% globally)
2. GSMA Intelligence, Q1 2018

Figure 1

Defining the research sample: 'Potential Adopters' and 'New Users'



Group of New Users, Mingumbi, Tanzania

Key findings

1

Potential Adopters and New Users have a positive perception of the internet, but see it as a 'double-edged sword' that carries risks as well as opportunities.

In both Côte d'Ivoire and Tanzania, New Users and Potential Adopters view the internet as a positive phenomenon they would like to be a part of. However, it is also seen as a double-edged sword that has both clear benefits (e.g. connection to the wider world) and potential risks (e.g. online scams or harassment).

2

For Potential Adopters, the three greatest barriers to mobile internet adoption are:

- Lack of awareness of the benefits of mobile internet use
- The cost of smartphones
- Low levels of digital literacy

3

Female Potential Adopters face more challenges adopting mobile internet than men, mainly due to existing social norms rather than being explicitly prevented from using it.

4

New Users required ingenuity and perseverance to adopt mobile internet, and enabling social circles are critical.

Because mobile internet adoption is still nascent or limited in both countries, many Potential Adopters do not have people within their social circle who can support them.

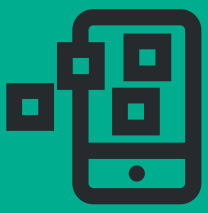
5

New Users understand the relevance of mobile internet as it fulfils one (or more) of four needs: connection, entertainment, keeping up to date (and feeling part of the modern world) and personal development and productivity.

While the first two areas are well understood, many are still unaware of how mobile internet could help to address their personal progression or productivity needs. Once understood, however, these are highly valued use cases.

6

New Users' mobile internet use is often shallow and restricted to a few key applications.



New Users must grapple with a range of issues, including the affordability of devices and data, network issues, and access to electricity. While they have found 'workarounds', there are still challenges and many end up being stuck on 'app islands', unable to utilise the full potential of mobile internet.

Recommendations

This report offers five key recommendations to drive uptake of mobile internet among Potential Adopters in Côte d'Ivoire and Tanzania.[3] Although these recommendations are primarily for mobile operators, they will apply to other stakeholders in the mobile ecosystem to some extent. While New Users, by definition, have already adopted mobile internet, many require support to become confident users. Some of the recommendations below will help them tap into all the benefits of mobile internet.

1	**Increase understanding of the benefits and value for money that mobile internet can deliver, especially raising awareness of valued (but poorly understood) use cases that support personal productivity and progression.** Promoting well-understood use cases and services, such as the ability to communicate with friends on Facebook, will continue to drive adoption and use due to their popular appeal. However, promoting other use cases (particularly related to business or education) that meet a wider range of needs will persuade Potential Adopters—often not motivated by social and entertainment use cases—to begin their mobile internet journey. It will also help to make the internet more valuable for New Users.
2	**Find solutions that enhance the affordability (both actual and perceived) of internet-enabled devices and data.** Ensuring access to smartphones is crucial to drive mobile internet use.
3	**Help build customers' confidence and digital skills.** This can be done through a range of channels (e.g. the agent network, above-the-line (ATL) and below-the-line (BTL) marketing efforts), but women may need additional support as they often have smaller social circles (or fewer people in their social circles who use mobile internet) and therefore fewer people to ask for advice.
4	**Design products, services, and marketing with a less digitally literate user in mind,** making mobile internet less intimidating and more user friendly.
5	**Address some commonly held negative perceptions of the internet,** and help users to access tools that will make them feel safe and in control of their online activity.

3. They are relevant for both women and men, but since women often experience the barriers to mobile internet adoption more acutely than men, the recommendations are likely to have a disproportionately beneficial impact on female uptake.

1. The mobile internet landscape

The internet has transformed the lives of billions of people around the world. Communication is quicker, information more available, commerce more efficient, and entertainment and education more easily accessible than ever before. These benefits, combined with its unprecedented scale – 3.6 billion people had access to the internet at the end of 2017[4] – have made it a key enabler of social development and economic growth, supporting all the United Nations Sustainable Development Goals (SDGs). This growth is being driven by mobile: between 2010 and 2016, fixed line broadband penetration in low- and middle-income countries had a compound annual growth rate of 11 per cent compared with 54 per cent for mobile broadband.[5] There are now 3.35 billion mobile internet subscribers around the world, 218 million of whom are in Sub-Saharan Africa.[6]

The internet, and by extension mobile, have become increasingly important in driving economic growth. Several studies have shown that a 10 per cent increase in internet penetration in a market leads to a 0.25–1.38 per cent increase in GDP.[7]

While growth in recent years has been dramatic, it has not been equal. The majority of the world's population are not yet mobile internet subscribers, and women, the poor, rural residents, and those who are less literate are being left behind. The gap is particularly pronounced in Sub-Saharan Africa where only 22 per cent of the population are mobile internet subscribers (compared to 44 per cent globally).[8] There are two key issues:

i. **The 'coverage gap':** There are currently 0.83 billion people around the world who live in areas without mobile broadband (3G or 4G) coverage. 97% of this group live in low- or middle-income countries, mostly in rural areas that are more expensive to connect. Sub-Saharan Africa is particularly underserved: 36 per cent of the region's population currently live in areas not covered by a mobile broadband network.[9]

ii. **The 'usage gap':** There are currently 3.44 billion people with 3G network coverage who are not using the internet, but could be. In fact, the majority of those not yet using mobile internet live in areas with network coverage, but are not using it for a variety of complex and often related reasons, including lacking the financial means, skills, or incentives to get online.[10]

1.1 Côte d'Ivoire and Tanzania

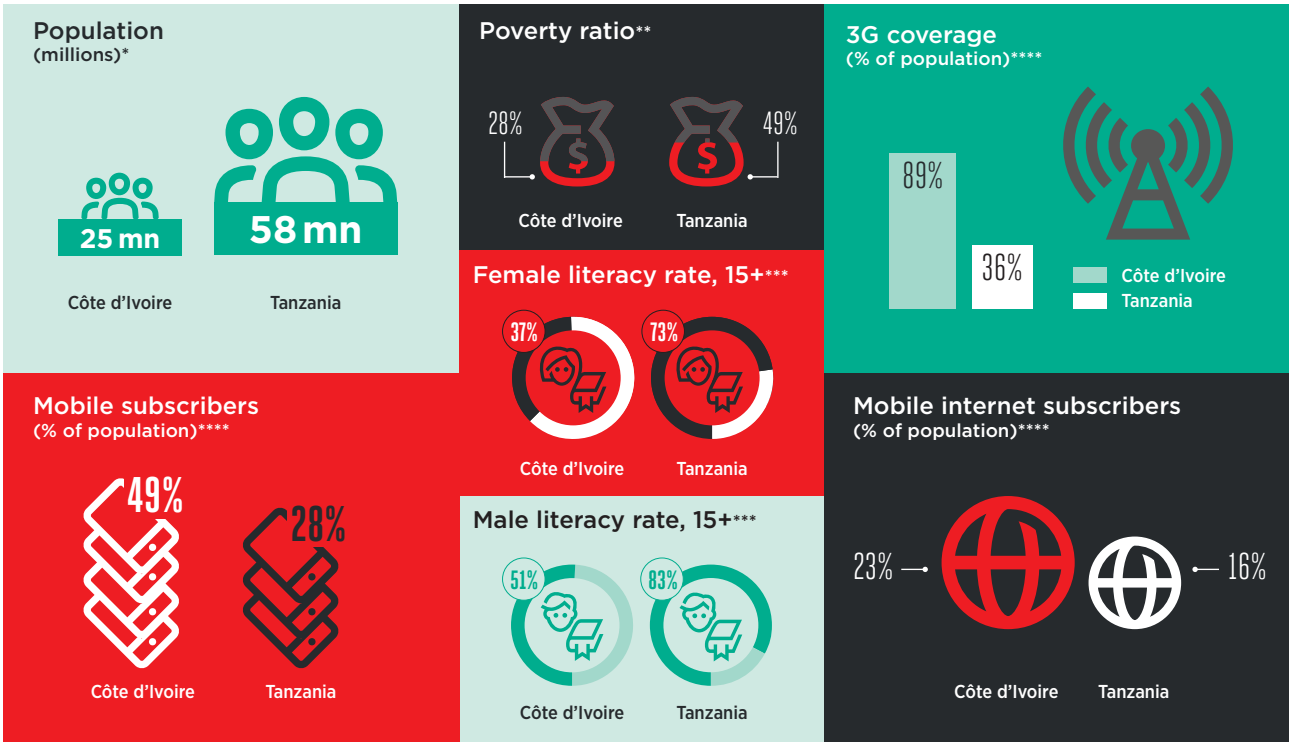
Tanzania and Côte d'Ivoire sit on either side of Sub-Saharan Africa, both are ethnically and religiously diverse societies. While both countries have experienced rapid economic growth in recent years, they also face a range of socio-economic issues relating to health, education and the wider economy, and are judged by the UN to have some of the lowest levels of human development in the world.[11]

Like most of Africa, both countries have seen a dramatic increase in access to mobile over the last decade. However, only a relatively small percentage of their populations are mobile internet subscribers: 23 per cent in Côte d'Ivoire and 16 per cent in Tanzania.[12]

4. ITU Statistics, 2017. Percentage of individuals using the internet (as reported to regulators and using ITU estimates)
5. ITU Statistics and GSMA Intelligence, 2017
6. GSMA Intelligence, Q1 2018
7. A wide range of literature addresses the economic impact of internet access and estimates vary depending on a country's level of development and market conditions. See, for example: Deloitte (2012) "What is the impact of mobile telephony on economic growth? A report for the GSM Association"; ITU (2012), "The Impact of Broadband on the Economy: Research to Date and Policy Issues".
8. GSMA Intelligence, Q1 2018
9. GSMA Intelligence, Q1 2018
10. GSMA Intelligence, Q1 2018
11. UNDP, Human Development Index 2016. Tanzania ranks 151st and Côte d'Ivoire 171st (out of 188).
12. GSMA Intelligence, Q1 2018

Figure 2

Country snapshots of Côte d'Ivoire and Tanzania



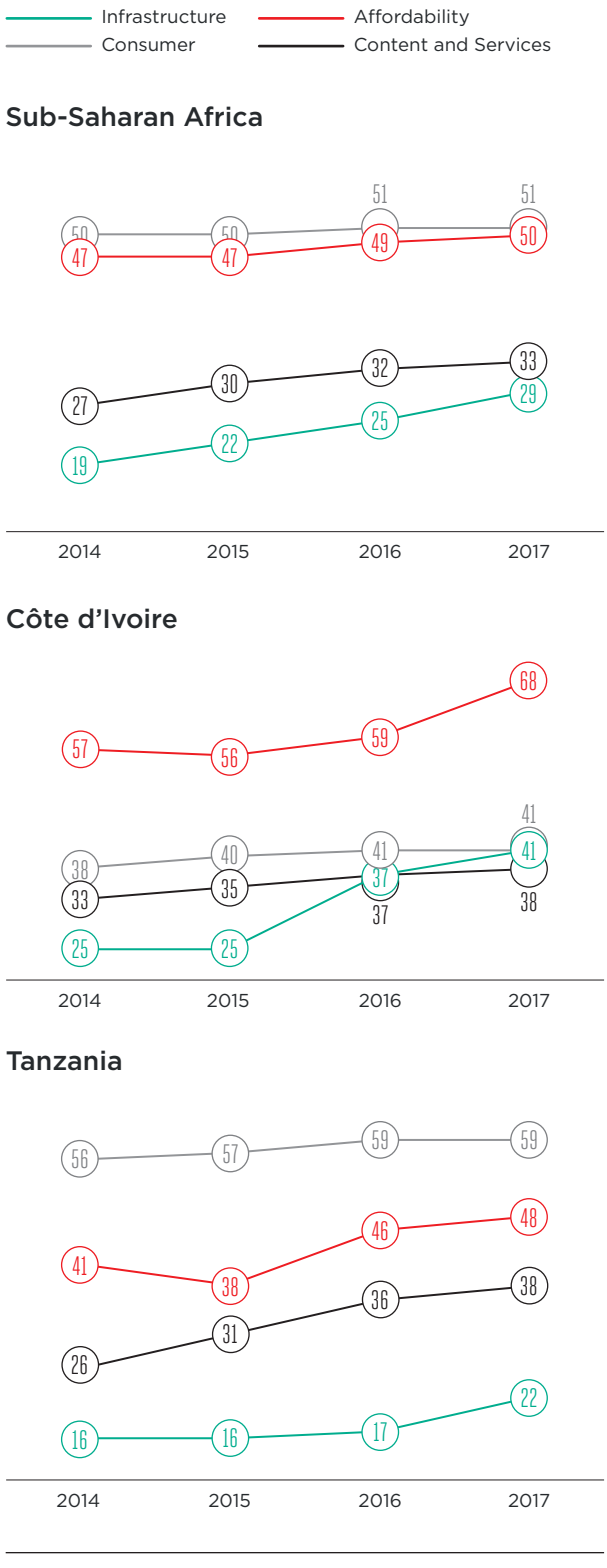
Sources: *United Nations, World Population Prospects (2017); ** World Bank poverty headcount ratio at $1.90 a day (2011 PPP) (percentage of population) (2015); ***UNESCO (2014 Côte d'Ivoire and 2015 Tanzania; percentage of population aged 15+); ****GSMA Intelligence (Q1 2018)

The GSMA's Mobile Connectivity Index provides a way to understand why mobile internet penetration remains low in both countries. This tool measures the performance of 150 countries against key enabling factors for mobile internet connectivity: infrastructure, affordability, consumer readiness, and content. Overall, both countries sit in the lowest 'Discoverer' category, a cluster of countries defined as having room for improvement across all four enablers. For Côte d'Ivoire, the 'Content' enabler is particularly low due to a limited amount of locally relevant content (particularly local language content).[13] This enabler is also low in Tanzania, although it improved markedly between 2014 and 2017, driven by a sharp increase in Swahili language and Tanzanian-created applications. The 'Infrastructure' score is particularly low for Tanzania, indicating this should be an area of focus for those in the country's mobile industry (see p. 12).

13. The 'Content and Services' enabler measures the availability of relevant content and services for a particular country. It is broken into two groups of indicators for local relevance (e.g. number of top-level domains registered in the country, number of social media accounts per 100 people) and local availability (e.g. proportion of population with mobile apps available in their first language). GSMA, Mobile Connectivity Index 2017.

Figure 3

GSMA Mobile Connectivity Index 2014-2017



Source: GSMA

GSMA Connected Society working to expand rural coverage in Tanzania

The limited reach of mobile broadband networks remains a significant issue in Tanzania as only 36 per cent of the population are covered by a 3G network.[14] Like other uncovered populations around the world, the vast majority live in rural areas, which typically have low population densities, low income levels, and weak or non-existent enabling infrastructure, such as electricity grids. All of this has a profound negative impact on the business case for mobile network expansion since it requires higher capital investment and operating costs, and typically presents a lower revenue opportunity. Closing the mobile coverage gap in countries like Tanzania should therefore be seen as an economic challenge as much as a technical one.[15]

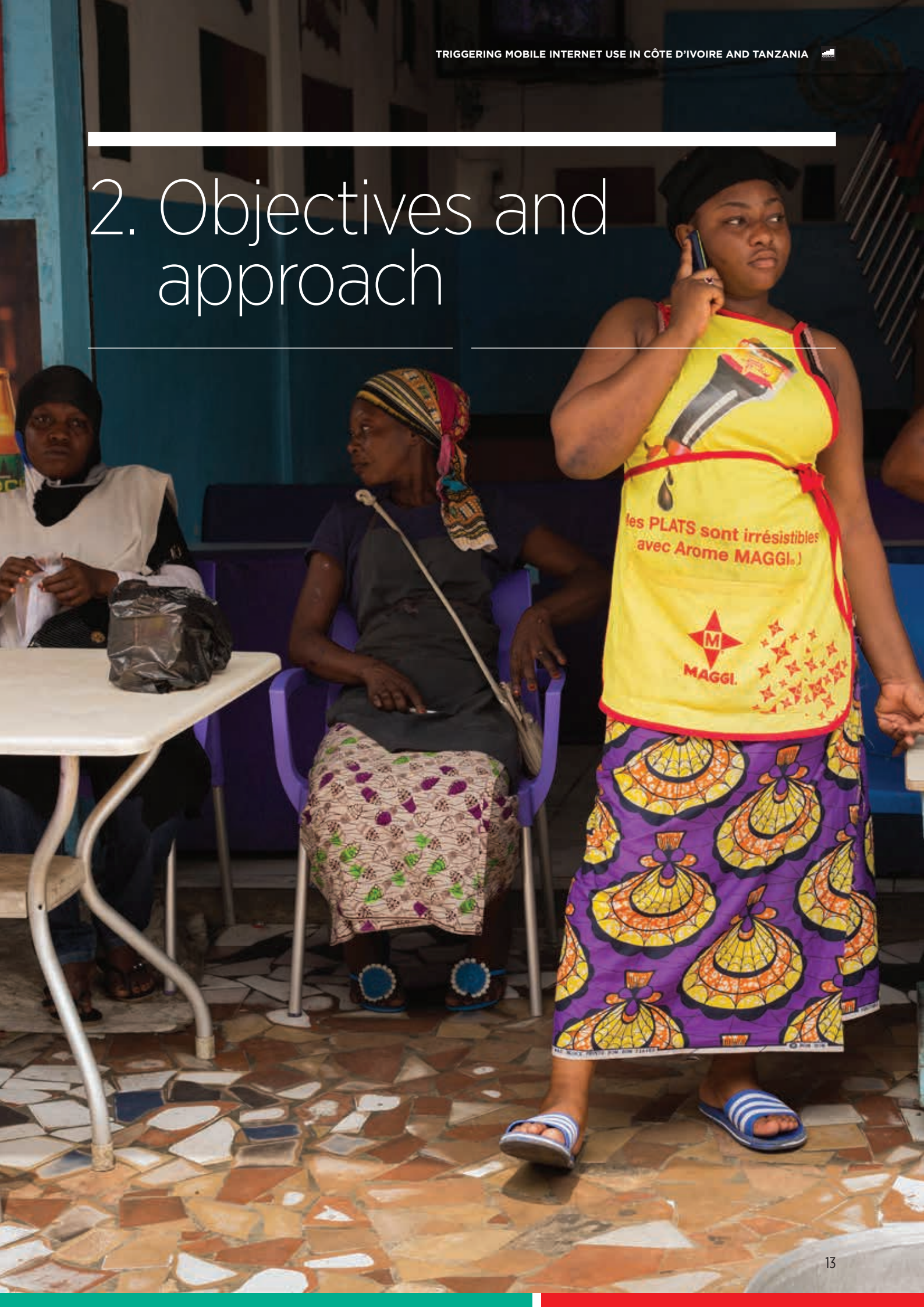
In an effort to find new solutions, in July 2016, Airtel, Tigo and Vodacom, with the support of the GSMA, commenced a tripartite national roaming agreement—the first of its kind in Africa. The three operators' trialled a shared low-cost 3G solution at six pilot sites (two per operator) spread across the country at sites agreed with the Tanzanian Universal Communication Services Access Fund.

The first pilot sites went live at the start of 2017, offering mobile broadband coverage to 72,000 rural Tanzanians for the first time. Consumer appetite for coverage was clear: within seven months, over 90 per cent of the addressable market in all sites had adopted mobile. There were also indications that mobile internet access was driving other positive developments, such as providing more accurate market information to local businesses or giving teachers access to educational resources. However, only a minority have adopted mobile internet. Seven months after the sites launched, only 16 per cent of potential users were using 3G data services on a daily basis, suggesting that solving the coverage issue was just the first step in driving digital inclusion in rural communities in Tanzania. To explore this further, one of the coverage pilot sites, Mingumbi, was selected as a location for this research.

Learn more about the pilot: Tanzania rural coverage pilots: Performance report

14. GSMA Intelligence, Q1 2018
15. GSMA (July 2016) "Unlocking Rural Coverage: Enablers for commercially sustainable mobile network expansion".

2. Objectives and approach



2.1 Research objectives

Despite broad stakeholder interest in supporting digital inclusion around the world, much industry attention has focused on the 'coverage gap'. Only a small number of publicly available studies have examined the 'usage gap' from a consumer perspective, particularly in Sub-Saharan Africa and other low- and middle-income markets.[16]

Mobile internet adoption in low- and middle-income countries has not progressed evenly, with women, rural residents, and those who are poorer and less educated lagging behind. This has created a wide gender gap in mobile internet use: women in low- and middle-income markets are 26 per cent less likely than men to use mobile internet. This gap expands to 34 per cent in Sub-Saharan Africa and 70 per cent in South Asia.[17] While 25 mobile operators in low- and middle-income countries have made commitments to reduce the gender gap in mobile internet use,[18] there is still a shortage of high-quality holistic research on what drives this gap in key markets of interest. This type of research would help to support the strategy and actions of mobile operators.

To help close this gap and support evidence-based stakeholder action, in 2016–17 the GSMA conducted research in four South Asian markets—Bangladesh, India, Pakistan, and Sri Lanka—that explored consumer needs, contexts, drivers, and barriers to mobile internet adoption. This research provided critical insight on the current barriers to uptake in these markets and the potential triggers for mobile internet adoption and use.

As with our recent South Asia research, the key objective of this Côte d'Ivoire and Tanzania study was to investigate how mobile operators and others in the mobile ecosystem could help trigger adoption and use of mobile internet among those currently in a position to begin using it.

The key questions we wanted to answer were:

- What are the barriers to mobile internet use for those who seem to be in a position to adopt?
- For recent mobile internet adopters, what was their path to adoption and what are their main reasons for using it (use cases)?
- Which factors, institutions, and individuals have the greatest influence on mobile internet uptake for men and women (and how do they differ)?
- What are the biggest triggers of mobile internet adoption?

16. Examples include: ResearchICT Africa and Mozilla (February 2017) "Internet Use Barriers and User Strategies: Perspectives from Kenya, Nigeria, South Africa and Rwanda".
17. GSMA Connected Women (2018) "Mobile Gender Gap Report 2018".
18. A list of Connected Women Commitment Partners can be found on the GSMA website.

Barriers and triggers to mobile internet adoption: A consumer view from South Asia

In 2017, GSMA Connected Women and Connected Society conducted consumer research in rural and urban locations in four South Asian markets. Like this study, the research explored ways to trigger mobile internet adoption among people who appeared economically and technically able to begin using it, but were not currently doing so. The conditions in South Asia differed from those in Côte d'Ivoire and Tanzania, most notably in South Asia there are stringent gender norms that negatively affect women's mobile internet access and use while in Cote d'Ivoire and Tanzania there is a less developed mobile internet ecosystem than in South Asia.[19]

The key findings from the research were:

- **Both New Users and Potential Adopters see the internet as a 'double-edged sword'** that has the capacity for good when used as a tool for learning, communication, entertainment and development, but which also has a negative side: potentially addictive, a waste of time and money, a risk to an individual's safety because of scams, exposure to explicit content or cyber harassment, and potentially damaging to relationships.
- **While all Potential Adopters recognise at least some benefits to using mobile internet, they typically feel 'it isn't for someone like me'.** They ascribe many positive, aspirational attributes to internet users (as well as a few negative ones), but do not relate to this image themselves.
- **Potential Adopters experience five main barriers to adoption:** fear of the negative side of the internet, affordability (actual and perceived); need and relevance (actual and perceived); a shortage of confidence and digital skills, and the need for permission from male 'gatekeepers'.
- **Among Potential Adopters, women face more challenges than men adopting mobile internet, mainly due to social norms.**
- **For New Users, connection (chatting and sharing) is the greatest need the internet fulfils,** followed by news, entertainment, information, and a range of other online activities.
- **Popular use cases (instant messaging and social media) are not usually sufficient justification for Potential Adopters to start using the internet,** as they may be considered more frivolous and do not deliver tangible returns on investment in terms of time or money.
- **Two key triggers for mobile internet adoption were apparent among male, and particularly female, Potential Adopters:**
  - **Use cases that have both personal appeal and externally justifiable rational benefits.** These are particularly important for female Potential Adopters, as they will help to persuade gatekeepers that access to mobile internet will benefit the entire household.
  - **Use by others in their social circle,** which had a significant and positive influence on adoption for both male and female New Users. The more family and friends are using mobile internet, the more likely they are to use it, as it makes the internet less intimidating, more relevant and easier to learn, and creates a feeling that usage is inevitable.

Read more about the research findings and the subsequent recommendations in "Triggering mobile internet use among men and women in South Asia".

19. For example, on the Mobile Connectivity Index's 'Content' enabler, which acts as a good proxy for the level of development of a country's internet ecosystem, Côte d'Ivoire scores 23.4 (out of 100) and Tanzania 28.1, both significantly lower than all the South Asian countries in the GSMA study: Bangladesh (53.7), India (48.7), Pakistan (39.4), and Sri Lanka (56.2).

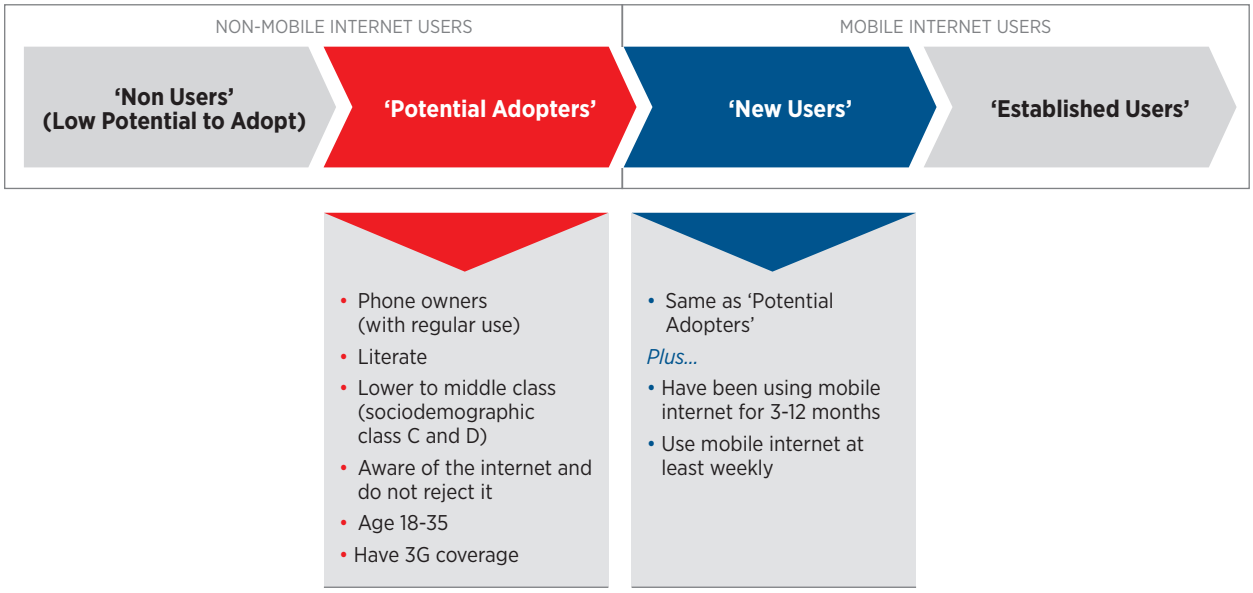
2.2 Research approach

The research approach for the South Asia project was replicated in Côte d'Ivoire and Tanzania. Although the countries are very different, and unique in Sub-Saharan Africa, both appear to be experiencing similar challenges to mobile internet adoption and use as many other countries in the region.

To understand how to drive mobile internet adoption in the short term, the research focused on a group of mobile users who appeared to be in a position to become mobile internet users soon: those living within 3G coverage who owned a mobile phone, had basic literacy, and were not 'rejecters' of the internet (see Figure 4 below). We labelled this group 'Potential Adopters'. Potential Adopters were contrasted with a group of recent mobile internet adopters ('New Users') with the same socio-demographic background to help understand what initially triggered their use and sustained it over time. References to both groups are made throughout this report.

Figure 4

Defining the research sample: 'Potential Adopters' and 'New Users'



Focusing on these two groups deliberately removed some traditionally significant barriers, not only to mobile internet adoption, but also mobile phone ownership and use. The potential impact of the following barriers was therefore reduced or even eliminated:

- **Network coverage:** Only locations with 3G coverage were selected.
- **Internet awareness:** All respondents had to be aware of the internet or at least an internet-enabled product or service.
- **Internet rejection:** Those who totally rejected the idea of the internet were excluded from the study.[20]
- **Literacy:** All non-mobile internet users had to have at least a basic level of literacy (this criteria was not applied to users as we were interested in whether anyone who was illiterate was currently using mobile internet).
- **Digital literacy:** Owning and using their own mobile phones (even if non-internet-enabled) meant all respondents had at least a very basic level of digital literacy.
- **Affordability:** As all respondents were drawn from socioeconomic group C and D, and already had the funds to own (and use) their own mobile phone, somewhat alleviating the affordability barrier.

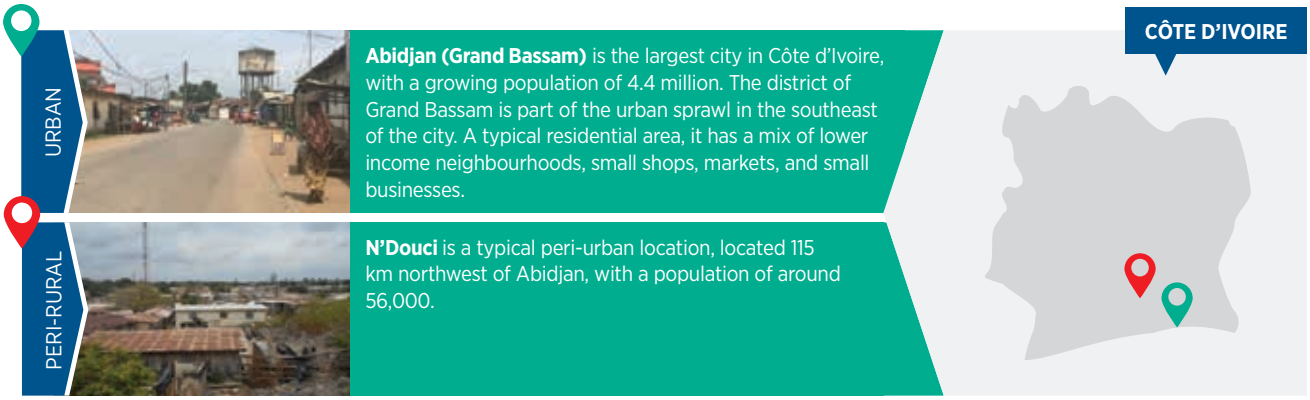
A qualitative methodology was used to go beyond what was reported to explore deeper rational and emotional barriers and motivations. The research employed several qualitative research methods, including focus group discussions, in-depth interviews, written and photographic pre-tasking (respondents were asked to keep a three-day diary of their mobile phone use), home visits, and retailer visits. This was combined with calls with mobile network operators (MNOs) and expert interviews (see Appendix 1 for more details).

These issues were explored in a range of areas around the countries to understand how geographical location affected responses to the research questions. Fieldwork was conducted in both the capital of Côte d'Ivoire, Abidjan, and in a fairly typical peri-urban area, N'Douci. In Tanzania, research was conducted in both urban (Dar es Salaam, the largest city in Tanzania) and peri-urban (Chalinze) locations, and in the rural southwest (Mingumbi and Nampunga). Nampunga was selected not only because it would reflect the uniquely rural experience with mobile internet, but also because it was one of six locations involved in a GSMA pilot project that had brought 3G to rural parts of Tanzania for the first time (see page 12).

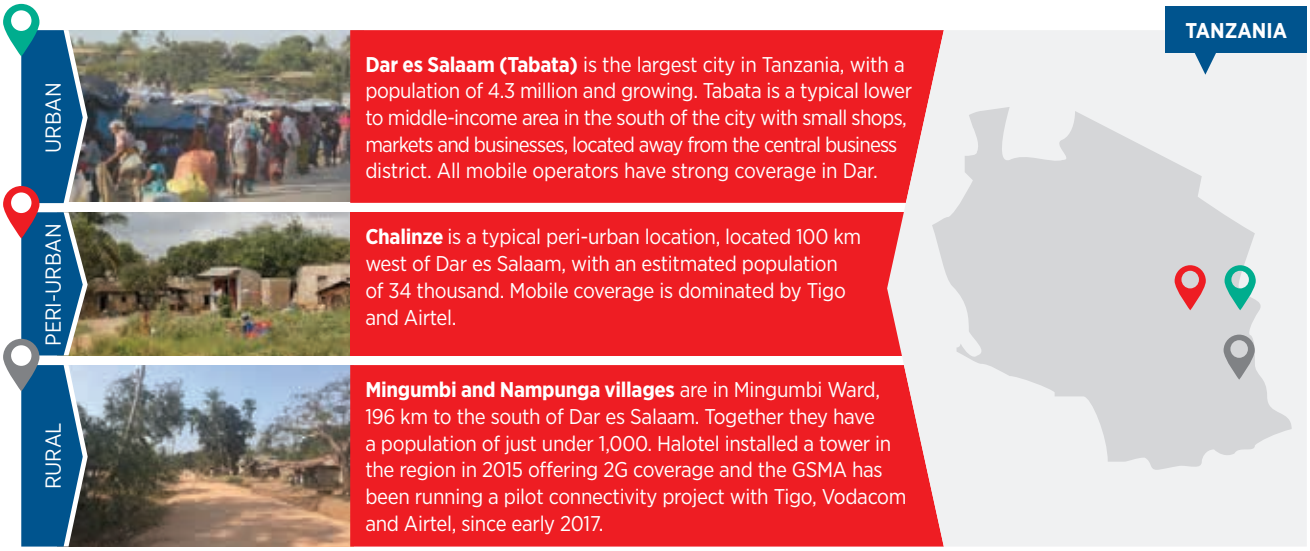
20. Internet rejecters were defined as anyone who agreed with the statement, "I do not like the idea of the internet at all; it is something I would never want to access in any way, including on a mobile phone."

Figure 5

Research locations in Côte d'Ivoire and Tanzania



We aimed to explore the situation in urban and peri-urban locations, where there was a mix of MNO coverage



We aimed to explore the situation in urban, peri-urban and rural locations, where there was a mix of MNO coverage

Because of the tightly defined sample and locations, caution should be taken extrapolating findings and recommendations to the general population of Côte d'Ivoire or Tanzania as characteristics and behaviours will likely differ (for example, affluence levels or age).

Many of the insights and recommendations for action will likely be somewhat relevant to other groups and in other markets, but for groups with very different profiles, further investigation should be conducted to confirm how much they apply.[21]

21. For example, barriers identified in this report are specific to Potential Adopters and the relative importance of each barrier may vary for other groups (e.g. those with lower or higher incomes).

3. Research findings

3.1 Potential Adopters and New Users view mobile internet positively, but it is also seen as a 'double-edged sword' with both risks and opportunities.

Those using the internet (including with mobile) are a minority in both Côte d'Ivoire and Tanzania. However, there was an encouraging sign: in both countries, Potential Adopters and New Users had an open, universal conception of the kind of person able to use the internet. In our South Asia research, Potential Adopters often expressed the sentiment that the internet was not for 'someone like them'.[22] This appeared to reflect a sense that the internet was meant for a different type of person—someone more affluent, potentially an office worker, who lived in an urban area, spoke English, or was better educated. While Potential Adopters and New Users in Tanzania and Côte d'Ivoire associated internet use with urban, younger, literate and more affluent demographic groups, they did not see this as a reason they (or others) could not also come online.

"Internet is for anyone, educated or not."

Female, New User, peri-urban, Tanzania

"We are in the 21st century and everything is modernizing so we have to go on the net to learn"

Male, Potential Adopter, peri-urban, Côte d'Ivoire

While the internet is, on balance, viewed as a positive force in both markets, many Potential Adopters and New Users consider it a double-edged sword that brings clear benefits, but also carries potential risks. Even when users do not fully understand the benefits of internet use, there is wide appreciation for the needs it fulfils: the ability to connect with others, to provide entertainment and information, or to improve personal productivity (see Section 3.4.2 below). Conversely, there are several perceived risks or negative features associated with mobile internet use, including specific concerns like the sexual harassment of women, or a more general sense that the internet is a dangerous or immoral space.

"For me the internet goes to both the negative side and the positive side. For the positive side it allows to make video, calls, to exchange with the friends. The negative side is that several people use to rip off people; I met a group of swindlers but I was able to avoid them. Some post pornographic videos"

Male, New User, peri-urban, Côte D'Ivoire

There were some differences in the concerns expressed in the two countries:

In Tanzania:

- Both New Users and Potential Adopters were concerned about exposure to 'improper' use of the internet, raising concerns about pornography and the potential for the internet to lead to infidelity. For women, the threat of online sexual harassment was also a concern.

"Most partners don't like it. They are afraid you'll change. Your behaviour will be bad. For example people post bad pictures on Facebook"

Female, Potential Adopter, peri-urban, Tanzania

In Côte d'Ivoire:

- As in other countries around the world, online scams are prevalent in Côte d'Ivoire and a concern. Most people in our sample had either been a victim of a scam or knew someone who had. These scams take many forms, with Facebook often used as a dissemination channel, such as fraudulent online shops or fake female profiles that ask men to send money (e.g. for

22. GSMA (2017) "Triggering mobile internet use among men and women in South Asia".

transportation). The fear of being scammed is a serious issue for New Users, and many in our sample in Côte d'Ivoire were either suspicious and put off from certain online activities (e.g. online shopping), or switched use cases to mitigate the risks (e.g. using video calling to ensure a new connection is who they say they are). For many Potential Adopters, the fear of being scammed can, in combination with other factors, put them off mobile internet entirely.

- There is also a high level of awareness of how mobile internet can be used for dating. In some cases, there was a concern it would lead to greater infidelity. For some female Potential Adopters, this was enough to put them off mobile internet. There were also some instances of women being 'banned' by their partner from using the internet, due largely to infidelity concerns.

"We cannot trust all the information, there are several websites which are pirated"

Male, New User, peri-urban, Côte d'Ivoire

"Some people send pictures and movies with illicit contents and that discourages many people because they don't want to see wrong pictures"

Male, Potential Adopter, rural, Tanzania

These are all important issues, but not barriers to internet use on their own. They can become so, however, when combined with other factors. For example, those with less practical experience or understanding of the potential benefits of internet use may not be sufficiently motivated to overcome their concerns. Similarly, those with less digital literacy lack the confidence to avoid these risks when using mobile internet, reducing their motivation to get online.

3.2 For Potential Adopters, lack of awareness of the benefits of mobile internet use, the unaffordability of smartphones, and low levels of digital literacy are the three biggest barriers to mobile internet adoption.

Potential Adopters in both markets face a range of barriers to mobile internet adoption (see Figure 6 below), three of which stood out as particularly significant: lack of awareness of the benefits of using the internet (including relevant use cases), the unaffordability of smartphones, and low levels of digital literacy. While these barriers apply to both men and women, lack of awareness appeared to be a particular issue for women in Côte d'Ivoire.

"I knew the internet but it's only been six months I've been using it, I had a feature phone, so I could not go on the net"

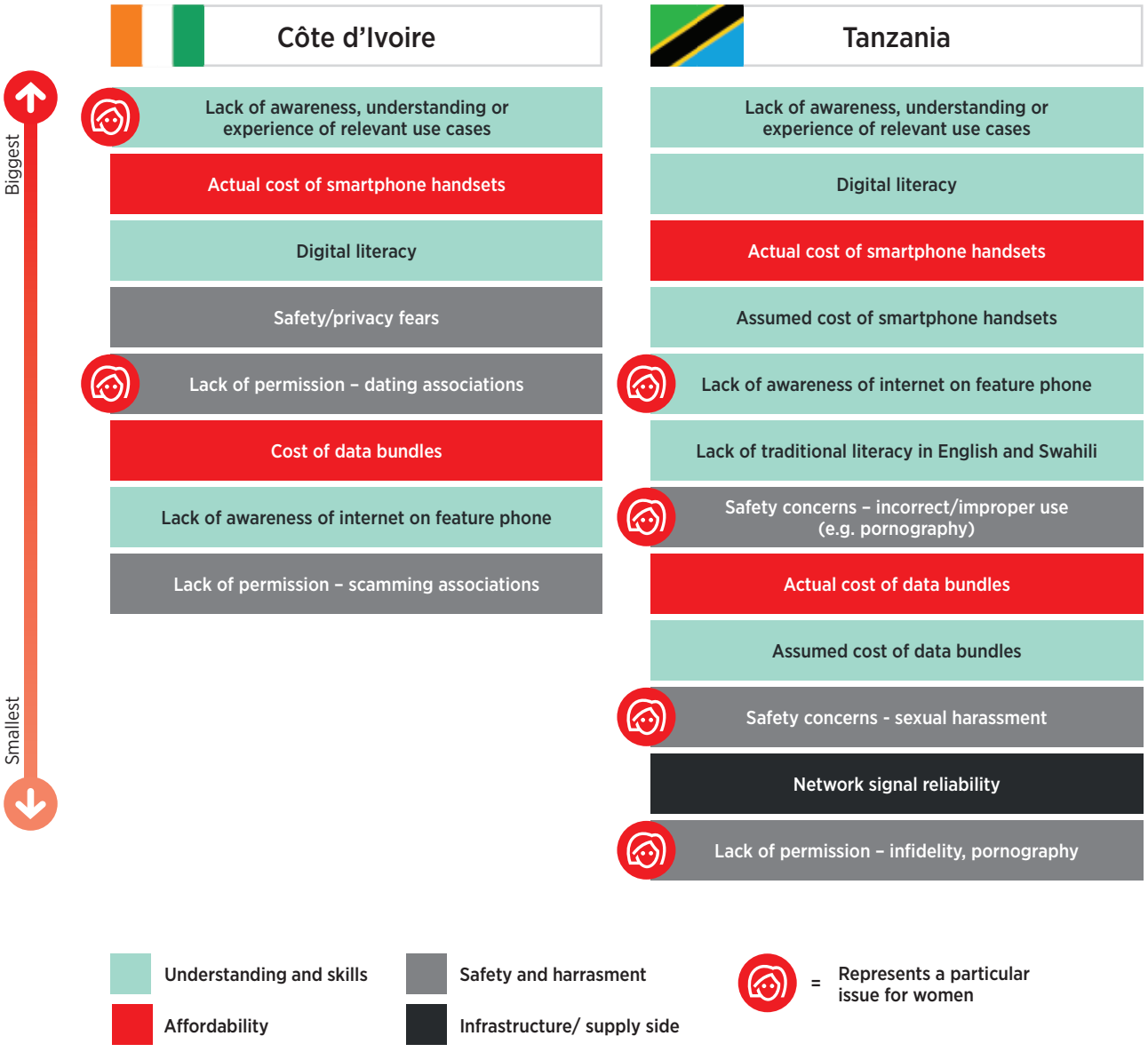
Male, New User, peri-urban, Côte D'Ivoire

"Nowadays there is Facebook version in Kiswahili but the Kiswahili used are very difficult to understand, it has very strong terminologies"

Male, Potential Adopter, urban, Tanzania

Figure 6

Qualitative ranking of barriers to adoption for Potential Adopters in Côte d'Ivoire and Tanzania



Beyond these three main issues, there were other barriers identified by Potential Adopters, including:

- Concerns over safety and harassment or infidelity. As mentioned in Section 3.1, these fears can prevent people from using the internet on their own or lead to men gatekeeping women's usage.
- There was a lack of awareness among some feature phone owners that they could use the internet on their devices.
- In Tanzania, some Potential Adopters had problems with reading and writing (in English or Swahili), which they felt stopped them from using the internet.
- While the research locations were selected in areas with 3G coverage, a few Potential Adopters in Tanzania felt that unreliable networks were a barrier to adopting and using mobile internet.

3.2.1 Limited understanding and awareness of what is available on the internet is holding back adoption

A lack of awareness, understanding, or practical experience with personally relevant use cases appeared to be the greatest barrier for Potential Adopters in both markets.[23] While awareness of a wider range of use cases appeared to be higher in urban and peri-urban locations in Côte d'Ivoire than in Tanzania, the difference was often relatively superficial where both New Users and Potential Adopters did not have practical experience of how this applied to their own lives.

"It doesn't help my business. I farm, it's just me, my hoe and the farm..."

Female, Potential Adopter, rural, Tanzania

"We do not need the internet for health, there is the hospital that is there, you do not need to go on the internet."

Male, Potential Adopter, urban, Côte d'Ivoire

In both countries, the internet is strongly associated with communication and entertainment. Two platforms are particularly dominant—Facebook and WhatsApp—and for some New Users, mobile internet effectively consists of these two services (see Section 3.4.3 for more details). While the best-known use cases, like chatting with friends and watching videos, are very appealing to many Potential Adopters, they can also fuel the belief that the mobile internet is a 'waste of time', creating a barrier for some. This is in part due to a limited understanding of how these platforms can support more valued use cases (e.g. using Facebook to help with business by promoting goods and services or contacting clients.)

"For me, internet means Facebook"

Male, Potential Adopter, urban, Côte D'Ivoire

"Misuse of the internet that I see – people chatting all day doing irrelevant things. That stops me"

Male, Potential Adopter, urban, Tanzania

While the internet is viewed favourably and with interest overall, there is often very limited understanding of how mobile internet can provide support in areas like health, education or business, which are highly valued use cases once explained. Lack of exposure to relevant use cases, either from trusted members of their social circle or via industry advertising, leads to many Potential Adopters not understanding the range of what is possible online.

In Tanzania, a clear difference was observed between those living in rural and urban areas:

- Urban residents were far more likely to have had exposure to a variety of mobile internet use cases via friends and family, formal contexts (school, work) and the surrounding environment (i.e. ubiquitous ATL advertising,[24] numerous shops selling mobile internet-related products).[25]
- By contrast, rural residents had far less exposure to what is possible to do online—less marketing, fewer phone shops, and more limited mobile internet use in their social networks or immediate environment. This translates to lower understanding of potential use cases for mobile internet and a perception that it may not be relevant to their lives.

23. All participants were recruited to have some level of awareness of the internet or a particular internet service (e.g. Facebook).
24. Note that above-the-line (ATL) advertising refers to mass marketing through channels like television, billboards, and radio.
25. The degree of exposure and understanding varied among urban dwellers.

Zainab

A rural clothes trader who does not use the internet as she is saving money for her education

Zainab is a 23-year-old living in Mingumbi, in rural Tanzania. She is an entrepreneur who buys and sells clothes, but has also just finished a nursing qualification. She dreams of being a doctor and her priority is to save money to go back to school and get more education. She currently owns a basic Samsung phone (with both Halotel and Airtel SIMs). She has heard of mobile internet through her friends, one of whom has a smartphone and has told Zainab about Facebook, Instagram, and Google. None of her family currently use the internet. Zainab would like to use mobile internet to search for study materials and to look at pictures on Facebook and Instagram. The main reasons she does not is that the cost of a Tecno smartphone is out of reach (given that she is saving for her education) and, despite recent investment, the patchy coverage in her area is something she is concerned about.

"I would like to use the internet but I can't with this phone. I would like to sign up to Facebook and Instagram... perhaps search for materials online especially if I am studying and maybe I can search for any assignment if my teacher leaves one for us and I can get information on the internet quickly."

3.2.2 Smartphones are highly coveted objects, but cost is a major barrier to purchase

Despite the falling prices of smartphones, cost remains a significant barrier for many Potential Adopters.[26] The most common issue for Potential Adopters is a genuine inability to afford a smartphone handset. However, for a minority it is a question of value for money or perceived cost. For some, a better understanding of how the internet could support their lives would make them more willing to find a way to pay for the handset (especially if they felt they could use it to increase their income). For others, particularly those in rural Tanzania, we encountered misunderstandings about cost, with some assuming smartphones were more expensive than they actually are.

"I have so many responsibilities which I must think of first... for 250,000 (Tanzanian) Shillings I can buy coconuts to take care of my family. It's not right to spend it on something like this"

Male, Potential Adopter, rural, Tanzania

26. For example, the average selling price of smartphones in Tanzania fell from $245 in 2012 to $117 in 2017 (Source: Strategy Analytics, 2017).

The cost of a smartphone is a critical barrier to mobile internet adoption for many consumers in emerging markets

A 2017 report by the GSMA Connected Society and Connected Women programmes explored the factors affecting the affordability of smartphones for consumers in emerging markets, and recommended different approaches for mobile operators and partners to increase smartphone ownership for consumers in their markets.

Regions that are home to the majority of the world's poor are lagging the furthest behind in smartphone adoption. At the start of 2018, only 36 per cent of connections in Sub-Saharan Africa were smartphones, the lowest of any region in the world.[27] High rates of poverty and income inequality make smartphone handsets unaffordable for many, with 57 per cent of Tanzanians and 59 per cent of Ivorians believed to be living in multidimensional poverty.[28] An average-priced smartphone can cost up to 16 per cent of the annual income of those classified as poor in Tanzania.[29]

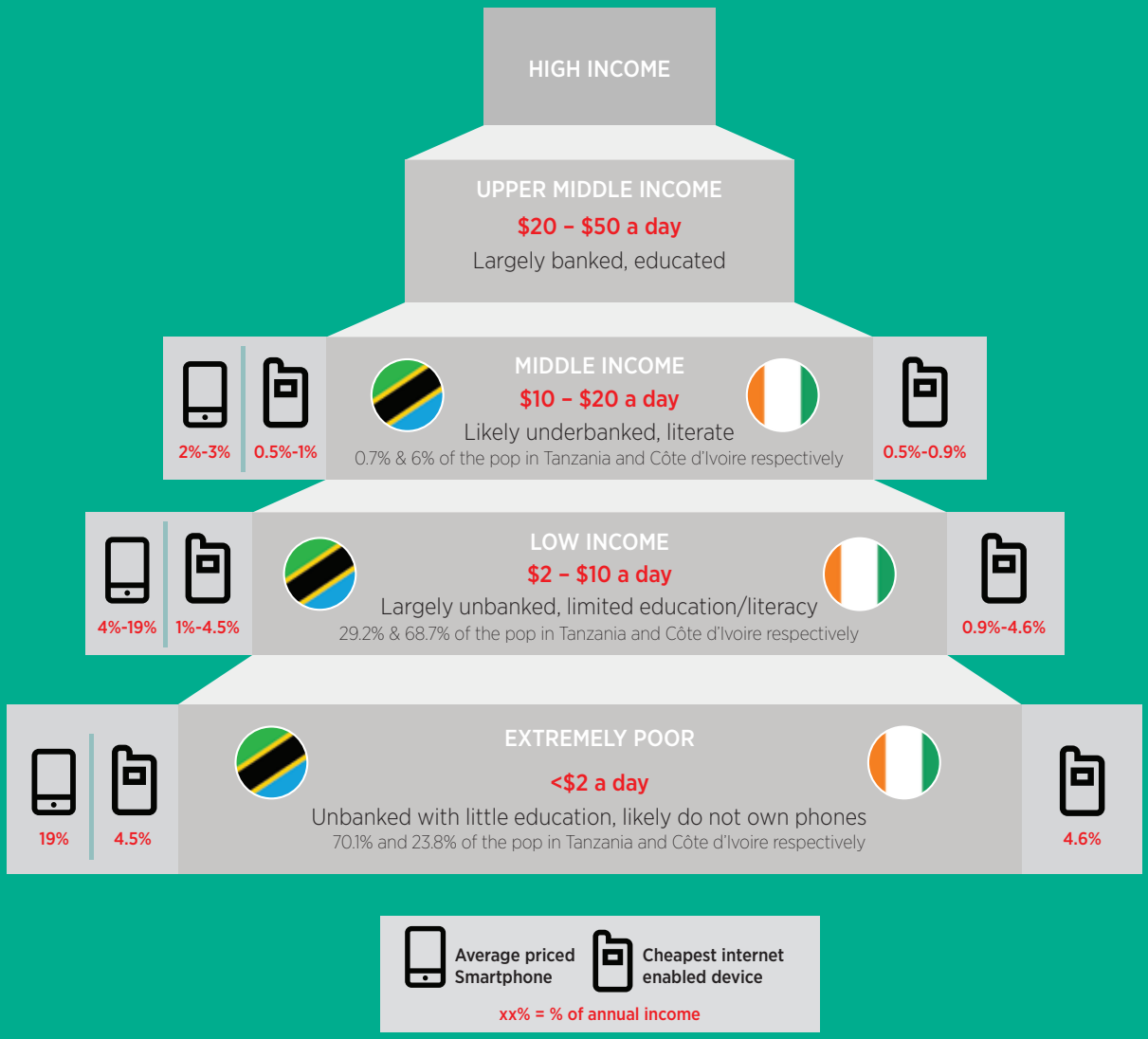
For much of the population in low- and middle-income countries, even the cheapest internet-enabled handset would use a prohibitively large portion of their income (see Figure 7 opposite).

The perceived 'value for money' of handsets is determined not only by the price of the device, but also the handset quality (and brand) and an understanding of the benefits of ownership. Lowering smartphone prices may not be enough; understanding the relevant use cases is also important for consumers to justify their investment in a smartphone. Our research revealed that many consumers are concerned about the quality of the handset, with some suspicious of lower-cost models they fear could be a poor investment. Many also exaggerated smartphone costs, which led some people to think they could not afford one even if they could.

27. GSMA Intelligence, Q1 2018 (global average was 59.5%)
28. Oxford Poverty and Human Development Initiative (2017), Global Multidimensional Poverty Index.
29. Strategy Analytics (2017) "Global handset average selling price and revenue forecasts for 88 countries: 2012 to 2022". In this analysis, "poor" is defined as anyone living on less than $2 a day.

Figure 7

Income pyramid showing the percentage of annual income required for an average-priced smartphone and the cheapest available internet-enabled handset in Côte d'Ivoire and Tanzania (2016)[30]



Learn more: "Accelerating Affordable Smartphone Ownership in Emerging Markets"

30. Tarifica pricing data for the cheapest internet-enabled handset available via mobile operator channels, 2017; Strategy Analytics (2017) "Global Handset ASP & Revenue Forecasts by 88 Countries: 2012 to 2022".

In both countries, the desire to own a smartphone was widespread. Among those in our sample, smartphones were seen as highly aspirational and coveted objects, in part because of their capabilities, but also the status they bestow on owners. For example, some small business owners in our sample thought that owning a smartphone helped their business because it showed customers they were 'successful'.

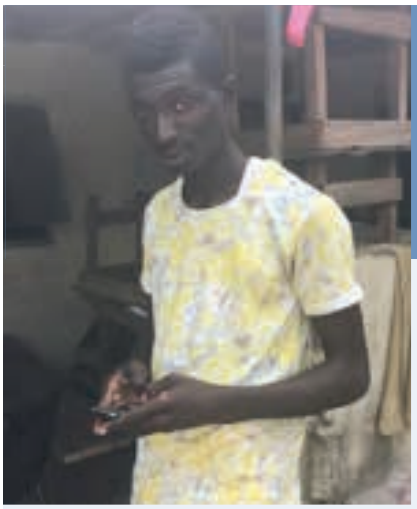
"When you are doing business and your customer see you with a smart phone it gives you some respect"

Male, Potential Adopter, Urban, Tanzania

"I knew the internet but it's only been six months I've been using it, I had a feature phone, so I could not go on the net before"

Male, New User, peri-urban, Côte d'Ivoire

They are also attractive due to a widespread perception that mobile internet is only available on a smartphone. While this is not accurate, internet use in both countries appears to be predominantly on smartphones (as opposed to feature phones). Data from the GSMA Consumer Survey 2017 indicates that 69 per cent of smartphone owners in Côte d'Ivoire are mobile internet users compared with only 27 per cent of feature phone owners. In Tanzania, the gap is even more pronounced: 86 per cent of smartphone owners were mobile internet users compared to 22 per cent of feature phone owners.[31]



Romaric

A Potential Adopter who would like (but cannot currently afford) a smartphone and cannot work out how to use the internet on his feature phone

Romaric is a student living with his mother and extended family in Bassam, a part of Abidjan's urban sprawl. He currently makes money by helping his mother sell perfume by the side of the road, from which his mother gives him around 200 CFA (USD 0.25 cents) to spend as he chooses. He ultimately dreams of becoming a doctor. He currently owns a feature phone given to him by an uncle, but is ashamed of what a low-end handset it is and is also frustrated at the poor photo quality. He aspires to have an iPhone, which he believes would help him with research. Romaric learned about internet in 2008 at school and this knowledge was supplemented by friends and some cousins who visited from France and taught him in cyber cafés how to use Google for research (particularly homework for school) and set him up with a Facebook account. He currently uses his mother's smartphone for research and although he understands that he has Facebook on his feature phone, he does not know how to use it.

"I know that thanks to the internet, I can see almost everywhere in the world, everything I seek, I can find it on the net. It is so developed that I can talk with someone who is far from me."

31. GSMA Intelligence Consumer Survey, 2017 (Base: total population aged 18+). A mobile internet user is defined as a person who has used the internet in the last three months. Device type is defined by the most advanced device owned by the user. Mobile internet users = 324 (Côte d'Ivoire) and 233 (Tanzania)

The belief among New Users and Potential Adopters that mobile internet use is only possible on a smartphone both encourages and inhibits adoption. In some cases, it can indirectly drive adoption of mobile internet, as some acquire smartphones for reasons unrelated to internet capability (e.g. status) and only discover the internet later. On the other hand, smartphone handsets were still too expensive for many in our sample, which meant a number of Potential Adopters believed they were unable to access the mobile internet even when they owned an internet-enabled feature phone.

3.2.3 A lack of basic, digital literacy is a major barrier for many Potential Adopters and is connected to a number of other issues

Despite all Potential Adopters being regular phone users, basic digital literacy was a key barrier in both markets. Even when they are interested in getting online, many Potential Adopters do not understand how to begin using mobile internet because they lack skills or confidence in the following areas:

- **Devices:** how to access the internet on a particular device
- **Specific products or services:** how to use a particular product or service (e.g. how to communicate with friends on Facebook or send an email)
- **Top-up:** how a particular data bundle[32] functions, what it offers, or how much data different services use
- **Safety:** how to stay safe online (e.g. avoiding scams or negative content).

"There is no one I can consult for help with learning internet – no one around me knows"

Female, Potential Adopter, rural, Tanzania

"Sometimes people laugh at us about not knowing, or doing something wrong"

Male, Potential Adopter, urban, Côte d'Ivoire

Digital literacy is closely connected to other barriers to adoption, particularly affordability. The high perceived cost of data was reported as an issue in both markets. While this is due in part to real financial constraints, it is also related to a lack of understanding on the part of Potential Adopters of how they can derive value for money from using mobile internet (due to a lack of skills or awareness of what is possible online). Similarly, low digital literacy among New Users means they do not always understand the data bundles on offer, do not purchase the best-value option, or become frustrated when a bundle runs out earlier than anticipated (e.g. because they did not understand there was a cap on usage). Given that New Users are a key source of information for Potential Adopters (see Section 3.4), many also end up believing that mobile internet is unaffordable.

32. A data bundle (or pack) gives mobile users the opportunity to buy a set amount of data (e.g. 500MB) or time (e.g. one day) to use the mobile internet for a set price. Bundles sometimes come with free access to a particular service (e.g. WhatsApp) for a limited period and are often packaged with an allowance of voice minutes or SMS.

The importance of digital literacy

As the digital world becomes a more central part of our lives and societies, the ability to understand, use, and create digital content is increasingly important. Ultimately, the internet will only be able to drive socioeconomic development when people have the digital skills to capture and create value from it. Supporting the development of these skills should therefore be a priority for governments and organisations in low- and middle-income countries. Unless this happens, existing inequalities may be magnified, not reduced.

The term 'digital skills' (or 'digital literacy') is a multidimensional concept encompassing capabilities in a variety of areas, such as the ability to find and interpret digital data and information, communicate with others online, or create digital content. Given the breadth of skills covered by the term, it is useful to distinguish between 'basic functional' digital skills (e.g. knowing how to use a touchscreen device), 'specialist' digital skills (e.g. using specialist software for work) and 'high-level' skills (e.g. the ability to create apps).[33]

While these are all important, a lack of basic functional skills is currently one of the greatest barriers to internet adoption in developing economies. Previous GSMA research has shown that many ordinary users lack the skills or confidence to discover what is available on the internet or the motivation to progress to more valuable uses (such as using the internet for education or employment).[34] Many mobile internet users are unable to expand their usage beyond the few applications they are already familiar with. Women often experience these issues more acutely than men due to fewer opportunities to 'trial' services, a greater fear of losing money by experimenting, perceived lack of value or incentive to learn, and smaller social circles to learn from.

To help tackle the shortfall in basic digital skills, the GSMA's Connected Society team has created the Mobile Internet Skills Training Toolkit (MISTT), a set of resources for organisations (including mobile operators) interested in conveying the fundamentals via the most commonly used internet services (WhatsApp, Facebook, Google, YouTube, and Wikipedia) in a range of languages.[35] Originally developed in India, in June 2017 Tigo localised MISTT in Rwanda where over 300 agents received training as part of a pilot that saw them training customers. Results from the pilot were very positive: 77 per cent of the more than 80,000 MISTT-trained customers increased their data usage in the period after the training and MISTT-trained sales agents increased the number of new data subscribers by 15 per cent (compared to an average month before). It also led to higher data revenues for Tigo: the MISTT group significantly outperformed a 'control' group of mobile agents (15 per cent versus nine per cent). Ultimately, the pilot was a cost-effective way to increase data usage and revenues. MISTT covered the incremental cost per customer in the first month, with an ROI of 13 per cent in one month and 240 per cent over one quarter.[36]

Read more about the pilot: MISTT: Tigo Rwanda Pilot Evaluation

33. This uses a classification presented in: Broadband Commission, Working Group of Education: Digital skills for life and work (September 2017)
34. GSMA and Mozilla (July 2015) "Approaches to local content creation: Realising the smartphone opportunity"; GSMA (July 2015) "Mobile internet usage challenges in Asia: Awareness, literacy and local content"; GSMA (June 2015) "Accelerating digital literacy: Empowering women to use the mobile internet".
35. MISTT is currently available in Bengali, English, French, Kinyarwanda, Hindi and Swahili. Available here.
36. GSMA Connected Society (2018) "MISTT: Tigo Rwanda Pilot Evaluation".

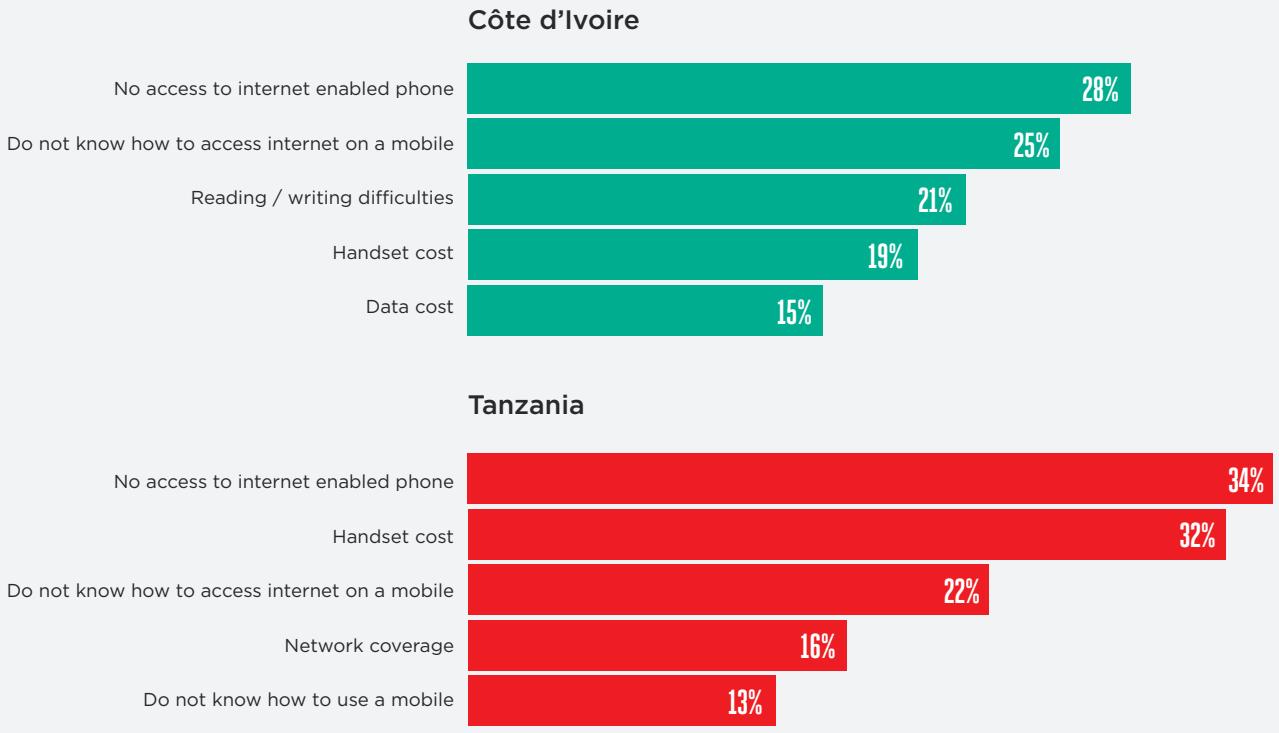

KOFLYN
KOFLYN

Barriers to internet adoption according to the GSMA Consumer Survey 2017

The GSMA Consumer Survey 2017 provides complementary data on the barriers to adoption among non-mobile internet users in Côte d'Ivoire and Tanzania. This nationally representative survey was conducted by GSMA Intelligence in 23 low- and middle-income countries, including Côte d'Ivoire and Tanzania. One of the survey questions asked respondents which pre-determined barriers had prevented them from using the mobile internet.[37] Issues relating to devices featured prominently in both countries: the lack of an internet-enabled device was the most frequently cited issue, with the cost of an internet-enabled device the second biggest issue in Tanzania and the fourth biggest in Côte d'Ivoire. Mobile and internet literacy also appear to be key concerns for non-users in both markets. The inability to read and write was reported as a major issue in Côte d'Ivoire where there are relatively low levels of literacy, while in Tanzania coverage was (not surprisingly) rated as a key issue.[38]

Figure 8

Top five perceived barriers preventing non-users from using the internet in Côte d'Ivoire and Tanzania



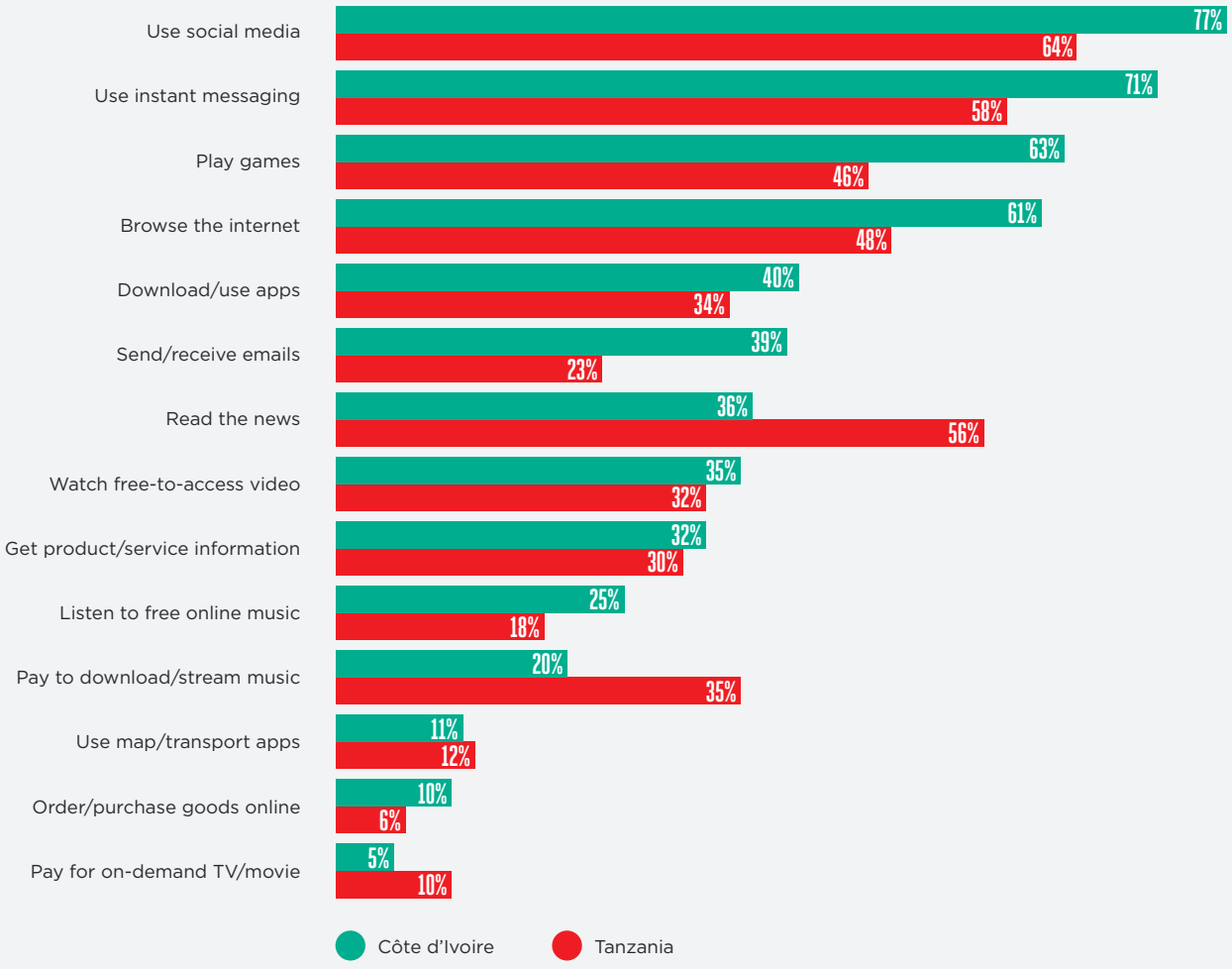
Source: GSMA Intelligence Consumer Survey, 2017
Base: adults aged 18+ who have used a mobile phone in the last three months, but have never used mobile internet, despite being aware of it (excludes mobile users who are not aware of mobile internet)
Percentages indicate the proportion of respondents who answered, "This is one of the main reasons stopping me" to the question, "Please indicate to what extent, if at all, this stops you from using the internet on a mobile phone." n = 220 (Côte d'Ivoire) and 171 (Tanzania)

37. A mobile internet user is defined as someone who has used a mobile phone in the last three months but has never used mobile internet, despite being aware of it (excludes mobile users who are not aware of mobile internet).
38. GSMA Intelligence Consumer Survey, 2017 [Base: adults aged 18+ who have used a mobile phone in the last three months, but have never used mobile internet despite being aware of it (excludes mobile users who are not aware of mobile internet)]. Percentages indicate the proportion of respondents who answered, "This is one of the main reasons stopping me" to the question, "Please indicate to what extent, if at all, this stops you from using the internet on a mobile phone." n = 220 (Côte d'Ivoire) and 171 (Tanzania)

The survey also gives us a nationally representative view of the services that are popular among mobile internet users in Côte d'Ivoire and Tanzania. As Figure 9 below illustrates, social networking sites and IM applications are the most popular use cases in both markets, reflecting what emerged among New Users in our research. It also shows that services with broad appeal in more developed markets have yet to become common activities for internet users in Côte d'Ivoire and Tanzania. For example, only 10 per cent of Ivorian and six per cent of Tanzanian mobile internet users regularly purchase goods online. While that might be expected given income levels and the nascent state of e-commerce in these markets, other free-to-use and established services also had low levels of usage (e.g. map and transport apps were only used by 11 per cent and 12 per cent of users). Beyond a few striking examples, like the comparative popularity of reading the news in Tanzania (56 per cent) compared to Côte d'Ivoire (36 per cent), the relative popularity of different services was similar. This supports the idea that a few platforms and use cases are dominating users' conception of the internet in a number of markets.

Figure 9

Percentage of mobile internet users who use the following services on mobile at least once a month



Source: GSMA Intelligence Consumer Survey, 2017
Base: Mobile internet users aged 18+. A mobile internet user is defined in this graph as one who owns a mobile and has used mobile internet in the last three months.
Percentage represents the proportion of mobile internet users who perform each of the specified online activities at least once per month.
n = 323 (Côte d'Ivoire) and 226 (Tanzania)

3.3 Female Potential Adopters face more challenges than men adopting mobile internet, mainly due to existing social norms rather than being explicitly prevented from using it

Gender plays a significant role in determining the adoption and use of mobile internet in both markets. Female Potential Adopters appeared to have less motivation and confidence to begin exploring and using mobile internet than men. However, this seemed to be driven more by ingrained social norms and structures than explicit male attitudes or control of their internet access and use.

In marked contrast to what we found in South Asia (see 'Barriers and triggers to mobile internet adoption: A consumer view from South Asia' – p. 15), male 'gatekeeping' of women's internet adoption and use was not common in either market for this sample. A minority of female New Users and Potential Adopters in Côte d'Ivoire reported that their mobile internet use was controlled (with potential for an outright ban) by their partners or parents, largely due to concerns about its potential to lead to infidelity. Some respondents in Tanzania mentioned that 'men may not let women use the internet'. However, this was not the case for any of the female Potential Adopters or New Users we interviewed, suggesting that this kind of gatekeeping is unlikely to be widespread in this market among this segment (or potentially among other groups of women).

"Some don't use the internet in marriage – the husband will say no Facebook or WhatsApp"

New User, urban, Tanzania

Instead, the challenges that female Potential Adopters experience in using mobile internet appear to be rooted in the gender roles, structures, and inequalities that exist in both countries. Women have less opportunity to access paid employment or their own disposable financial income. As a result, they are often more reliant on their social support networks, particularly the men in their lives, to meet their financial needs or make purchasing decisions. They are also less literate,[39] tend to have lower digital skills, less confidence, less disposable income, more safety concerns (including about sexual harassment and not knowing how to prevent it), and less exposure to mobile internet in general, all of which limit their understanding of personally relevant use cases (in Côte d'Ivoire especially). In Tanzania, female Potential Adopters were also in particular often not aware that feature phones are internet-enabled.

For more details, see Figure 6: Qualitative ranking of barriers to adoption for Potential Adopters in Côte d'Ivoire and Tanzania.

"There are certain parents who refuse that their child has a smartphone or go to cyber. When they hear that their children are in cyber automatically it is a scammer...this is the image they have"

Male, Potential Adopter, urban, Côte D'Ivoire

"Very few women have the income. They are not earning, or not earning as much. They do the cooking, they don't have income for phones"

Female, Potential Adopter, rural, Tanzania

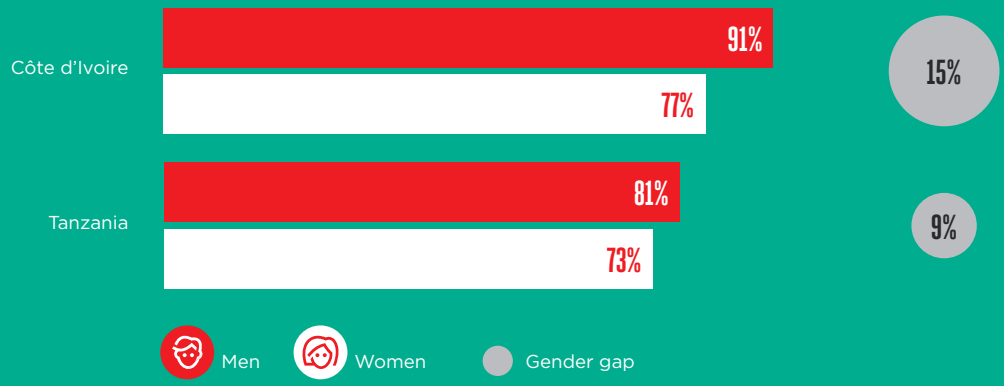
39. In Côte d'Ivoire, the literacy rate is 51 per cent for men and 37 per cent for women. In Tanzania, this rises to 83 per cent and 73 per cent, respectively. Source: UNESCO (2012 and 2015), percentage of population over the age of 15).

Data from the Mobile Gender Gap Report 2018

Results from the GSMA Consumer Survey 2017 clearly show that women in both Côte d'Ivoire and Tanzania are less likely to be mobile owners or mobile internet users than men. In both markets, there is a substantial difference between the number of male and female mobile owners (see Figure 10).

Figure 10

Mobile ownership by gender

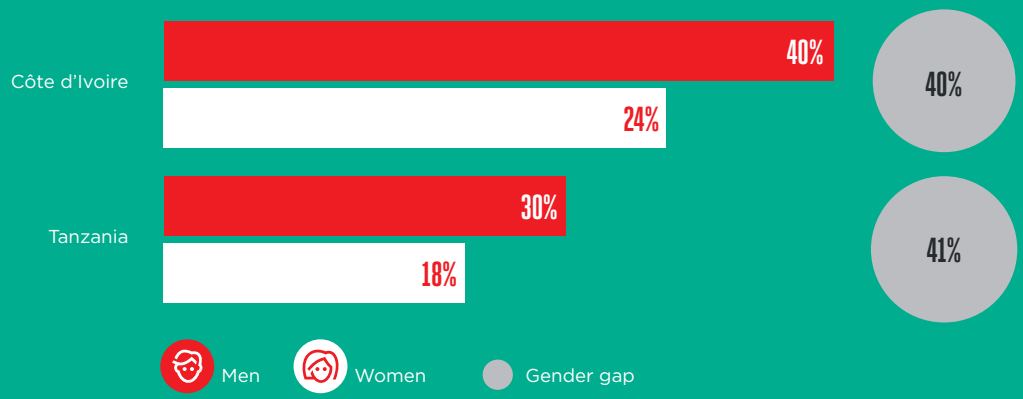


Source: GSMA, The Mobile Gender Gap Report 2018
The gender gap in mobile ownership and use is calculated using the following formula:
Gender gap in ownership / use (%) = [Male owners / users (% of male population – Female owners / users (% of female population)]/ Male owners / users (% of male population).

In low- and middle-income countries, the gender gap in mobile internet use is even more pronounced than that for mobile ownership. While 40 per cent of Ivorian and 30 per cent of Tanzanian men now use mobile internet, only 24 per cent and 18 per cent of their female peers do so. Where one lives also makes a difference—for both mobile ownership and mobile internet use, the gender gap is wider in rural areas than urban areas.

Figure 11

Mobile internet users by gender



Source: GSMA Intelligence Consumer Survey, 2017
Base: total population aged 18+. A mobile internet user is defined as a person who has used the internet on a mobile phone at least once in the last three months. Mobile internet users do not have to personally own a mobile phone.
The gender gap in mobile ownership and mobile internet use refers to how less likely a woman is to use mobile internet than a man. Mobile internet users = 117 for women, 207 for men (Côte d'Ivoire) and 92 for women, 140 for men (Tanzania)

3.4 New Users have made the leap into mobile internet use, but usage is often shallow and restricted to a few key applications

A key part of our research was examining the journey to mobile internet adoption for New Users. We found that while there are some commonalities, there is no single pathway. New Users began using the internet in different settings, and a range of use cases triggered initial interest and adoption. Some began using the internet on a friend's phone when out socialising. For others, the use of WhatsApp to video call friends and family or the ability to do research on their own via Google were early triggers. In Côte d'Ivoire, many Potential Adopters and New Users were first exposed to the internet through school and New Users then often began using the internet on a desktop computer in an internet café, sometimes with the support of the owner.

3.4.1 New Users require ingenuity and perseverance to adopt mobile internet. They do not do this alone; enabling social circles are critical.

New Users demonstrated considerable ingenuity and creativity in grappling with the range of barriers to internet adoption discussed earlier (see Section 3.2). While these were indeed significant challenges, New Users in both countries have become adept at finding 'workarounds'. The lengths many are willing to go reflects the value they place on continuing to use mobile internet.

Some examples of this resourceful behaviour are listed oppostie. A common factor is the importance of New Users' friends and family. Indeed, a person's social network typically acts as the primary trigger or enabler of internet adoption, helping New Users overcome most barriers to adoption. The fact that friends and family are 'socialising' the internet is encouraging for the potential of internet adoption and use to spread among Potential Adopters more quickly—that is, if the barriers outlined in Section 3.2 are addressed.[40]

40. An example of how this can work is the 'viral' growth of many internet services, particularly social media: the number of active social media users in Côte d'Ivoire and Tanzania grew 78 per cent and 79 per cent respectively between 2016 and 2017. Source: We Are Social, "Digital in 2017: Eastern Africa", p. 125; We are Social, "Digital in 2017: Western Africa", p. 34 (both cover the period January 2016–January 2017).

1 **Sharing (or gifting) smartphones:** Smartphone handsets are still expensive for those in our sample, even when they are highly motivated to own one. Some are able to get around this issue by sharing handsets or even SIM cards (although this is not generally a desirable choice for the phone or SIM owner, due to concerns about privacy and cost). Examples include users purchasing a SIM for use in a friend's or relative's smartphone, or borrowing a smartphone to check social media accounts when they do not have access to their own internet-enabled mobile or have run out of data. In our sample in Côte d'Ivoire, we observed a culture of men buying smartphones for women they were interested in romantically. In both markets, receiving a second-hand device from friends and family is common.

> **"My brother bought it so I can sell shoes"**
>
> Female, New User, urban, Tanzania

2 **Using friends and family as informal data credit networks**: As is typical in both countries, New Users often have relatively low and fluctuating incomes. As a result, many opt to purchase the lowest-cost data packages available (despite a common understanding that higher-cost bundles are better value for money). When New Users do not have means to pay for data, many rely on people in their social network to purchase bundles for them. While this is typically reciprocal in Tanzania (i.e. people purchase a data pack with the expectation that they will be repaid in kind at some point in the future), in Côte d'Ivoire we observed more of a culture of data 'gifting'. There, men often purchase data for wives and girlfriends as a present, with women also purchasing data for their siblings, friends, or partners who need it.

> **"My wife, she lives in Sikensi, I am obliged to recharge her"**
>
> Male, New User, peri-urban, Côte d'Ivoire

3 **Juggling devices to overcome cost, battery, and signal issues**: Many New Users owned multiple phones, often because of issues with battery life and signal strength. Many smartphone owners also have a basic or feature phone they use for calls and SMS to conserve their smartphone battery. Given that smartphones are perceived by some as fragile luxury items, some keep their smartphone safe at home and take their basic or feature phone out with them during the day, as these are seen as more robust and easier to replace if they are lost or broken.

4 **Swapping SIMs in a constant quest for value and to overcome coverage issues:** Most New Users own multiple SIM cards and engage in 'SIM swapping' to get the best deals across networks or maintain coverage when travelling across different regions. Most have a 'favourite' network they feel most loyal to and would conduct most of their usage with if they could. This is often the one they first started using or that most of their peers also use. Many others have multi-SIMs, using one for data and the other for calls and SMS.

5 **Finding a way around a lack of electricity in the home**: Given low levels of access to electricity, particularly in Tanzania where only 15.5 per cent of the population have access to electricity (compared to 62 per cent in Côte d'Ivoire),[41] we anticipated that this might be a major barrier to mobile internet adoption. However, many New Users work out strategies to deal with this, including juggling devices (see above) or paying mobile agents to charge devices. In general, it appears that a lack of electricity does not prevent adoption of the internet among this sample (although it does reduce usage).

In both countries, New Users and Potential Adopters felt there was a clear social imperative to begin using the internet. In Côte d'Ivoire, respondents expressed this in terms of becoming a 'modern' global citizen, while in Tanzania, it was expressed as being a way to connect with the broader Tanzanian population ('being modern' was a secondary motivation). Both New Users and Potential Adopters felt that a broad set of stakeholders, including governments, mobile operators, and schools and universities, were encouraging them to become internet users. However, close friends and family were by far the most trusted, influential, and commonly accessed sources of information about mobile internet.

41. World Bank, 2014

Dora and Sammy, New Users in Tanzania

In urban areas, viral awareness of mobile internet is far more likely, whereas in rural areas, New Users are dependent on early adopters and have needed far more motivation and initiative

"The customer can tell you when they want some kind of clothes and what you do is just take a photo and send to them through Instagram or Facebook. When I use my phone to do my business it is easier for me because I can easily contact my customers." Dora

Dora, small business owner, Dar es Salaam

Dora lives in Tabata, a typical district of Dar es Salaam. Coverage, including 4G, is strong in the area and she is surrounded by people using mobile internet. Dora was gifted her first phone—a feature phone—by her father for communication purposes. As many of her friends and family were on social media, she then bought a smartphone to be able to communicate using WhatsApp and share pictures on Facebook. She now uses the internet to promote her business (e.g. through Facebook pages and groups). Her younger siblings also use her phone to find materials for school and to use Snapchat.

Although she is relatively confident in her use of the internet, she sometimes does not know how to do certain things (e.g. how to block people that tag her in posts and photos on Facebook) and sometimes finds the language too technical to understand. Her friends and brother are the first ones she approaches for help.

Sammy, coconut farmer, rural Tanzania

Sammy lives outside Nampunga village in a rural, southern part of Tanzania. Most of his friends and family do not have internet-enabled phones and are not currently using the internet. Awareness of the internet is low in the area and 3G coverage only recently arrived. Sammy learned how to use the internet from one of the few 'early adopters' in his area. One of Sammy's teachers at school taught him how Google could be used for research on a computer. Once Sammy had saved up enough money, he bought his own feature phone and discovered it also had Google. He now helps his friends and family find answers to questions they have about areas like health. He travels to Dar es Salaam to sell some of his coconut crops and as a result has heard of Facebook, WhatsApp, and Instagram. He particularly wants to use WhatsApp, as he has heard it is good for sending and receiving pictures and is keen to use it to send pictures of his crop to potential clients.

"When I finished form six, I went to computer school and we were taught about internet but many things I was taught by my friends"

Female, New User, urban, Tanzania

"People use internet because it is the key to the world today... it's like the whole world is revolving around it"

Male, Potential Adopter, urban, Côte d'Ivoire

"I was told when I join Facebook I will be able to be updated on current events happening all over and especially here in Tanzania"

Male, New User, peri-urban, Tanzania

"my little sister, my father prevents her going on the net... she is only 12 years old, when we go on the net, we meet other people. He wants to prevent her being negatively influenced."

Female, Potential Adopter, urban, Côte D'Ivoire

"I was not interested in internet initially. I heard about it and my ex boyfriend did not want me to connect to Facebook. He claimed that girls who go on Facebook are not serious and could have another relationship. I hid to create my account on my sister's computer and he got angry"

Female, New User, urban, Côte D'Ivoire

While social networks are powerful triggers for Potential Adopters and New Users to adopt mobile internet, they can also restrict their online experience. Three main issues tend to arise:

1. **People may not have informed users in their social network.** Some Potential Adopters do not have an 'enabling' social network that will help them become an internet user. This issue was particularly prevalent in rural Tanzania. While some Potential Adopters may have heard of high-profile platforms like WhatsApp and Facebook, their contacts may not be able to provide sufficient support to help them start using them. Many in this group are reluctant to try the internet (often due to concerns about making a mistake that will cost them money) or are unaware that the internet is available on their feature phone (and do not know how to access it)[42]

2. **Limited knowledge of relevant use cases in one's social network.** When the discovery of internet services is so closely tied to one's social network, Potential Adopters and New Users may end up with a limited view of what is possible on the internet due to knowledge gaps or low levels of understanding among friends and family. I.e. if Potential Adopters do not see their social circle using mobile internet in ways that are appealing and motivating to them (relevant use cases), and these people are one of their few sources of knowledge about mobile internet, then it can prevent them from wanting to use themselves.

3. **Social networks can inhibit rather than encourage internet use.** Social networks generally enable internet use by helping Potential Adopters and New Users to address the full range of adoption and usage barriers. However, in a minority of cases, one's close social network may limit or prevent access to mobile internet. For example, older relatives in positions of authority (e.g. parents and grandparents of children and young people) may attempt to limit or prevent access to mobile internet because they perceive the internet as a negative influence, or because they are not aware of the potential benefits. While 'gatekeeping' of women's internet use (by men) was relatively rare in this sample, some partners, in-laws, and parents did attempt to prevent women from using mobile internet.

42. This lack of confidence was particularly apparent among female Potential Adopters. However, it seems likely that while male Potential Adopters may feel equally unconfident, they may not want to admit this as there are some perceptions that men are more likely to be 'good with technology'.

3.4.2 New Users understand the relevance of mobile internet as it fulfils one (or more) of four needs: connection, entertainment, keeping up to date (and feeling part of the modern world) and personal progression and productivity.

A key rule of thumb about human decision-making applies when it comes to why New Users adopt the internet and Potential Adopters have not. In short, people are far more likely to use mobile internet when it is easy or when the perceived benefits outweigh the barriers. As discussed earlier, many New Users have, and continue to, overcome some serious barriers to adoption and use, but believe it is worth it as it meets some important needs.

Those who have become mobile internet users typically have a clearer understanding of how the mobile internet is relevant to them and answers real needs in their lives. New Users are also typically surrounded by a supportive and enabling social network of friends and family that help guide them towards use cases that are personally relevant.

For New Users, mobile internet appears to answer four key needs, from most to least important:

1. **Connection (to friends and family):** Communicating with friends and family (both locally and those further afield) is the greatest need fulfilled for New Users and the best understood. In both markets, WhatsApp and Facebook (including Messenger) are the dominant platforms.

> **"I like WhatsApp because it brings us together as a family and it's helping us to pass information faster, it's helping me to get news and to know current affairs"**
>
> Female, New User, urban, Tanzania

2. **Entertainment:** Using mobile internet to find and consume music and video content is highly valued, particularly for certain demographic groups (urban, educated, youth). However, it does not fulfil a major need for some groups of Potential Adopters (rural, less educated, lower social grade) and is therefore not sufficient motivation for them to overcome barriers to adoption.

3. **Keeping up to date (and feeling part of the modern world):** Keeping up to date with international and national news or local events is highly valued. In Côte d'Ivoire, New Users value the internet for its ability to 'break down borders' and allow them to understand more about the wider world.

4. **Personal progression and productivity:** Use cases supporting entrepreneurship, business, jobs, and academic and other learning opportunities were often not well known, but when they were, New Users valued them highly.

> **"We do research on the internet because it is fast - it is like all the libraries in a single place. In libraries, it is necessary to walk around shelves to look for the book you want...we win at time and in information."**
>
> Male, New User, peri-urban, Côte d'Ivoire

> **"We use work groups and we post topics for discussions...We also use it for business purposes, sometimes we use our phones to reach out to a larger population through adverts on Instagram, Facebook, WhatsApp and so on"**
>
> Female, New User, rural, Tanzania

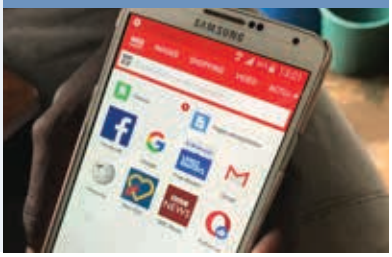
> **"In the beginning... I was doing everything in cyber, I did not see the importance of having a phone of this kind. My clients were limited to the Bassam level. Since I created the group and started publishing on Facebook... I have customers because I advertise my products on Facebook which allows me to reach the maximum number of people. I took a friend's phone to take pictures and share, but... this process was too long, and I bought a phone"**
>
> Male, New User, urban, Côte D'Ivoire

Innocent

A New User who discovered internet could be valuable for his business and bought a smartphone for this reason

Innocent is a real estate agent who lives in Bassam, Côte d'Ivoire with his wife and two children. For several years, he was using internet in a local cyber café, mainly to use Facebook. One day he observed a friend creating a Facebook group, which inspired him to create a group connecting real estate agents and customers to support his business. As the group grew, Innocent realised it was worth purchasing his own smartphone (in addition to his Samsung feature phone) so that he could access the group on the go, upload images and videos for his business, and be in contact with his clients more easily. He now communicates with clients using Messenger, WhatsApp, and Viber and advertises on Instagram. The Facebook group has grown to 3,700 members and he has seen his business grow to a much broader, more diverse customer base, including people from France. The growth in his business has meant he has been able to buy a laptop and modem so he can also access the internet when he is at home.

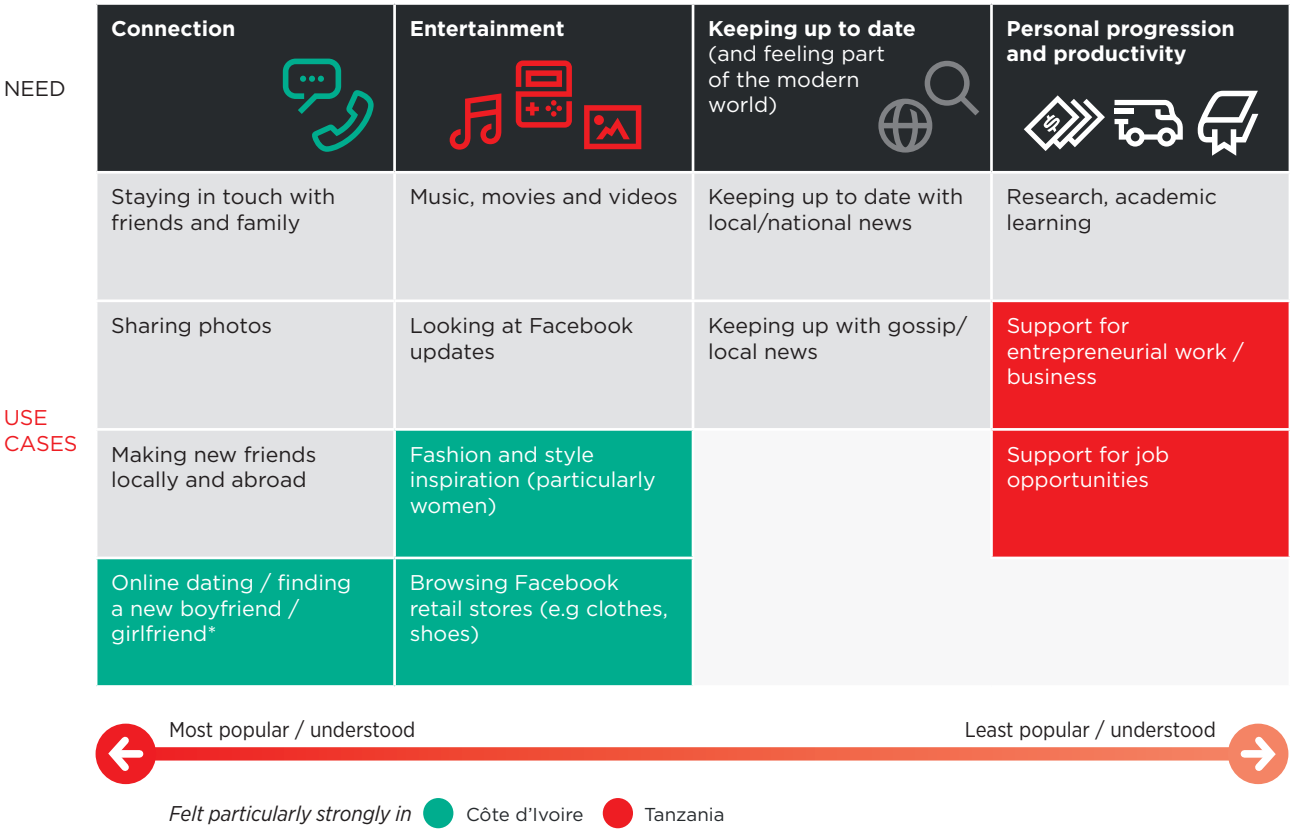
"I bought the phone for 110,000 francs. It is cheap. Before I found that expensive, I did not see the usefulness of paying a phone at this price. It does not shock me today, because the phone makes me money."



While these areas were all highly valued, they were not equally understood. New Users associate mobile internet most strongly with connection and entertainment use cases. Chatting with friends and family, sharing pictures, or watching videos are all popular and well understood. 'Keeping up to date' on local, national, or international events is slightly less well understood, while personal productivity and progression were highly valued but poorly understood by comparison (See Figure 12).

Figure 12

Key needs the internet fulfils for New Users (with examples of use cases)



* This also acts as a barrier / puts some people off using the internet

3.4.3 New Users' mobile internet usage often remains shallow and restricted to a few key applications

Despite becoming mobile internet users, a limited understanding of broader use cases and low digital literacy (among other issues) are holding many New Users back. WhatsApp and Facebook were the services that triggered adoption for most New Users and remain the dominant way many experience the mobile internet. For many, WhatsApp and Facebook fulfil each of the four needs outlined above. Together, they act as the primary platform for communication, entertainment, local and national news, and personal progression and productivity. While some have progressed beyond these initial use cases (e.g. to begin searching for relevant information on Google or other applications), many remained exclusive users of these platforms.

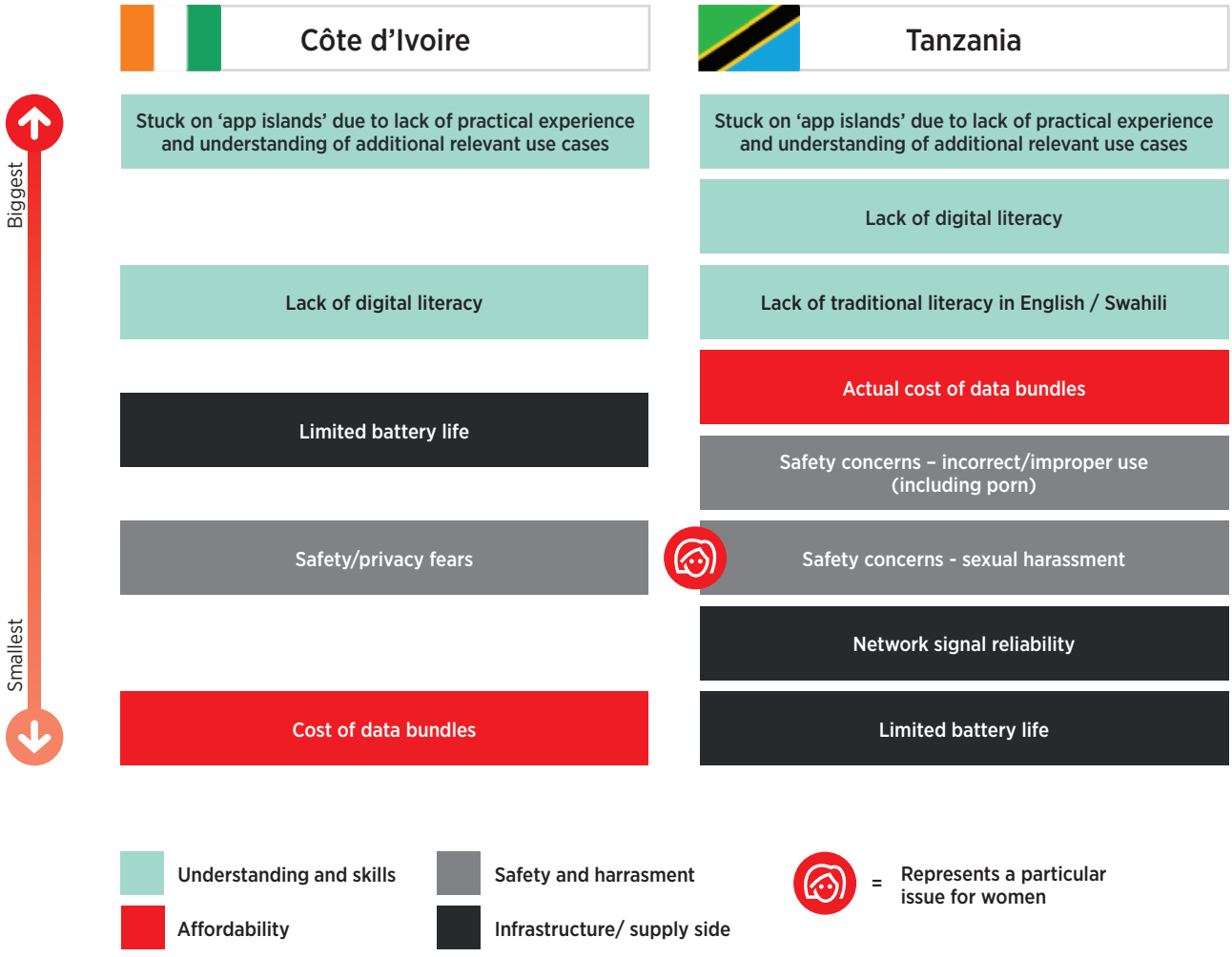
"The internet is many things: WhatsApp, Facebook, Instagram"
Male, New User, rural, Tanzania

As a result, they are effectively stuck on 'application islands', operating within a limited conception of what is possible online. This limits the value they derive from mobile internet (and potentially depresses their usage). For example, many in our sample run small businesses and are keen to understand how the internet can help. However, while they understood in a general sense that the internet could be used for business or education purposes, they often struggled to identify the specific relevance or application of the internet in their own lives.

For users, this means they are unlikely to extract maximum value from their internet experience, while for mobile operators (and the industry as a whole) there is a danger that it will inhibit (or curtail) usage.

Figure 13

Qualitative ranking of barriers to increased mobile internet usage among New Users in Côte d'Ivoire and Tanzania

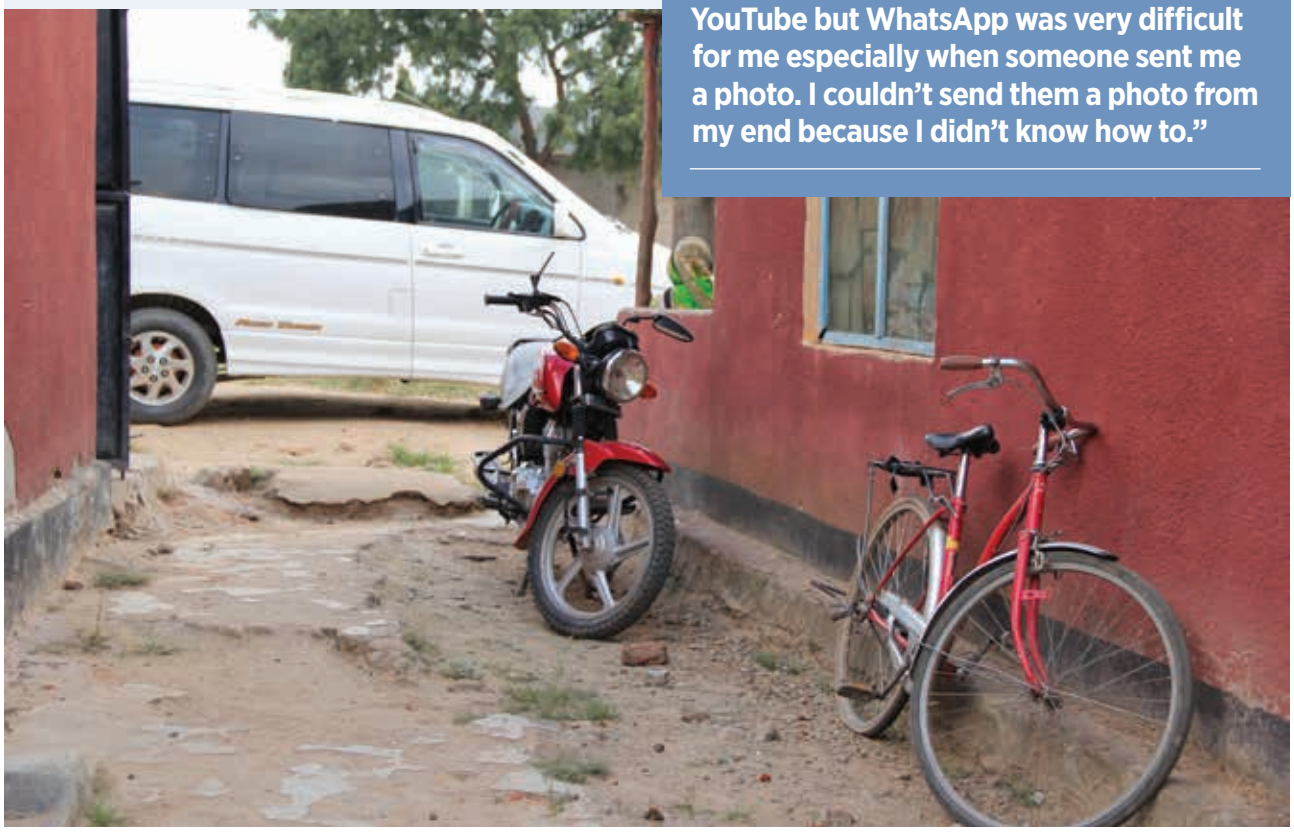


Violet, New User

The mobile internet enables more diverse social connections, but wider usage is limited by low digital literacy

Violet is a nurse living with her sister's daughter in Chalinze, a peri-urban town 100 km to the west of Dar es Salaam. She has a smartphone, which she uses to make calls, send text messages, take photos, and use a couple of apps. Violet was given her first smartphone as a gift from work and initially only used WhatsApp to stay in touch with family. WhatsApp continues to be the main way she uses mobile internet to communicate with relatives (including those abroad), but she is now also using Facebook to chat with a range of people. She also watches movies and videos on YouTube. Whenever she faces a challenge in using her phone (e.g. how to post a picture), she seeks help from her relatives or friends. This can be stressful because it makes her feel 'outdated'. She is interested in opening an email account, but does not know how.

"Initially, I wanted to join Facebook and WhatsApp, but I didn't know how to go about it…I didn't have any problem using YouTube but WhatsApp was very difficult for me especially when someone sent me a photo. I couldn't send them a photo from my end because I didn't know how to."



Triggering mobile internet use in Burkina Faso: Insights from parallel research

In February 2018, at the initiative of Orange Burkina Faso, the Connected Society team were invited to conduct a similar research study in Burkina Faso. While the research questions and approach were the same, the research sample was somewhat different: slightly older (20–45 years old) and a focus on peri-urban and rural areas. While it is therefore not possible to directly compare the findings with those from Côte d'Ivoire and Tanzania, some interesting parallels emerged.

Key findings from this research:

- **There is a growing sense that the mobile internet is important, but awareness of how to benefit from it can be low,** especially among older women and those living in rural areas. While many understand what the internet is, they lack basic knowledge of how they could make use of it.
- **For Potential Adopters of mobile internet, the biggest barriers to adoption are issues around affordability and understanding.** These could be grouped into three key concerns: cost, comprehension, and negative perceptions of the internet.
- **Smartphones are highly desirable status symbols, but are also seen as expensive (for some prohibitively so), fragile, and lacking in battery life (a particular concern for those living in rural areas).** There is widespread appreciation of their functionality, in part because many believe smartphones are the only mobile phones that can access the internet.
- **New Users of mobile internet find the internet provides a range of rational and emotional benefits.** These centre around use cases related to communication (by far the most common), entertainment and lifestyle, and access to information and work.
- **While enjoying greater comparative freedom than South Asia, women in Burkina Faso still face bigger hurdles to accessing mobile internet than men.** This is largely due to greater time pressures and financial limitations, and some prevailing social norms that the mobile internet is not a suitable activity for women.

Several different concepts addressing barriers to internet adoption were tested during the research: a smartphone instalment payment plan, a zero-rated social media package, a mobile financial services application, an educational app aimed at young children, and the GSMA's MISTT concept (see p. 30). The most popular by far was the MISTT concept. The need for basic training on what the internet is, what it can be used for, and how to use key services like WhatsApp and Google, was raised spontaneously among those in the sample, particularly Potential Adopters. In response, the GSMA is currently supporting Orange Burkina Faso to launch an agent-based training programme using the MISTT curriculum and training methodology.

Marketing: What works and what doesn't

As part of our research, we tested marketing material from all mobile operators in Côte d'Ivoire and Tanzania. In both markets, both New Users and Potential Adopters responded well to advertising that emphasised visual, engaging imagery rather than text-heavy copy (a particular turnoff for low-literate users). Celebrity endorsements were appreciated by the Tanzanian groups, with groups in both markets responding well to adverts that communicated clear and engaging use cases. While technological terminology was appreciated by those who understood it (e.g. that 4G meant faster internet), many found this language confusing, especially relating to data packages. Generally, most Potential Adopters and New Users appreciated simplicity and clarity.

4. Recommendations

Expanding and improving mobile broadband coverage in both markets remains a priority, particularly in Tanzania. However, the findings of this study suggest this will not be enough on its own to drive adoption and use of mobile internet. Potential Adopters face other significant barriers to adoption, primarily access to devices, awareness of relevant use cases, and low levels of digital literacy.

Therefore, the GSMA recommends that operators and other players in the mobile ecosystem act now to take the following recommendations on board. A holistic approach to addressing the range of barriers and triggers people experience will be most helpful in driving the next generation to adopt mobile internet—a significant opportunity for the mobile industry.

Caution should be taken extrapolating these recommendations to the general population, as the relative importance of these suggestions are likely to vary for other groups (depending, for instance, on their social and financial situation), and for some groups additional actions may be needed (e.g. improving 3G coverage). Still, these recommendations may have broader relevance.

4.1 Recommendations to stimulate mobile internet use among Potential Adopters

The following recommendations are mainly aimed at triggering mobile internet adoption among Potential Adopters in Côte d'Ivoire and Tanzania. While New Users have overcome some of these issues and started to use mobile internet, they also need support to help them progress their usage beyond basic services. While focused on Potential Adopters these recommendations will also apply to them to some extent, encouraging them to expand their internet use. This will ultimately help drive usage among Potential Adopters.

The recommendations are aimed at mobile operators, but they will be applicable to other stakeholders in the mobile ecosystem to some extent. They are relevant to both women and men, but will likely have a disproportionately beneficial impact on women's uptake (which is currently lower in both markets) as female Potential Adopters often feel the barriers to adoption more acutely than men. In general, we believe that by focusing on driving adoption for those needing the most support (whether women, the more rural, poor, or less educated), it will help to promote uptake for those who experience the barriers less keenly.

1	**Increase understanding of the benefits and value for money that mobile internet can deliver, especially raising awareness of valued (but poorly understood) use cases that help personal development and productivity.** Promoting well-understood use cases and services, such as the ability to communicate with friends on Facebook, will continue to drive adoption and use due to their popular appeal. However, promoting other use cases (particularly related to business or education) that answer a wider range of needs will persuade those Potential Adopters often unmotivated by social and entertainment use cases to begin their mobile internet journey. It will also enhance the value of the internet for New Users.
2	**Find solutions that enhance the affordability (both actual and perceived) of internet-enabled devices and data.** Ensuring access to smartphones is crucial to drive mobile internet use.
3	**Help build the confidence and digital skills of customers.** This can be done through a range of channels (e.g. the agent network, ATL and BTL marketing efforts), recognising that women may need additional support as they often have smaller social circles (and therefore fewer people to ask for advice).
4	**Design products, services, and marketing with a less digitally literate user in mind,** making the mobile internet less intimidating and more user friendly.
5	**Address some of the commonly held negative perceptions of the internet,** helping users access the tools that will make them feel safe and in control of their online activity.

4.2 Converting strategic recommendations into actions

The table below provides examples of potential actions mobile operators could take to implement each of the five strategic recommendations. Many of these actions are also likely to be relevant to other stakeholders in the mobile industry.

1. Increase understanding of the benefits and value for money that mobile internet can deliver	2. Help build confidence and digital skills	3. Improve affordability (both actual and perceived) of internet-enabled handsets and data
Research which internet products and services Potential Adopters in your market find relevant and appealing (and which they do not), taking gender differences into account.	**Support Potential Adopters to learn on their own:** e.g. create 'bite-sized' digital skills tips, such as short videos, which could be put on YouTube, pre-loaded onto handsets or 'side-loaded', included in a 'welcome' pack, or played on agents' devices. These videos could also be shared with NGOs that focus on improving digital skills.	**Design solutions to make internet-enabled handsets more affordable:** e.g. microloans, instalment repayment plans with third parties (e.g. solar pay-as-you-go providers) or partnerships with low-priced handset manufacturers.
Leverage the social nature of internet use via targetted data packs (e.g. 'his and hers' combo data tariffs or SIM packs, or 'buy one internet-enabled handset, get another half price').	**Consider offering remote support to help with questions about data/apps** (e.g. simple online interface).	**Support industry efforts to lower the cost of smartphones** (ideally for handsets with long-lasting battery life).
Design/encourage others to design mobile internet products and services that help customers develop their business or help them and their family learn new skills.	**Train and incentivise agents to provide advice on using mobile internet and popular apps.**	**Introduce more creative pricing to appeal to the price-sensitive:** e.g. innovative data packages, such as '1 hour' packs.
Analyse customer data on mobile internet use to understand which products and services recent adopters of your service are using most. This should also include particular demographics, e.g. women.	**Consider partnering with NGOs or other organisations that have expertise in technical literacy training** to teach Potential Adopters to use mobile internet.	**Encourage trials of mobile internet products/services at low or no cost through promotional deals.**
Use people in advertising that Potential Adopters can relate to (or only slightly more aspirational) to ensure they feel the internet can deliver value for them. Consider using Swahili, not English, in marketing (Tanzania).	**Offer practical training with hands-on demonstrations via roadshows with specialists.** Women training women can be particularly well received, even by conservative men.	**Design/encourage others to design 'data-light' versions of mobile apps/ services** (addresses cost barriers and will also benefit areas with poor-quality network coverage).
Research which communication channels are best placed to reach Potential Adopters (including different demographics, especially women).	**Tap into social circles to recruit/create 'ambassadors' who can teach friends and family how to use the internet** and understand the benefit to the household. This is particularly important for women who often trust other women and are more comfortable learning from them.	**Tackle misconceptions about the cost of smartphones and data through marketing.**
Promote mobile internet products and services that help support customers' personal development.	**Consider letting Potential Adopters 'try before they buy', especially if promoting lower-cost devices that consumers may be more sceptical about:** e.g. stalls run by informed agents that can provide advice. For women, locate these stalls in female-friendly areas.	**Create incentives/train agents to promote mobile internet,** in terms of its value for money and to tackle misconceptions about the cost of smartphones and data.

Key for categorisation of suggested actions:

- Product / Service
- Marketing
- Distribution

4. Design products, services and marketing with a less digitally literate user in mind	5. Address some common negative perceptions of the internet
Design and/or encourage others to design mobile internet products and services that are user friendly and meet the needs of all segments, including Potential Adopters who are less confident and literate: e.g. clear user menus with fewer steps, simplified content (websites, apps), comprehensible terminology, local language, icons/symbols/pictures/comic-style stories in addition to (or instead of) text.	**Offer mechanisms to help control data consumption and expenditure:** e.g. daily spend limits, warning reminders for data charges.
Pilot and test products and services to ensure ease of use (include female Potential Adopters and those with lower literacy levels in the testing).	**Design and/or encourage others to design mobile products and services that allow users to control privacy and security settings in a user-friendly way.**
Encourage handset manufacturers to simplify features on internet-enabled handsets, focusing on what Potential Adopters value to improve the user experience.	**Encourage the design of applications that make Potential Adopters, especially women, feel safer going online** (e.g. blocking unwanted messages or filtering/ removing explicit content).
Use video as a hook, given that many consider it more accessible than text-based services, especially for the less literate (but always give users the option to play or not, to avoid concerns about data costs).	**Help customers with privacy settings (particularly for social media) through marketing.**
Consider 'time-based' or 'service-based' pricing for data packs, not just volume (MB/GB), as these will be easier to understand e.g. one hour of unlimited browsing or one day of WhatsApp for $USDxx.	**Offset the negative reputation of the internet with positive stories promoting the benefits of mobile internet use** (especially around education and employment).
Explain the cost of mobile data clearly, avoiding complex terminology (e.g. 'gigabyte') and communicating (or avoiding) 'hidden' fees.	**Consider partnering with an NGO and/or government body to launch public awareness campaigns** (including in schools) to draw attention to cybersafety and harassment, raise awareness of ways to prevent and respond to it, and educate people about acceptable online behaviour.
Use simple language in marketing, not elaborate terminology or acronyms. Consider using icons/symbols/pictures/comic-style stories in addition to (or instead of) text.	**Create incentives/train agents to help Potential Adopters feel safe online** (particularly women, who are more vulnerable to threats and harassment).
Communicate a clear marketing message that avoids analogies and technical detail and conveys the impression that the internet is a user-friendly environment.	

5. Appendix: Further details on methodology

5.1 Research approach

The research presented in this report was conducted in Tanzania in July 2017 and in Côte d'Ivoire in August 2017. Research involved a mix of different qualitative methodologies: in-depth interviews, focus group discussions and community visits, which involved interviews with mobile agents and ad-hoc interviews. Some of the participants who took part in the in-depth interviews were involved in a 'pre-task', which involved keeping a diary, a photographic assignment, and answering some basic questions in advance of the field research. Four interviews were also conducted with subject matter experts in this field.

Our approach was to first speak with recent New Users of mobile internet to gain a full picture of how mobile internet fit into their lives, how they overcame barriers to adoption, what their key use cases were, and how they justify the decision to continue paying for and using the internet. These lessons were then discussed with a matched (by sociodemographic profile) sample of non-users—the Potential Adopters—to understand, among other things, how relevant and appealing these use cases were for them.

In Tanzania, research was conducted in Tabata, Dar es Salaam (the country's largest city); Chalinze (a peri-urban town 100 km West of Dar), and Mingumbi and Nampunga (two villages in the rural southwest). Across these locations, we conducted nine in-depth interviews (including five with 'pre-tasks'), eight focus group discussions, and three community visits (with an interview with a mobile agent in each).

In Côte d'Ivoire, research was conducted in Grand Bassam, Abidjan (the country's largest city) and N'Douci (a peri-urban town 115 km to the northwest of Abidjan). In the two locations we conducted: eight in-depth interviews (including four with 'pre-tasks'), six focus group discussions, and three community visits (with an interview with a mobile agent in each).

5.2 Defining Potential Adopters and New Users

New Users and Potential Adopters were recruited to have the same sociodemographic profile (i.e. a matched sample) with the only major difference being whether they used mobile internet or not.

Network coverage

- Living in locations with 3G coverage

Age

- 18–35 (felt to be a key age for adoption of mobile internet)

Socioeconomic class (SEC)

- Grade C and D (i.e. lower-middle class), defined using local metrics (those in SEC AB are more likely to have adopted already)

Education and literacy

- Literate (completed up to primary school) plus self-identified ability to read and write at a basic level
- A range of education levels, from basic literacy (some primary school) to college graduate level

Employment

- A range of options: self-employed or entrepreneur/employee/unemployed/not contributing to household income (e.g. living with parents/housewife/student)
- Women in formal employment/ housewives/unemployed
- Skewed towards agriculture workers in rural location

Handset

- All respondents to personally own a mobile phone, for personal use
- Representation of basic, feature, and smartphone owners

Mobile and data use

- All to make use of a paid-for mobile service (outgoing text or call; data) once a week or more

Internet awareness and openness

- All aware of the internet or an internet service (e.g. they could be aware of Facebook even if they claimed not to know about the internet)
- Not rejecters of adopting mobile internet for themselves personally, on their phone, at some point in the future

New Users:

- Adopted mobile internet in the last two to six months where possible, up to a maximum of 12 months
- Used mobile internet (through mobile data and not WiFi) at least once a week

Potential Adopters:

- Not using mobile data on their phone in any way (including mobile browsing, apps on smartphones, or handset-based services on feature phones)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5.3 The research deliberately suppressed some barriers to mobile internet use

The criteria for the selection of the sample deliberately removed some traditionally significant barriers to not only mobile internet adoption, but also mobile phone ownership and usage. The impact of the following criteria was therefore potentially reduced or even eliminated.

- **Network coverage:** Only locations with 3G coverage were selected.
- **Internet awareness:** All respondents had to be aware of the internet or at least an internet-enabled product or service.
- **Internet rejection:** Those who totally rejected the idea of the internet were excluded from the study.[43]
- **Literacy:** All non-mobile users had to have at least a basic level of literacy (this criteria was not imposed on users, as we were interested in whether any illiterate people were currently using mobile internet and, if so, how and why).
- **Digital literacy:** Owning and using their own phones meant all respondents had at least a very basic level of digital literacy.
- **Community restrictions on phone ownership:** As all respondents had to own at least a basic handset, this meant that communities with very strong social norms preventing women from owning mobile phones were excluded from the research.
- **Affordability:** As all respondents were SEC C and D and already had the funds to own (and use) their own mobile phones meant the affordability barrier was somewhat alleviated.[44]

5.4 Findings and recommendations should be extrapolated with caution

Since this report focuses on Potential Adopters and New Users only, caution should be taken extrapolating findings and recommendations to the general population (or other groups or similar markets) as they are likely to have different characteristics and behaviours (for example, affluence levels or age). Many of the insights and recommendations for action will likely be relevant to some degree, but for groups with very different profiles, further investigation should be conducted to confirm how much they apply.

43. Internet rejecters were defined as anyone who agreed with the statement, "I do not like the idea of the internet at all; it is something I would never want to access in any way, including on a mobile phone."
44. Many Potential Adopters owned a basic phone, so the cost of a smartphone could still be perceived as a barrier for them.

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