



# Innovations in Mobile Birth Registration:

Insights from Tigo Tanzania and  
Telenor Pakistan





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# 1 Introduction

It is estimated that one in three children under the age of five – roughly 230 million children in total – have not had their births officially registered, and every year more than 50 million additional children are born into this state of invisibility. Disparities in birth registration rates are significant; the World Health Organisation estimates that 99 per cent of unregistered births take place in developing countries, with nearly 80 per cent occurring in either South Asia or sub-Saharan Africa<sup>1</sup>. In most countries, children who are poor or live in rural areas are significantly less likely to have their births registered or to possess a birth certificate.

For decades, the United Nations Convention on the Rights of the Child, as well as a number of international treaties, have guaranteed every child the right to be registered at birth and the right to both a name and nationality. More recently, the Sustainable Development Goals have set a global target to provide every person with a legal identity – including birth registration – by 2030. As a permanent recording of a child’s identity and the first legal recognition of the child by its government, birth registration helps to bestow access to a number of vital services, including access to healthcare and immunisations, education and social protections. As a proof of age, it can protect children from being forced into child labour, early marriage or recruitment into the military. Later in life, it can enable young adults to acquire national identity documents, vote in elections, gain formal employment, own property, or access formal financial services.

For national governments, birth registration is also a vital first step in establishing a robust Civil Registration and Vital Statistics (CRVS) system – an essential tool for effectively planning and monitoring the delivery of public services, development policies and infrastructure programmes. Accurate demographic data also protect governments against fraud, lead to more efficient and cost-effective delivery of government services and social protections (especially in areas related to health and education), and can ensure fairer elections. For many governments looking to reap these benefits, digital identity has emerged as the preferred method of providing citizens with access to officially-recognised identification.

In today’s world, it is increasingly evident that the mobile industry is uniquely positioned to bring the benefits of digital technology to many of the poorest and hardest to reach communities around the world and help address a wide range of socio-

economic challenges. There are now more than 4.7 billion unique mobile phone subscribers globally, and over 70 per cent of the world’s population is expected to own a mobile subscription by the end of this decade<sup>2</sup>. In developing countries, more than 40 per cent of internet connections are now made using mobile broadband, and falling device prices are encouraging the rapid adoption of smartphones; in Africa alone more than 400 million new smartphone connections will be added by 2020.

This report highlights the experiences of two operators – Millicom Group’s Tigo Tanzania and Telenor Pakistan – to demonstrate how mobile technology is being used to improve the means and efficiency by which birth data is collected, accessed, verified and stored. By speeding up progress with regard to birth registration and the provision of unique identities to the most underserved, operators have delivered sustainable identity solutions that have the potential to be taken to scale nationally and deliver both social and commercial return.

## 1.1 Introduction to Tigo Tanzania and Telenor Pakistan

Over ten million Tanzanians subscribe to voice, SMS, internet or mobile money services from Tigo Tanzania, the second largest mobile network operator (MNO) in the country. Driven by a commitment to invest in Tanzania’s digital transformation, Tigo plans to double its investment in rural areas by 2017 to increase coverage and deepen mobile penetration. Tigo Tanzania belongs to Millicom Group where the vision “to empower every individual to advance in life and find joy” translates into leveraging their strongest assets – products, knowledge and expertise – to deliver societal value in the communities where they operate.

With a subscriber base of over thirty-eight million people, Telenor is Pakistan’s second largest mobile operator. It has invested over \$3.5 billion in the local economy since beginning operations in 2005 and has a network of over 220,000 retailers, franchises and sales and service centres. In 2009 Telenor launched Pakistan’s first and (to date) largest Mobile Financial Services brand, ‘Easypaisa’, which in 2015 was used by over 20 million Pakistanis across 800 cities and moved three per cent of Pakistan’s GDP. In addition to their focus on extending the benefits of mobile communications, Telenor Pakistan

contributes to society through social investments that are focused on long-term partnerships that contribute to lasting change. Telenor Group and UNICEF have a global collaboration which aims to leverage the reach and capability of connectivity for children’s survival and development.

For both mobile providers, the strategic decision to participate in respective birth registration projects was driven by the value they knew could be gained by deepening relationships with government and civil society partners, as well as a desire to showcase the role mobile providers can play in addressing a pressing social need through the application of technology and in-house expertise. In Tanzania, the initiative presented Tigo with an opportunity to develop new, innovative mobile applications and introduce their services to over 700 birth registrars, as well as the thousands of customers the registrars serve. In Pakistan, the new mobile birth registration platform has provided Telenor franchises and distribution points with new opportunities to strengthen their role in the community as an access point for government services, and could potentially provide Telenor with new, commercially-sustainable revenue streams that link birth registration to mobile internet and disbursements.

1. Philip Setel and others, ‘A Scandal of Invisibility: Making Everyone Count By Counting Everyone’ (2007) The Lancet <http://www.who.int/healthinfo/statistics/WhoCounts1.pdf>, accessed 27 October 2016.

2. GSMA, ‘The Mobile Economy 2016’ (2016).

# 2 Barriers to birth registration

In addition to ratifying the UN Convention on the Rights of the Child, the governments of Tanzania and Pakistan have each passed national-level legislation that makes the registration of births compulsory. In Tanzania, the Births and Deaths Registration Act (2002) and the Law of the Child Act (2009) recognises every Tanzanian child's right to a name and nationality and further establishes the responsibility of parents or guardians to register the birth of their child. Pakistan's National Database and Registration Authority Ordinance (NADRA) 2000, makes it obligatory for every new-born child to be registered within 30 days of birth.

Nevertheless, as of 2014 Tanzania maintained the seventh-lowest rate of birth registration in the world and the third-lowest rate in East and Southern Africa. Only 16 per cent of Tanzanian children under the age of five are registered at birth, and only half of those registered receive a birth certificate.

Meanwhile, in Pakistan only one in three births is officially registered, a rate that is less than half of the average for South Asia. In both countries, registration is much less likely to occur among children residing in rural areas or among households in the poorest quintile of the population<sup>3</sup>.

The barriers to birth registration - in Tanzania, Pakistan and elsewhere - are often varying and complex, and are likely to be influenced by a range of factors including the state of a country's civil registration and national identification systems, national policies and legal frameworks, and a number of other supply and demand-side barriers.



## 2.1 Supply-side barriers

In many countries the Civil Registration and Vital Statistics (CRVS) process is fragmented or decentralised, making it difficult to standardise registration forms and procedures or to foster coordination among registrar offices and other government ministries. In Pakistan, for instance, delivery of the birth registration mandate is the responsibility of each Union Council (UC), the smallest administrative unit in local government, which create and maintain civil registration records for residents and report these statistics to the National Database and Registration Authority (NADRA) for authentication purposes. A lack of transparency in the registration process exists overall, with variable fee structures and process times, and no standardized information portals or receipts.

Further, it is all too common for birth registration offices in developing countries to be poorly equipped, understaffed and underfunded. Low capacity levels among staff and antiquated paper-based systems are often the primary cause of delays in the registration process, and where a digitised service has been established, the same can be hampered by frequent power cuts, intermittent internet connections or the use of unreliable

equipment. Being one of the many functions within the broad portfolio of local government authorities, including healthcare providers in some circumstances, delivery of the birth registration service is often not considered a priority.

In many circumstances, applicable legal frameworks governing birth registration are out of date and/or not fully aligned with international minimum standards. Parents may not be able or willing to meet some of the process requirements for registration, such as submitting a marriage certificate or national ID documents. Research from Plan International shows that unmarried mothers in at least 19 countries avoid registering their baby due to issues related to shame and stigma<sup>4</sup>. This includes women in Sierra Leone, where a birth cannot be registered if the child is born to unmarried parents or is not acknowledged by the father. In Bhutan registration can only take place if the father's name is declared, in Eritrea late registration fees can cost as much as one week's rent, and in Oman parents are compelled to declare their religion when registering<sup>5</sup>. In many countries registration can be nearly impossible to complete for children who are orphans or refugees.

3. Birth registration data taken from UNICEF's dataset, available at: <http://data.unicef.org/topic/child-protection/birth-registration/>, accessed 27 October 2016

4. Plan International, 'Mother to Child: How Discrimination Prevents Women Registering the Birth of Their Child' (2015).  
5. UNICEF, 'Every Child's Birth Right: Inequities and trends in birth registration' (2013).

## 2.2 Demand-side barriers

More than half of all children in Tanzania are born at home rather than a hospital or health facility. With registration services only available at one site per district, many parents must make (at least) two long journeys in order to register their child and collect a birth certificate. In areas that lack adequate infrastructure and public transportation, travelling this distance can be prohibitively time-consuming, expensive and inconvenient, particularly for those who must disrupt their income-generating activities or sacrifice daily wages. Cost is also a significant deterrent in Pakistan where documents require attestation from government officials and may necessitate multiple trips from adult males in the family, increasing the time and effort needed to complete the registration process. Surveys conducted by UNICEF in Pakistan suggest that registering a birth through the traditional process costs the average household PKR 297 (US \$3.00) in Sindh and PKR 736 (\$7.40) in Punjab, equivalent to the average daily wage in some communities.

A lack of awareness on how to complete the registration process and the benefits of birth registration may also be obstacles. A 2016 study in Indonesia<sup>6</sup>, for instance, found that aside from issues related to cost and distance, the most common reasons parents did not register their child's birth were that 'the process was too complicated' or that they 'do not know how to arrange for one'. Since many applicants in Pakistan are illiterate, unofficial

agents are often used to complete the birth registration application, with many people paying high fees for this service.

Incentivising parents to engage in the birth registration process can be particularly difficult in areas where an adult's experience tells them that, in practice, birth certificates are not in fact required to access basic services, especially health care or education. Interestingly, a 2015 report from DLA Piper comparing the legal frameworks governing birth registration in 11 jurisdictions found that in many cases, birth registration is still not essential for accessing primary and secondary education, primary or emergency health, or social payments<sup>7</sup>. Indeed, very few (if any) governments will deny a child the right to education or healthcare simply because their births have not been registered. Even so, in most places registration remains vital for any child or young adult wishing to access a multitude of value-adding services (including formal financial services or tertiary education), protect themselves when in conflict with the law, or obtain national identity documents. Targeted public awareness campaigns can be an effective way to increase demand for certificates in these situations, particularly when they are conducted with support from trusted community members, such as religious leaders, teachers and front-line health workers.

6. Putu Doff, Santi Kusumaningrum and Lindsay Stark, 'Barriers To Birth Registration In Indonesia' (2016) 4 The Lancet.  
7. DLA Piper, 'Birth Registration: A Comparative Report Prepared for UNICEF' (2015).

# 3 Digitising birth registration through mobile

Data shows that only modest levels of improvement in birth registration rates were made in least developed countries between 2000 and 2010, with rates increasing from 32 per cent to 43 per cent<sup>8</sup>. It has become clear that faster progress with registration is required, especially in Sub-Saharan Africa and South Asia, where rapid population growth means that the need for robust civil registries is more urgent than ever. To this end, between 2011 and 2012, government ministries in both Tanzania and Pakistan began to look for opportunities to improve and augment their existing birth registration processes through the introduction of mobile technology.

8. UNICEF, 'Every Child's Birth Right: Inequities and trends in birth registration' (2013)

## 3.1 Case study 1: Tigo Tanzania

### OVERVIEW OF THE EXISTING BIRTH REGISTRATION PROCESS IN TANZANIA

The Registration Insolvency and Trusteeship Agency (RITA) mandates and governs Tanzania’s vital registration system, which includes the registration of births, marriages and deaths, with registration offices at the village and district levels. The registration system is a continuously updated, secure database.

### The birth registration process: Tanzania

The birth registration process established through the Births and Deaths Registration Act (2002) requires parents to register their child within 90 days of birth. As a first step, they must obtain a ‘Notification of Birth’ from the hospital or health centre in which the birth took place or, if the birth occurred at home, from either a Village Executive Officer or District Registrar.

Next, the Notification of Birth must be submitted to a District Registrar, who charges a processing fee of TSH 3,500 (US\$ 1.60). The parents must return to

the District Registrar’s office after some time to pick up the completed birth certificate.

Late registrations can be made after 90 days, however the process is longer, a higher processing fee applies (TSH 4,000) and parents are required to submit additional supporting documents from local government offices. If information on a birth certificate needs to be corrected, parents must submit a new application and pay a fee of TSH 6,500.

In 2011 the Registration Insolvency and Trusteeship Agency (RITA) of Tanzania developed, with support from UNICEF, a five-year strategy that aimed to make the birth registration process more affordable, widely accessible and efficient. After identifying three pilot locations - Dar Es Salaam, Mbeya and Mwanza - a Memorandum of Understanding was developed with relevant ministries to allow the project partners to legally test a new mobile registration process.

As a first step, in the pilot locations RITA eliminated the processing fee to allow parents to register their child and obtain a hand-written birth certificate free of charge. The registration process was also decentralised; rather than requiring parents to register their child and request a certificate at the District Registrar office, local Registration Agents (or registrars) from local government administrative

offices, hospitals and health clinics were trained to provide these services. This expanded the average number of registration touchpoints in each district from one location to forty and greatly reduced the maximum distance parents had to travel. With these changes, it became possible for a parent to travel to their local health clinic to register their child’s birth, have their child vaccinated, and have a handwritten birth certificate produced all in a single trip.

To further modernise the registration process RITA and UNICEF worked with Tigo Tanzania to develop innovative mobile applications that could allow registrars to collect birth registration data and remotely upload it to a centralised system. In addition to providing their technical expertise to this project, Tigo provided registrars with free mobile handsets, data and SMS texting. For all three partners, it was important to follow a user-centred

design process to develop a practical, scalable mobile application capable of working on all models of handsets and on any operating system. Just as importantly, the application needed to work in areas where network connectivity may be interrupted, allowing information to be stored on the device until a connection is restored. For registrars operating in areas where electricity is scarce, UNICEF provided solar chargers to keep the phones powered.

Tigo was committed to letting the mobile application evolve as needed and responding to feedback from registrars in the field. The earliest version was designed to work on the most basic mobile phones, using a specialised platform called the SIM Application toolkit. This basic application allows the registrar to input the required information by following a series of prompts. When this is complete, the application compiles the data into two SMS messages and

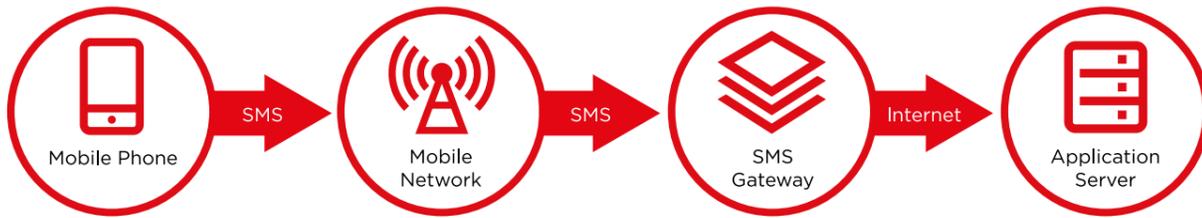
sends it to an SMS gateway server which, in turn, forwards the message to RITA’s central server. Once the central server decodes the message and stores the birth record in the central database, a confirmation message is immediately sent to the mobile device to notify the registrar that they can issue a birth certificate to the child. The entire process only takes a few seconds to complete.

Although the first application worked well in most respects, over time the partners found that it would be difficult to take to scale due to the fact that the application is built directly onto the SIM card; this is a time-consuming, labour-intensive process and requires providers to recall devices from the field whenever changes to the application are needed. Furthermore, they recognised that the simplicity of the device and SIM card limited the number of features that could be added to the application and the amount of data it could store.

A new version of the application has now been developed by Tigo to work on an Android smartphone, providing a more user-friendly interface and the ability to work across multiple network providers. Although the basic function of transmitting data via SMS remains the same, the smartphone application is inherently more secure (all data can be wiped remotely if the phone is lost or stolen), resilient, and includes a variety of new features. Partners have also found that the Android devices make data collection faster and easier due to its bigger screen, full keyboard, and dropdown menus.



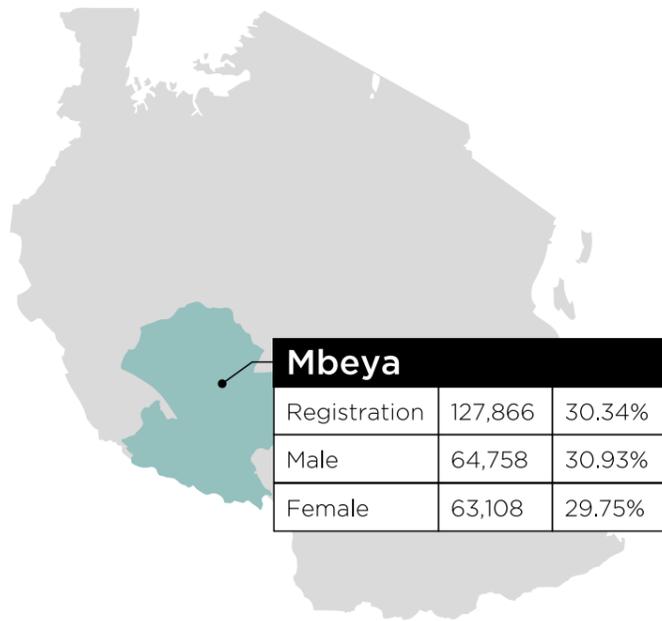
Figure 1



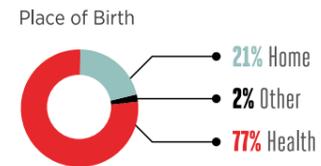
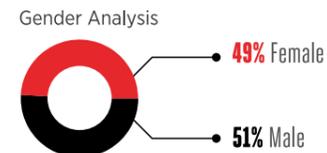
The information submitted by Tigo's applications is used to automatically populate an innovative birth registration dashboard that allows RITA to quickly extract and analyse data by time, location, age and gender. Because the information is available in real time at the national, regional and local levels, the partners were able to identify any project areas

where registration rates remained low and quickly deliver tailored advocacy campaigns. It is expected that the technology developed for this initiative will help the government deliver on their ambition to harmonise CRVS data with other key identification systems, such as voter registries and the national ID database.

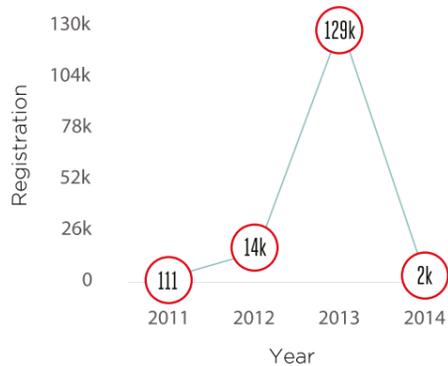
### Registration Insolvency and Trusteeship Agency (RITA) under-five birth registration dashboard



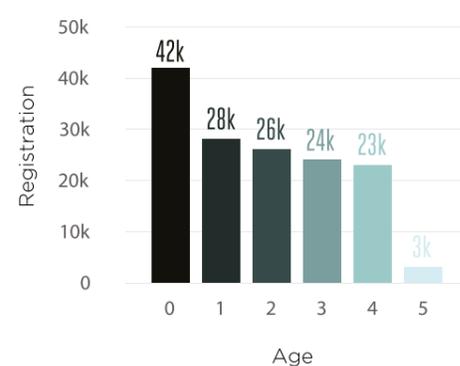
**TOTAL Birth Registration**  
**146285**



Number of Under-Five Birth Registrations



Age Analysis



## 3.2 Case study 2: Telenor Pakistan

### THE BIRTH REGISTRATION PROCESS: PAKISTAN

The requirements for registering a birth is likely to differ across provinces within Pakistan, due to the fact that responsibility is delegated to local governmental authorities who create their own application formats. The registration of any new birth is free if completed within 30 days of birth (60 in some provinces), while late registration may incur a fee, depending on the applicant's age and place of residence.

### The birth registration process: Pakistan

Registration typically begins with an applicant verbally reporting a birth at the nearest Union Council (UC) office, at which point a birth registration application form is issued. The completed form, along with any applicable fees and documents (including the parents' proof of identity card/other documents) is then submitted to the UC Office to be processed.

With regard to births occurring at home, proof of identification documentation of two witnesses is also required. If the application is approved, relevant data is entered into a paper-based register maintained in the UC Office, as well as in NADRA's Civil Registration Management System (CRMS). Once the data is authenticated in the system,

NADRA can then create a unique CRMS number for the child, which is linked to the family tree and used for other official purposes.

For an additional fee (PKR 100; US\$1.00), parents may apply to the Union Council to issue a "Child Registration Certificate" ("CRC") through the NADRA system, which is printed on NADRA security paper in both English and Urdu and signed and stamped by the UC authority. The Certificate contains important family details, including the name of the child's parents, the name of his/her grandfather, religion, place of birth and the child's address. On average, certificates are completed in five to ten working days.

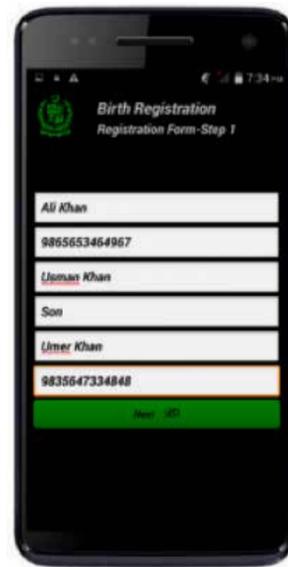
In 2012, UNICEF Pakistan conducted a series of studies to investigate the barriers to birth registration at the household and community levels. The research revealed a number of bottlenecks and inconsistencies in the registration process, some of which had the potential for improvement through the application of mobile technology. Key stakeholders were asked to provide their input on a range of policy, administrative, technical and cultural issues recognised as impacting low registration rates, ensuring that the new model would comply with all applicable regulations and local norms.

Recognising the importance of making the birth registration processes less costly and more accessible, the new approach, developed in partnership with UNICEF, Telenor and the Local Government Departments of the Provincial Governments of Punjab and Sindh, introduced the use of community-based 'gatekeepers' to act as either mobile or stationary birth reporting facilitators. Nikah (marriage) registrars were chosen as mobile gatekeepers in Punjab, primarily due to their existing status as government-authorized marriage contractors. As part of their regular duties, Nikah registrars complete forms, collect

and deposit fees, and regularly visit UC Offices to register marriage records. Lady Health Workers, who provide maternal and child health advisory services, especially in rural areas, were chosen as mobile gatekeepers in Dhabeji, Sindh. And finally, Telenor agents, or 'Sahoolat Ghars', were introduced in Gharo as stationary gatekeepers. Sahoolat Ghars were chosen due to the fact that they were already proficient with relevant administrative procedures, such as issuing mobile phone SIM cards, handling cash transactions and verifying NADRA's National Identity Card information. Mobile operators and NADRA had already collaborated in 2014, whereby the five main mobile phone operators re-registered 108 million SIM cards and helped to achieve universal coverage of NADRA's national identity scheme under a national SIM card registration drive.

As the technology implementation partner, Telenor led the development of a mobile application which digitised the birth registration reporting/application form and also provided SIM cards with data connectivity and Wi-Fi access. Gatekeepers were equipped with handheld mobile devices, while UC Secretaries were equipped with tablets. To ensure data privacy, gatekeepers were required to authenticate themselves using credentials tagged to the devices, and the server-side data transmission was encrypted. To deliver a high quality service, the partners also developed a capacity building programme for both gatekeepers and UC Secretaries, covering all areas of the birth registration process, including administrative procedures, technology and field support. Scheduled and on-demand training sessions were held regularly to help address day-to-day issues.

As in Tanzania, the partners decided to use an Android platform for the mobile application due to its open-source nature and cost effectiveness. Each of the application form's fields are presented in both English and Urdu for ease of understanding, and drop-down menus and radio buttons are used, where applicable, in order to standardise responses and minimise data-entry errors. The phone's camera can be used to take pictures of additional requisite documents if necessary, which can be attached when submitting the application form electronically. The application was developed to work both online and offline, allowing forms to be saved on the phone and synced once connectivity becomes available. Similarly to Tigo in Tanzania, Telenor has committed to letting the mobile application evolve as needed, and there are now local variations of the application used across different provinces.

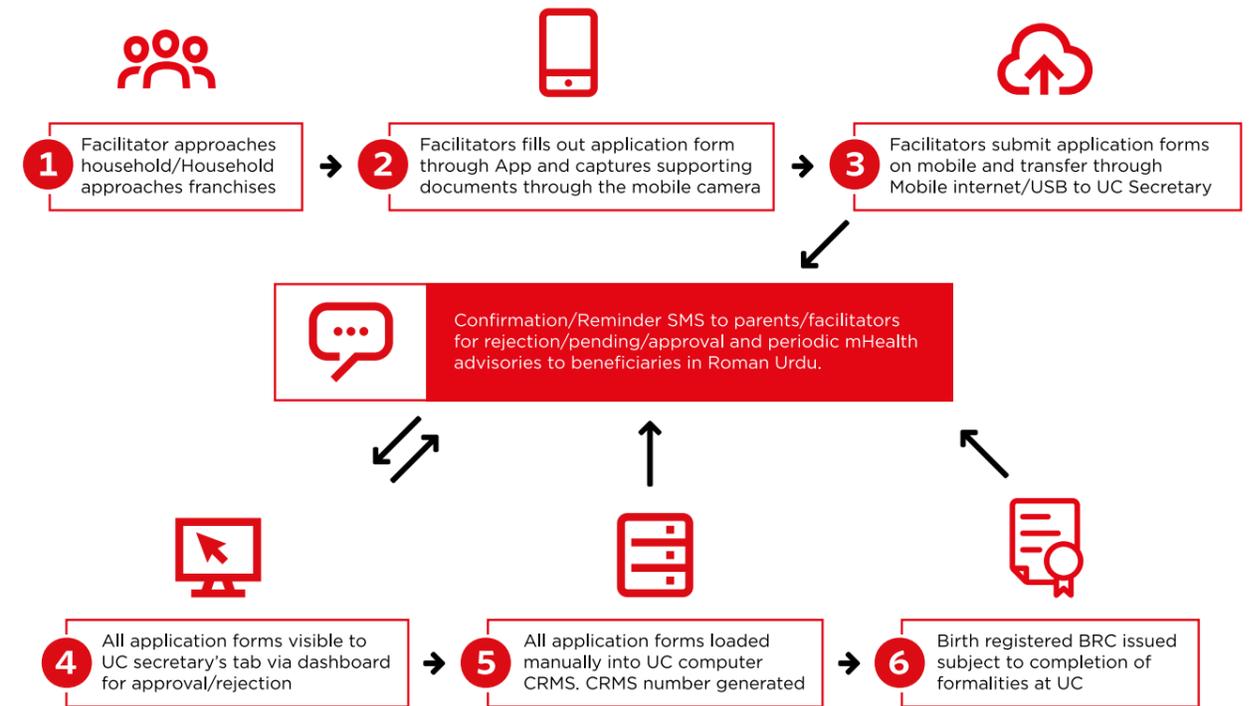


When the digital application forms are received by a UC Secretary, the details are checked for accuracy and a unique birth record is created in the paper-based UC register and NADRA's CRMS. Following this, an SMS message is sent to the gatekeeper and parent to notify each that the registration has been completed. Whereas the traditional birth

registration process requires, on average, three trips to a UC office and a processing time of two days, the new mobile registration process enables parents to register births without leaving their community (and in some cases, without leaving their home) and can be completed in less than ten minutes.

Figure 2

### Revised birth registration process

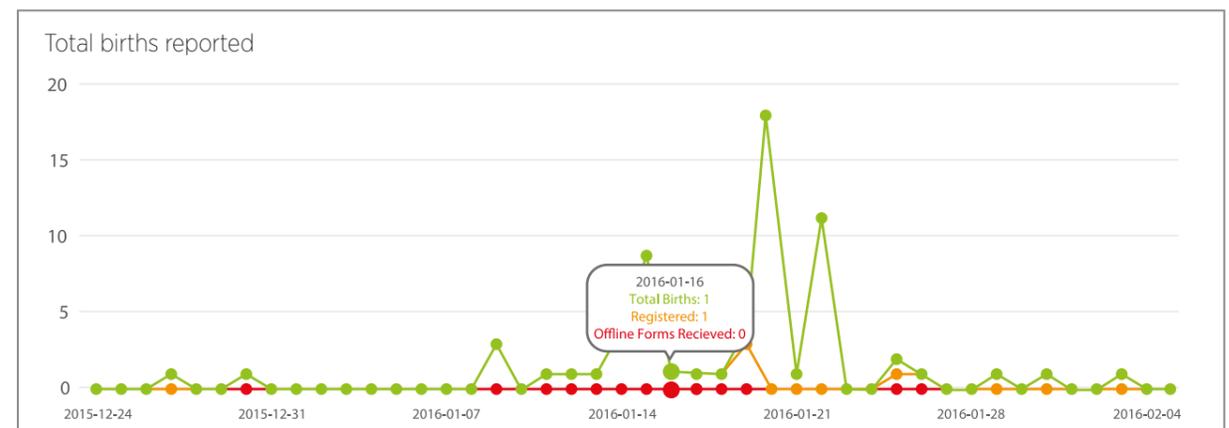


The data collected through the Android system help populate a web-based dashboard providing real-time information on reported and registered births and up-to-date information on the status of each

application submitted through this modality. The dashboard will enable government ministries to the allocation of their resources to provide services in previously underserved geographic areas.

### Web-based dashboard

Forms status			Registration			CMRS No. issuance		
62 Total births reported			42 Total births accepted			26 Total births registered		
42 Accepted	17 Rejected	3 Awaiting Action	42 Accepted	42 Registered	42 Pending	26 Registered	42 CRMS issued	42 Pending



# 4 Impact and next steps

Tigo has highlighted that when the new mobile registration system was first piloted in Mbeya, it reached over 127,000 children in the first six months, increasing local registration rates from 8.9 per cent to 30.3 per cent. Since then, the new system has successfully registered more than 420,000 births, and the partnership expects to reach one million registries by the end of 2016.

Due to the success of the project Tigo, UNICEF and the Government of Tanzania have committed to scale the new birth registration system across ten other regions in Tanzania, with an aim to register and provide birth certificates to 3.5 million children under the age of five by 2019. This will ensure that at least 90 per cent of new-borns and 70 per cent of children between the ages of one and five in each region will be registered, many of which will be reached through linkages with health and social protection services. To ensure sustainability, the system will be embedded into new legislation, and capacity-building exercises will ensure that RITA is prepared to manage, monitor and effectively scale up the system not only to the next ten regions, but also nationwide.

The new phase of this project was launched in the regions of Iringa and Njombe in late September 2016, and in the first two weeks of implementation the new system successfully registered just under 160,000 children under the age of five. Across the two regions, this represents 69 per cent of the total under five population. Additional temporary human resources have been provided in each project location to cope with the initial surge in demand for registration, and sustained follow up support, monitoring and community engagement will help ensure that registration rates remain high well beyond the launch of new campaign.

The project has provided significant reputational value for Tigo, allowing them to demonstrate the genuine social impact mobile operators can make by leveraging their unique resources and expertise. Other Millicom Tigo subsidiaries have since visited Tigo Tanzania to learn more about their involvement in this project, and new birth registration programmes were subsequently launched by Tigo Ghana and Tigo Bolivia.

Telenor Pakistan, UNICEF and the Local Government Departments of the Provincial Governments of Punjab and Sindh also witnessed a tremendous increase in statutorily-compliant registration rates of new-born babies during the first four months of implementation. A baseline comparison has demonstrated an increase of more than 300 per cent in Sindh province and 126 per cent in Punjab province during the pilot phase. Across all three pilot locations, almost three times as many children were registered between June and December 2015, as compared to the same time period in the previous year. The most significant improvements were witnessed in rural Dhabeji, Sindh province, where Lady Health Workers registered four times as many births as were registered in the previous year and where an eight hundred per cent increase in the number of registered female births was witnessed. Surveys conducted by UNICEF found that beneficiaries were much more satisfied with the new process, saying that it was more accessible, cost effective and easier to understand.

A post-pilot evaluation also found that mobile gatekeepers were the most effective delivery model - particularly in rural areas - due to their access to, and knowledge of, the local community. Nikah registrars and Lady Health Workers also possess a unique combination of operational experience and social influence, which had a clear impact on their

performance. Although Telenor agents excelled at the use of technology, it was felt that their role in facilitating birth registration was not adequately promoted to the public and it took a considerable amount of time to familiarise agents with the operational aspects of the registration process. The partners plan to address both of these issues in the next phase of the project.

By the end of 2016, the partners plan to expand the mobile birth registration pilot to the entire districts of Thatta in Sindh, and Pakpattan in Punjab. Scaling up such activities will facilitate the registration of around 705,000 children in 108 locations. Targeted SMS messages will be used to broadcast public service messages highlighting the importance of birth registration for children and supporting increased awareness of the new system.

A key aim will be to make the registration process sustainable over the long-term. Before the end of the project, the provincial governments are expected to provide all requisite human and infrastructure resources to effectively manage the mobile birth registration system internally. The partners also plan to make each of the gatekeeper models more effective by improving how their services are communicated to the general public and by offering more sustainable, performance-based incentives.

Through their involvement with this project, Telenor has been able to positively engage with key stakeholders and advocate the role and value of mobile operators in delivering digital identity services to the underserved. The next phase of the partnership will allow Telenor to work with the GSMA to investigate whether their role as intermediaries can provide additional revenue streams through data, disbursements and links with other value-adding services, including maternal and child health advisory services provided via text message, and customized SMS alerts to remind parents of their child's immunisation milestones.

# 5 What have these projects taught us about mobile birth registration?

The projects led by Tigo Tanzania and Telenor Pakistan are two examples of mobile birth registration initiatives which successfully delivered measurable and significant improvements in birth registration rates, the creation of strong public-private partnerships, the development of new, innovative technology and the commitment of government to take the projects to scale. For operators and other organisations hoping to emulate this success, a handful of key learnings should be considered:



### Working in partnership:

The multisector approach used in these projects worked in large part because each partner's strategic objectives were aligned: it contributed to the governments' national development strategies, UNICEF's wider goal to strengthen the realization of a number of pertinent child rights, and the operators' ambition to use technology to empower and improve living standards in local communities. Just as importantly, each organisation had a specific and clearly-defined role to fill which built on their core competencies. Mobile operators may choose to support birth registration projects through the donation of funds and other goods (such as handsets, SIM cards, data, etc.), but their most vital contribution will be the provision of technical expertise for the development of innovative mobile solutions, and leveraging their unique assets (e.g. agent networks and infrastructure) to help increase reach and take applications to scale. Government ministries and development partners, meanwhile, are well suited to provide strategic leadership and on-the-ground support, conduct awareness-raising campaigns, build the capacity of local registrars, and conduct monitoring and evaluation activities.

Strong support for the project should be encouraged, including buy-in from local government ministries and administration offices, community leaders and front-line workers. In Pakistan, key stakeholders were consulted and updated at each stage of the project. A Project Steering Committee – which included representatives from local government, NADRA, UNICEF and Telenor Pakistan – received formal government authorisation at the provincial level to oversee the project and provide policy and administrative guidance. Furthermore, a Task Coordination Committee was established in each district which addressed operational aspects of the project, outlining clear roles and responsibilities and creating an accountability structure for the achievement of project objectives<sup>9</sup>.



### Maximising impact:

By helping to address fundamental barriers to birth registration – particularly cost, accessibility and awareness – mobile operators can help government ministries and development partners address a pressing social need and achieve significant, measurable impacts in a relatively short amount of time. By proving that the enhanced system can

achieve greater impact, efficiency and efficacy, partners can maintain close working relationships with key stakeholders and build a strong, evidence-based case for ongoing support and national scale-up of the new system. In order to maximise this impact in Tanzania and Pakistan, the new systems were piloted in areas with very low birth registration rates and the approaches were tailored to suit the specific environment (rural, urban or semi-urban) and context. Project locations having reasonable mobile and broadband coverage were prioritised to reduce disruptions caused by intermittent breaks in mobile connectivity. It was also important that the target areas were relatively well-connected and accessible to ensure that the projects could be effectively managed and monitored through frequent site visits. In Pakistan, for instance, the project was implemented in districts already connected to provincial capitals by highways.



### Intelligent, responsive, user-centric design:

When designing a mobile application, partners should give extensive attention to the specific human and technical limitations of the market. Projects should include a capacity-building component to ensure new registrars have the skills and knowledge they need to carry out their roles, and the application should be designed to be both easy-to-use and interoperable – this will ensure that the application works across multiple platforms, allowing governments to explore partnerships with other mobile providers and expand coverage to other regions throughout the country. It is vital that partners remain open and responsive to learning and are prepared to adjust the process or applications as often as required. Continuous learning systems, including call centres and face-to-face visits, should be part of the programme's design so that partners can collect feedback from end-users on a regular basis and ensure they are aware of any challenges faced by the community.



### Linkages to other life-enhancing services:

While the use of mobile applications have already proven to be effective for increased rates of new-born births registered, their utility should

extend to the registration of other vital statistics, such as marriage, divorce and death, as well in support of the collection of data related to other health outcomes. Organisations in Tanzania are already exploring the possibility of expanding the application's use to allow for more comprehensive identification of people with HIV in order to support a greater continuum of care, provide better links to information on treatment, and track patients all the way to death. Opportunities to use other services as an entry point for birth registration should also be explored, particularly immunisation services. According to 2014 data from the World Health Organisation, child immunisation rates stand at 86 percent globally, and in Tanzania and Pakistan they stand at 98 percent and 73 percent, respectively.



### Changing the legal framework:

To take digital or mobile registration projects to scale, it is essential for operators and other partners to work alongside governments to embed the new, modern birth registration system into law. For pilot projects, it may be possible to work around unresponsive laws through Memoranda of Understanding or by governments delegating special authority on a temporary basis, but without legal support or change – a process that can take multiple years to finalise – the registration system will likely remain an experiment only.

### Planning for sustainability:



Although many mobile operators will be driven to support mobile birth registration initiatives for reasons other than commercial gain, at least in the short-term, it is vital that partners work together from the outset to help operators elevate these projects from the CSR space to the commercial space - as they have already done with many financial, agricultural, health and utilities services. Creating both short- and long-term value for all partners will ensure that applications/systems move from 'pilot' to 'scale' and can be financed sustainably, and should therefore be part of every project's design.

9. For other key considerations to enhance and facilitate multi-stakeholder alignment, see: GSMA, World Bank & SIA, 'Towards Shared Principles for Public and Private Sector Cooperation' (2016).

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