



GSMA end-user research

Our top 5 lessons

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Digital Identity

The GSMA Digital Identity Programme is uniquely positioned to play a key role in advocating and raising awareness of the opportunity of mobile-enabled digital identity and life-enhancing services. Our programme works with mobile operators, governments and the development community to demonstrate the opportunities, address the barriers and highlight the value of mobile as an enabler of digital identification.

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The World Bank estimates that one billion people do not have access to any form of legally recognised identification¹. Those without an official identity (ID), most often the poor and marginalised, are less able to access mobile connectivity and basic financial, health and education services, or to participate fully in society.

The most significant 'identity gaps' are found in the same locations where mobile connectivity and mobile agent networks continue to scale. This indicates that mobile network operators (MNOs) are well-placed to provide national governments and other ecosystem players with the opportunity to offer more inclusive methods of providing official identities to the underserved. In recent years, the international community has also recognised that digital identification – that is, proof of identity that can be verified and authenticated using digital technology, including mobile – has the potential to reduce the global identity gap, while also unlocking access to the services people need most.

To ensure that future digital identity solutions or services are inclusive, effective and relevant, it is vital for MNOs and other stakeholders to take a bottom-up approach to design and implementation, where the requirements, needs and desires of consumers – or 'end-users' – are understood and met. Over the last two years, the GSMA Digital Identity programme's in-country research has helped address this critical knowledge gap by

collecting a broad range of insights from end-users, such as how they navigate day-to-day identity-related pain points; the short and long-term incentives that influence their decision to access and use identity documents; and their preferences for identity-linked services. We have also engaged with a wide range of stakeholders in the identity ecosystem – government representatives, identity experts, MNOs, international development practitioners and local service providers – to document their perspectives on the role that mobile technology could play to reduce the identity gap.

Our research has been conducted across eight countries in Sub-Saharan Africa and Asia: Tanzania, Rwanda, Nigeria, Ghana, Cote D'Ivoire, Pakistan, Bangladesh, and Sri Lanka. Although end-user attitudes and perceptions were highly contextualised and varied by country, our reports have been able to identify a number of common insights and themes that are shaping digital identity opportunities across these markets, and likely other developing countries.

In this briefing, we share our team's top five lessons.

1. See: <http://id4d.worldbank.org>



Lesson One

Identity documents have practical, aspirational and emotional value

Above all else, identity documents – especially official, government-recognised forms of identity – are appreciated by end-users because of their day-to-day practical value. They provide more inclusive access to essential services; allow greater freedom of movement; act a vital safeguard against various forms of exploitation; and contribute to higher levels of social, economic and civic participation. Similar to the World Bank’s latest Global Findex survey², we’ve found that applying for a mobile SIM card is the most prevalent use of identity among men and women. In an estimated 150 countries, an official form of ID is now required to register for mobile services, putting those without ID at a higher risk of digital and financial exclusion.

In Pakistan, end-users told us that the National Identity Card (NID) has become an established part of daily life: it provides access to essential government services and support, and facilitates daily movement by enabling individuals to pass easily through police and military checkpoints. Similarly, the NID in Bangladesh has become a necessity for using a wide range of public and private services, and is also a prerequisite for formal employment – meaning those who lack a NID face real constraints on their incomes and ability to find decent work.

‘If you do not have a National Identity Card, you are nothing. The ID card can resolve everything...it proves that one lives as a human being.’

Female, Rwanda

‘I would like to get national ID. It’s necessary especially for travellers. If you have an accident people will recognise you and you can pass through checkpoints.’

Female, Cote D’Ivoire

‘I know I will not ever get in trouble if I have my own NID.’

Male, Bangladesh

IDs are also appreciated for their symbolic, emotional and aspirational value. Possessing an official document with a photo and signature that anchors you to your national identity can be valuable and exciting. Research participants in Rwanda and Nigeria said they were proud to

2. World Bank Group (2018) ‘The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution’



be citizens of their countries, and their ability to prove their status as 'Rwandan' or 'Nigerian' was intrinsically important. Many people also reflected that having a NID helped prove that they were 'good', 'responsible' or 'proper' citizens. For others, eagerness to possess formal identity stemmed from the enjoyment of imagining a prosperous future that would require them to travel abroad or engage beyond their local communities and social networks.

'Everyone should have ID – once you are 18, everyone should have it. It is part of being a citizen.'

Male, Nigeria

'I feel proud when I look at my ID card. It says who I am, that I am Sri Lankan.'

Female, Sri Lanka

'Maybe if I want to go abroad one day, this will help me.'

Female, Tanzania

End-users also agreed that ID can confer status. In Nigeria, a woman with a NID explained how possessing this proof of identity had elevated her position in the community: others asked her for

advice about how to navigate the NID registration process; she took several people to the NID enrolment centre to meet her contacts; and she can now vouch for other people's identity by virtue of the fact that she possesses a NID. Building on this, end-users agreed that it would be valuable to possess new forms of digital identification that enabled others – particularly service providers such as banks and MNOs – to recognise their economic success. For instance, smallholder farmers in Ghana and Sri Lanka have told us that digital identity concepts such as 'economic IDs'³ – which would help MNOs collate data that validate an individual's creditworthiness and professional accomplishments – could help build greater pride in their professions, build self-confidence and also facilitate easier access to financial services.

'The bank dismissed me because I am a farmer. If they would have asked more questions they would see I have a good income.'

Female, Sri Lanka

'[An economic ID] is evidence that I have knowledge about my farming and shows I am a leader. It shows I am able to pay for mobile money and track my finances.'

Male, Ghana

3. See GSMA's reports on 'Digital Identity for Smallholder Farmers: Insights from Sri Lanka' (2018) and 'Mobile-enabled Economic Identities for Smallholder Farmers in Ghana' (2019).



Lesson Two

End-users are able to cope without identity – but workarounds can be costly

End-users without identity documents are adept at ‘working around’ identity requirements to get the services they need, ultimately perceiving these processes as flexible and negotiable. This often includes borrowing an ID belonging to a friend or family member, asking a trusted contact to provide a reference, using an expired or less-official form of ID (such as a student card) or simply making excuses for not having the right documentation.

‘The first time I went to the hospital I had to take my mother so she could show her national ID, because I don’t have one.’

Female, Cote D’Ivoire

‘You do not have to provide identification for daily tasks. You only have to tell who you are and whose son are you.’

Male, Pakistan

‘I got stopped by a police patrol when I didn’t have my student ID with me, so I said I was still at primary school.’

Female, Cote D’Ivoire

‘I was unloading my goods when the police stopped me accusing me of counterfeit goods. I called the chairman of the trade association who vouched for my goods.’

Male, Nigeria

In Pakistan and Nigeria, many participants noted the prevalence of vouching, whereby someone else – usually a respected community leader or family member – could attend, or be called, to authenticate a person’s identity or attest to their good character. In Tanzania, letters from ward officers (local government representatives who both know, and are known by, the community) were widely considered to be the most robust form of ID in the eyes of end-users, as they are letters of introduction from someone who knows them personally, and are therefore reinforced by one’s reputation and link to the community.

‘The ward letter is important as it is from someone who knows you, this is better than ID from someone who doesn’t know you.’

Male, Tanzania



In some cases, end-users are able to directly manipulate the identity ecosystem to their own advantage, for example when age restrictions prevented them from being eligible for a service. In Cote D'Ivoire, we found that it was a common practice for young people to purchase a fraudulent birth certificate (with a new name and eligible age) if they wanted to return to school or join a youth football league. In practice, this means that many people owned multiple birth certificates, with disparate names and ages, which they can use in different situations according to their need. Similarly, in Tanzania several young people confessed to lying about their age to government registrars so that they could obtain a Voters Card before reaching the age of 18.

'Going forward my name and age on my documents will be incorrect, but that is not a problem. Things are so fast and easy once I have my student ID.'

Female, Côte D'Ivoire

'I lost my student ID and it would be really difficult to replace, so I thought [lying about my age to get a Voters Card] would be easiest. You don't need to prove your age for Voter Cards - they just trust you.'

Female, Côte D'Ivoire

In many instances, these workarounds help ensure that end-users are not routinely excluded from vital services such as health care or education, particularly in areas where NID penetration is low. However, this 'flexibility' often weakens the perceived need for NID ownership, and in cases where workarounds are not as effective, lacking ID carries direct and negative costs. In Rwanda, end-users without identity documents said that they often chose not to access services because they know they will be turned away, and instead looked for alternative solutions. For instance, those who could not access healthcare might visit a pharmacist or local traditional doctor for medical advice, and several people without a NID would change their



travel plans in order to avoid security checks. In other countries, end-users have described having to pay bribes or additional fees to access the services they need, or said that a lack of ID had prevented them from obtaining formal employment.

'When I go to ask for a service, I check what they're asking for, and if they need documents I go back home. I do not have any peace of heart when I do not have ID. I am sad...when someone asks me [about ID documents], I say I am looking for them.'

Male, Rwanda

'The first thing the traffic police officer asks us is to do show our ID cards. If we don't have them then we have to give up to 100 rupees to bribe the officer.'

Male, Pakistan

'I was staying in a slum at Mirpur. One time I went back to my village, and when I returned I saw that our slum had been destroyed, and I had lost my NID. It was hard. I lost my job at a factory and now I work as a maid.'

Female, Bangladesh

Not surprisingly, many end-users have told us that they felt marginalised, shamed or embarrassed by their failure or inability to enrol for national identity documents. Those who knew they possessed 'the best ID' (typically a NID) described how this provided a sense of relief, while those without identity often felt anxious about how to navigate day-to-day activities.

'It hurts me that I cannot have it. All citizens should have it.'

Female, Nigeria

'I feel unhappy and not free in my country because I have no ID.'

Female, Rwanda

'It is so painful to me. They asked me, 'Even you, as big as you are, you do not have ID?'

Male, Nigeria

Behaviours, attitudes and habits related to identity are easily entrenched, which means that even the most inconvenient workarounds – such as borrowing an ID or avoiding a service altogether – can seem safer and easier than using new identity solutions. In order to be perceived as being 'better' than these workarounds, digital identity solutions should be easily accessible and enable users to access the services they want, in the way that they want. Providers of new digital identity services can also encourage the formation of new habits by communicating the benefits of registering for mobile services in one's own name, or supporting the frequent, simple and repetitive use of ID – perhaps by developing ID-linked services that offer small financial incentives for frequent use, or even non-financial 'rewards' in the form of praise or recognition.



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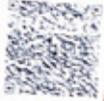
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Lesson Three

There is a complex gender narrative associated with identity

Across all countries, nearly all participants spontaneously asserted that women and men have an equal right to obtaining National Identity Cards. Furthermore, all forms of official identity documents (including birth certificates) were seen as equally useful for both men and women for accessing services and other opportunities. We have seen minimal evidence of any conscious or deliberate actions from male or female ‘gate keepers’ that are intended to prevent women from accessing ID; in fact, we have seen numerous cases where male family members encouraged women to get registered for a NID, or where women had enrolled first and then encouraged their husbands to do the same.

‘My husband told me to get [the NID] as soon as possible from wherever I can get it. It is very essential. My children are growing up. They need the card for school admission or for other things.’

Female, Bangladesh

‘It is not possible for my husband to stop me from getting ID if I want it.’

Female, Nigeria

‘People without ID are ignorant people. I didn’t mind giving up my day to get my National Identity Card – I thought this could be a one-time opportunity, and having an ID is very valuable.’

Female, Tanzania

But beneath this, we’ve learned how prevailing gender inequalities and social norms can reinforce a widely-held assumption that compared to men, women have less practical need for ID. Women are often perceived to be less threatening than men at security checkpoints, they tend to travel less and work nearer to home in order to manage childcare and household responsibilities, and the informal economy roles often filled by women do not usually require or provide ID. Women are also better able to navigate ID situations in ways that wouldn’t work well for men: for instance by smiling, crying or providing their phone number to the official blocking access.

In Côte D’Ivoire, we found that young women were more likely than their male counterparts to be frequently concerned about how service providers could misuse their personal details, fearing that their information could be accessed and traced back to them by unknown men, ‘jealous women’ or



even rebel military groups. In many circumstances, therefore, women depended heavily on using identity documents belonging to men or other family members to access the services they need, or they would seek to protect their privacy by using fraudulent IDs with incorrect personal details.

'At the hospital I didn't have ID so it became very difficult for me - I gave my aunt's ID card.'

Female, Pakistan

'Women refer to men as their ID card.'

Male, Nigeria

'If women get their NID stolen, they don't have to worry as much.'

Male, Bangladesh

'I don't like the idea of registering your SIM. I only want to give my name to a mobile operator, and I don't really want to give that.'

Female, Côte D'Ivoire

This meant that in some locations, women were less likely than men to prioritise or pursue ID registration and ownership. A lack of urgency to register can be further complicated by the fact that many women are unable to leave their home to travel to enrolment centres, or less willing to navigate lengthy, complex, and often arduous enrolment processes. In Tanzania and Pakistan, we saw that mothers relied on their male partners to complete the birth registration process because they were less able to travel, and felt less confident navigating government processes or engaging with government officials.

Similarly, in some patriarchal communities women avoided interactions with local mobile agents due to the cultural inappropriateness of speaking with unknown men, or because they had lower levels of understanding around technology, airtime and data packages.

'And after all that trouble [navigating NID enrolment], you only get a scrap of paper? No, I will wait until they have sorted out these problems.'

Female, Nigeria

'To withdraw from my mobile money account, I need to take my husband's ID as my SIM card is registered in his name.'

Female, Rwanda

Mobile technology has significant potential to reduce the ID gender gap. For instance, using mobile agents to facilitate ID enrolment could make it quicker and easier for women to register for NIDs or to register the births of their children. In Nigeria, Rwanda and Bangladesh, end-users felt that the ability to enrol for a NID through a local MNO agent would be transformative, as it would bring enrolment services closer to communities and make them much more accessible to women who face time, travel or resource constraints. There are also opportunities to deliver identity-linked mobile services that are specifically designed to improve the lives and livelihoods of women, which could help make the value of official ID more salient. We have seen that among many women, the desire to access mobile financial services – especially those that make it easier to save or make school payments – could be a key trigger for obtaining a proof of identity.



Lesson Four

Relationships and trust are vital

The relationships that end-users have with their government, local service providers, and community members have a strong influence on an individual's behaviour and attitudes towards identity, and their willingness to share information about themselves. Where community relations were strong and trust among citizens was high, we've found that people tended to be happy to share personal information with service providers, and less-formal proofs of identity that leverage personal relationships were highly valued. Conversely, in instances where national security was a concern and trust among citizens was low, data privacy and access to government-issued proof of identity was a high priority.

'I know who you are today, but I don't know who you will be tomorrow. Humans have two sides, you could be one today and another tomorrow.'

Female, Cote D'Ivoire

'I don't feel like going outside [without ID] because problems will be there for me. Policemen will stop us and ask so many different questions like 'where are you from? You are from some other country and not from Pakistan'. There are so many terrorist issues.'

Male, Pakistan

Many of the end-users participating in our research live and work in close-knit communities where friends and family act as financial and social safety nets, and local service providers provide a vital channel for accessing advice and support.

Neighbours lend money to families experiencing financial shocks; local ward chiefs or religious leaders act as in-community links to government; mobile agents facilitate financial transactions and promote other digital services; and members of organised groups and cooperatives work together to pool resources or share information. Community self-reliance is often a source of pride, as is having a positive social reputation – being someone that others in the community are willing to vouch for is critical.

'We trust the government first because it's here at all levels: cells, districts and above. But then telephones come second, because you have them in your pocket all the time. If there is no government or phone to help you, it would be like life is stopping.'

Female, Rwanda



In Sri Lanka, agribusinesses and local government officials successfully build trust and loyalty among farmers by providing personal, accessible touchpoints for them to navigate services and support. Through almost daily interactions, they grow to know the farmer on a personal level and are a reliable and trusted source of information and advice. They are aware of the farmer's successes and challenges, and are likely to know detailed information on their farming-related activities and productivity. End-users are open to sharing information about themselves with these trusted institutions, believing that personal data will be used for their mutual benefit. In places where MNOs hold more distant relationships with consumers, they may want to partner with 'known' institutions such as these when designing digital identity solutions that require end-users to share their personal information.

'You can call the [agricultural] officer if there's any problems, the next day he is at your farm. I trust him with my heart - he tells us when they get information.'

Male, Sri Lanka

'(Market traders) give loans to farmers on trust... farmers don't give anything as a guarantee because they actually don't have anything.'

Male, Sri Lanka

Many research participants said that they would be willing to trial new services that required them to share personal information with MNOs, but insisted that they would have to see the benefits of this action immediately. In addition to this, end-users felt that being asked to share too much personal information, too quickly, would raise concerns. Very little information was considered by participants to be so private that they would not be willing to store or share it using their mobile phone, with the occasional exception of information related to

income levels, or health conditions that carry stigma. This is a strong context for digital ID innovation, with trust in such services and acceptance of data sharing both high – as long as a service of real value is being offered in return. As MNOs build up a suite of identity-linked products, it is important that they follow a staged approach that considers which identity-linked services will deliver the quickest impact and value for end-users, while requiring the least amount of data.

'I feel good that Tigo knows me, as they can help me with my problems.'

Female, Tanzania

'If the service is real then I will give information to you. I will not want to share my financial history. Others are ok.'

Female, Nigeria

'If I have AIDS, I would not like to give this information to the public.'

Female, Nigeria

Lastly, it is important to note that end-users were often unaware of the potential consequences of sharing their personal information publicly. For example, many had not considered that sharing their mobile PIN with others could make it easier for someone to remove money from their mobile money wallet. Should such negative consequences occur, users may blame MNOs or mobile agents rather than recognising the influence of their own behaviour, which can be damaging to an MNO's reputation. Education campaigns around mobile privacy and the risks associated with mobile behaviours can address this knowledge gap, while also helping to ensure that mobile users' privacy and data security rights are respected when using digital identity services.



Lesson Five

Mobile is already being used in ‘identity journeys’ – and could be used better

In all research countries, MNOs were valued and trusted as a service provider with one of the closest day-to-day relationship with end-users. Equally, mobile phones were highly valued and are increasingly viewed as something that everyone should be able to access or own. For billions of people, a mobile device is no longer just a tool for communication, but has become the only means of accessing the internet and a plethora of life-enhancing services. This puts MNOs in a strong position as a trustworthy and reliable provider of digital identity solutions, particularly in markets where SIM registration is mandatory.

‘My mobile phone is like my second personality.’

Male, Nigeria

‘Without the invention of [mobile phones] my business wouldn’t exist.’

Female, Nigeria

Mobile technology is already playing a significant role in many day-to-day identity journeys: end-users can call friends or family members to ‘vouch’ for them; some services, such as e-government services in Rwanda, use two-factor authentication by linking national IDs to mobile numbers; and some people relied on their mobile handsets and SIM cards to store key identity information or photographs of ID cards. Most end-users could see clear benefits to using their phones in new ways to validate their identity when travelling, or when accessing identity-

linked services, such as e-Government platforms. With more governments supporting digitisation initiatives and e-governance service provision more generally, many people felt that that mobile-enabled digital identity solutions were a positive and inevitable part of their future.

‘My phone is always with me – if I could show it [as ID], this would be very easy. Technology is making our lives better, it makes sense to use them for more and more things.’

Male, Tanzania

‘I use my phone to pay my solar energy bill, so why not use it as my ID – this is the way of globalisation.’

Male, Tanzania



'I would love to give, show or just tell them my mobile number [when asked for ID]. You always have your mobile and you can remember the number.'

Male, Cote D'Ivoire

'If I am away from home on a trip and I get sick, I won't have my documents. But [with a Health ID] I could get treated via my cell phone and maybe even pay via mobile money.'

Female, Rwanda

It is clear that MNOs are well-placed to meet a latent demand for new identity-linked services, with end-users welcoming digital identity solutions that were more accessible, easy-to-use and enabled them to better meet their daily needs. Research in Sri Lanka, Ghana and Nigeria has made it clear that economic IDs have the potential to help farmers and small business owners build pride in their profession, feel more informed, connect to new markets or buyers, access digital financial service and reduce their financial risk. End-users in Tanzania, Côte D'Ivoire and Pakistan have revealed an opportunity for mobile to improve access to healthcare. The creation of health IDs (e.g. digital patient records linked to a mobile number and SMS health messages) was easy for end-users to understand and highly appealing, particularly if it could make the healthcare experience faster, easier and safer, or provide access to a healthcare provider via mobile. Mobile birth registration solutions were also popular among end-users across all countries, as this would reduce the number of trips to government offices and reduce the amount of time it takes to complete the registration process. End-users often said that they would be willing to pay for new services offered by MNOs, so long as there was a clear payment structure, an incentive for them to access, and the fees were reasonable (i.e. in line with charges for similar services).

'[Digital Birth Registration] is good. Without this we have to go to the local government office, and we keep delaying that. If we register a birth late we are charged an extra fee; if we register on time then they ask us to come back the day after tomorrow or they give us a new date.'

Female, Pakistan

It will be vital to keep in mind that the segments of the populations lacking ID are not a homogenous group, and a number of factors will influence an individual's identity-related needs and priorities. For instance, our research has found that compared to older participants, younger end-users tended to be: more digitally literate; better connected to, and more aware of, the outside world; more willing to use digital channels to access information, advice and support; and more concerned about how their personal data is used. In Sri Lanka and Ghana, we found that a farmer's digital identity needs can be influenced by their age, social capital, digital literacy, ability to manage uncertainty, perception of themselves, and even the types of crops they grow. MNOs and their partners should therefore take a targeted approach when designing and marketing digital identity solutions.



Looking Forward

Our in-country research has helped GSMA and our partners develop a more detailed picture of the needs, opportunities and use-cases for mobile-enabled digital identity solutions that target low-income consumers. As more and more governments move towards establishing national identity programmes, opportunities will emerge for MNOs to leverage their existing assets and identity-related practices to provide end-users with greater access to official identity as well as relevant, identity-linked mobile services. This could include facilitating enrolment for national identity schemes; effectively communicating the benefits of using identity; and developing new services that meet the identity needs of citizens, business owners, informal workers, and those marginalised from financial and other services.

The GSMA's Digital Identity Programme works with MNOs and other stakeholders to build on the opportunities and insights identified through our research. With just over a decade left to meet the 2030 United Nations' Sustainable Development Goals, there is a clear need for concerted action. Governments, the development community, the mobile and financial services sectors and stakeholders from the wider identification ecosystem need to do their part to jointly address

the difficulties end-users face registering identity documents and help to ensure that with these they are able to access enhanced opportunities, including life-enhancing mobile services in their own name.

If you are a GSMA member, policymaker or other organisation seeking to develop digital identity solutions for underserved populations, please contact the Digital Identity team at digitalidentity@gsma.com.



For further information please visit
the GSMA website at www.gsma.com

GSMA HEAD OFFICE

Floor 2
The Walbrook Building
25 Walbrook
London EC4N 8AF
United Kingdom
Tel: +44 (0)20 7356 0600
Fax: +44 (0)20 7356 0601

