Birth Registration in Tanzania:

Tigo's support of the new mobile
birth registration system

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Introduction

For nearly thirty years, the Convention of the Rights of the Child and numerous international treaties have afforded every child the right to be registered at birth and to possess both a name and nationality. Nonetheless, it is estimated that the births of 230 million children under the age of five have not been officially registered and more than 50 million additional children are born into invisibility every year.

Disparities in birth registration rates are significant; the World Health Organisation estimates that 99 per cent of unregistered births take place in developing countries, and nearly 80 per cent occur in South Asia or sub-Saharan Africa. More than half of all children in sub-Saharan Africa do not have their births registered before the age of five, with registration least likely to occur in rural areas or among children from poor households.

The importance of registering every child at birth is now expressed in Sustainable Development Goal 16.9 ('by 2030, provide legal identity for all, including birth registration'), and it is also seen as a key enabler for a multitude of other development objectives. This is because for a child, a birth certificate bestows a number of other important rights such as access to healthcare, education and social protection. As a proof of age, it can protect children from child labour, early marriage or recruitment into the military. Later in life it can enable young adults to gain national identity documents (for instance, a passport or drivers licence), vote in elections, access formal employment, defend themselves in court, acquire property or other inheritances, or use 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 public services, as well as development policies and 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 ensure fairer elections.

Mobile technology has an increasingly important role to play in speeding up progress with birth registration and the provision of unique identities to the most underserved. This is especially true in Africa, where the industry continues to scale rapidly, reaching 367 million subscribers in mid-2015. Falling device prices are encouraging the rapid adoption of smartphones, with the region set to add more than 400 million new smartphone connections by 2020. These developments are already impacting the means and efficiency by which birth data is collected, accessed, verified and stored, while also presenting mobile operators with new opportunities to create social value, generate revenue and improve their Know-Your-Customer processes.

II

Birth Registration in Tanzania

In addition to ratifying the Convention on the Rights of the Child, the Government of Tanzania has made birth registration compulsory through the Births and Deaths Registration Act (2002) and the Law of the Child Act (2009). Through this legislation, the government recognises every Tanzanian child's right to a name and nationality and further establishes the responsibility of each parent or guardian to register the birth of their child.

Even so, Tanzania maintains one of the lowest rates of birth registration in the world and the third lowest rate in East and Southern Africa. Only 16 per cent of children under the age of five are registered, far below the average for Sub-Saharan Africa (44 per cent) or neighbouring countries such as Uganda (30 per cent), Kenya (60 per cent) and Rwanda (63 per cent). Furthermore, only half of the children who are officially registered in Tanzania receive a birth certificate.

In the last decade Tanzania has seen significant economic growth and improvements in living conditions, access to education and healthcare, and employment. However, the benefits of this growth have not been distributed equally, with inequalities increasing between rural and urban communities. Birth registration has followed a similar trend: children from urban areas are four times more likely to have their births registered than children in rural areas, and the richest 20 per cent of children are fourteen times more likely to be registered than the poorest 20 per cent.

Meanwhile, the mobile landscape in Tanzania is developing rapidly. An estimated 63 per cent of all households have access to a mobile phone, including 55 per cent of households in rural areas. Mobile networks are now the leading internet service providers, and one in three households use a mobile money service.

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 the digital transformation of the country, Tigo became Tanzania's first MNO to operate a GSM and 3G network, and plans to offer 4G coverage in every region by the end of 2016. It also 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.

The Birth Registration Process

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 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.

Barriers to registration

More than half of all children in Tanzania are born at home rather than a hospital or health facility. With only one Registrar office per district, many new 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. Many parents simply lack the financial means to pay for the cost of travel and the mandatory registration fee.

A lack of awareness about how to complete the registration process and the benefits that accompany registration are also obstacles. This is especially true for parents who have grown up in an environment where, in practice, birth certificates were not needed to access basic services such as health care or education. 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 local community and religious leaders, teachers and front-line health workers.

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Developing the Mobile Birth Registration System

The government of Tanzania is committed to addressing these barriers and significantly increasing the rate at which parents complete birth registration and collect a birth certificate. In 2011 RITA developed, with support from UNICEF and Tigo, a five-year birth registration strategy that aimed to make the process more affordable, widely accessible and efficient.

The new strategy was initially piloted in one district of Dar Es Salaam (Temeke), before being scaled into two additional regions: Mbeya and Mwanza. As a first step, RITA eliminated the TSH 3,500 processing fee, making it possible for 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 a 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.

Moving from analog to digital

To further modernise and improve the registration process, RITA and UNICEF worked closely with Tigo to develop innovative mobile applications that allowed registrars to collect birth registration data and upload it to a centralised system. In addition to providing their technical expertise to this project, Tigo helped facilitate the mobile registration process by providing the new registrars with free mobile handsets, data and SMS texting.

For Tigo, the strategic decision to partner in this work was driven by the value gained by expanding and 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 their technology and expertise. Through this initiative they have also been able to develop a new, innovative application and introduce Tigo services to over 700 registrars, as well as the thousands of customers the registrars serve.

How it works

For all three partners, it was important to follow a user-centred design process while developing 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 can 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, 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 scale across multiple mobile providers due to the significant amount of 'technical involvement' required. Furthermore, they recognised that the simplicity of the device and SIM card limited the amount 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.
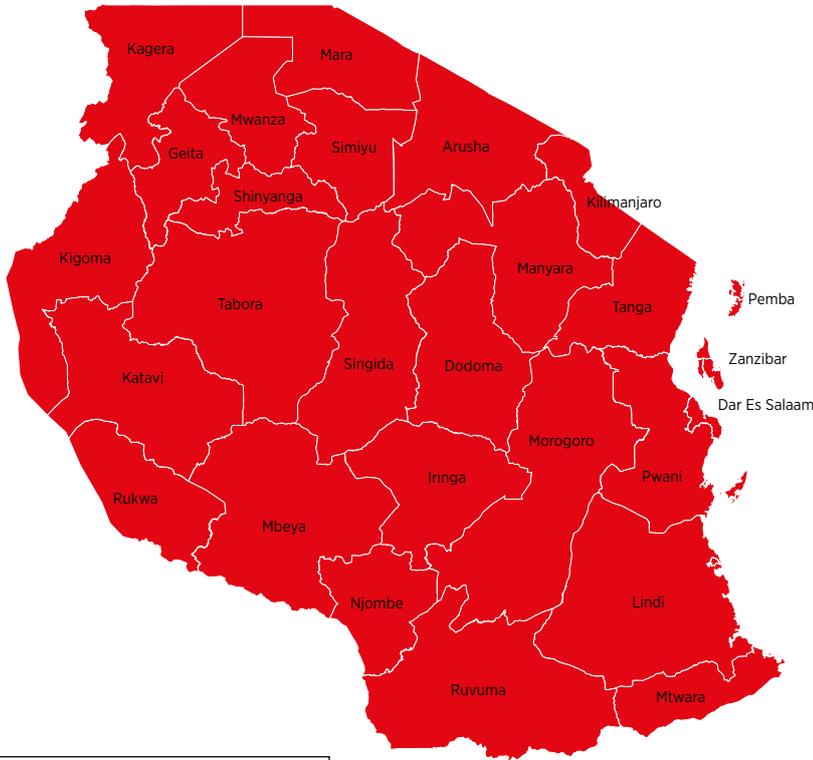
The birth registration dashboard

The information submitted by Tigo's applications are used to automatically populate an innovative birth registration dashboard, allowing RITA to monitor birth registrations in real time at the national, regional and local levels. For the first time, RITA can quickly extract and analyse data by time, location, age and gender.

The technology developed for this initiative may play a substantial role in helping RITA populate a more comprehensive CRVS system by expanding data collection to include information on marriages, divorces, and deaths. In time, this could help the government deliver on their ambition to harmonise CRVS data with other key identification systems, such as voter registrations and the national IDs.

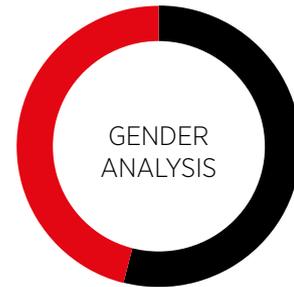# Data captured through the under-5 birth registration dashboard

Kagera

Mara

Mwanza

Geita

Simiyu

Arusha

Shinyanga

Kilimanjaro

Kigoma

Manyara

Tabora

Tanga

Pemba

Singida

Dodoma

Katavi

Zanzibar

Dar Es Salaam

Morogoro

Iringa

Pwani

Rukwa

Mbeya

Njombe

Lindi

Ruvuma

Mtwara

Total Birth Registrations

421,374

PLACE OF REGISTRATION

Local Govt
17%

Health Ctr
83%

GENDER ANALYSIS

Female
46%

Male
54%

PLACE OF BIRTH

Health Ctr
83%
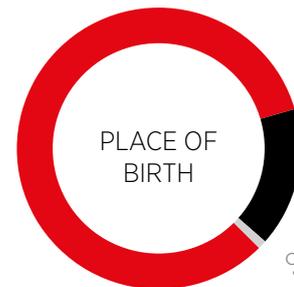
Home
16%

Other
1%

Under-five Birth Registrations

REGISTRATION

176k

188k

25k

16k

2013   2014   2015   2016

Age analysis

REGISTRATION

140k
78k
69k
64k
62k
9k

0   1   2   3   4   5

AGE
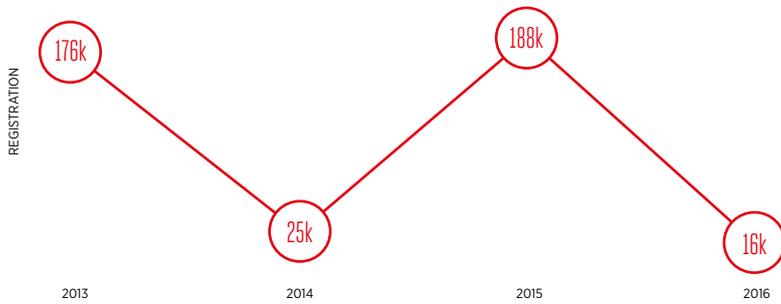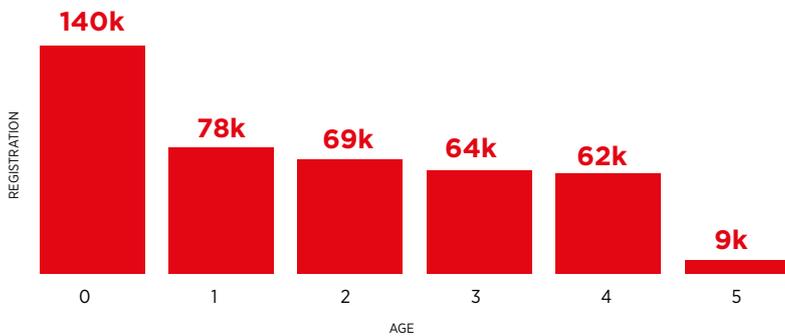
IV

Impact and Next Steps

Tigo has highlighted that when the new mobile registration system was first piloted in Mbeya, the registration rate of children under five increased from 8 per cent to 45 per cent within six months. Since then the mobile registration system has successfully registered more than 420,000 births, and the partnership expects to reach one million registries by the end of 2016.

UNICEF and RITA played a pivotal role in spreading awareness about registration in the targeted regions, driving key and consistent messages through education and publicity campaigns. Because the registration dashboard allows RITA to monitor progress with registration in real time, areas where registration rates remained low were quickly identified and tailored advocacy campaigns were delivered. As evidenced by the sharp increases in registration rates, parents have been quick to grasp the value of the registration process and birth certificates.

For Tigo, the project has provided significant reputational value, allowing them to demonstrate the genuine social impact mobile operators can make by leveraging their unique resources and expertise. Other Millicom Tigo subsidiaries from Ghana, the DRC and Rwanda have since visited Tigo Tanzania to learn more about their involvement in this project.

As a result of the project's success, RITA has committed to replicating the new mobile registration process in an additional ten regions. By the end of 2019, it is expected that 90 per cent of new-borns and 70 per cent of all children under the age of five in these areas will be registered and have certificates. Many of the under-five children who are not registered will be reached through linkages with health and social protection services that are already in contact with the children.

A key aim for the initiative in the coming months will be embedding the new registration system into law, and working together to make mobile registration sustainable for the government in the long-term. Along these lines, the GSMA Digital Identity programme is exploring the long-term sustainability of mobile birth registration in developing markets and its role in the wider digital identity ecosystem.

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Key Success Factors

Cross-sector Collaboration: The project's multi-sector approach worked in large part because each organisation had a specific and clearly defined role to fill building on their core competencies: Tigo provided technical expertise and access to technology, while RITA and UNICEF provided strategic leadership and on-the-ground support, conducted awareness-raising campaigns, built the capacity of local registrars, and conducted M&E activities. The project also aligned each partner's strategic objectives: the project contributed to the government's national development strategy, UNICEF's wider goal to strengthen national child protection systems, and Tigo's ambition to use technology in a way that empowers and improves living standards in local communities.

Interoperability: Designing (and redesigning) the mobile application to ensure that it works across multiple platforms allows RITA and UNICEF to explore partnerships with other mobile providers and expand coverage to other regions throughout the country. There could be opportunities for the technology to be applied as a solution to similar initiatives where the collection of data is required, internet connectivity is limited and mobile connections are widely available.

User-centred design process: Extensive attention was given to the specific human and technical limitations of the market. The project included a capacity-building component to ensure registrars had the skills and knowledge they need to carry out their roles, and the application was redesigned for Android devices to be interoperable and easier to use. The new system leverages Tanzania's wide cellular coverage and even allows data to be collected when networks are interrupted. Solar powered chargers were provided to registrars operating in remote areas.

Continuous process: Regular feedback from registrars in the field helped to inform the evolution of the mobile applications. Refining the technology is an ongoing process, and the partners are continuing to investigate how the approach can be tailored to strengthening the registration system and make it sustainable in the long-term.

Government commitment: To take registration projects of this kind to scale, it is essential for governments to: a) create robust management and oversight systems for birth registration; b) help strengthen the supply and demand factors contributing to increased registration rates (e.g. awareness-raising campaigns and building the capacity of local governments to carry out registration activities more efficiently and effectively); c) embed the new birth registration system into law.

Tigo's birth registration projects in Ghana and Bolivia

Tigo Ghana

Building on the success of the mobile birth registration initiative in Tanzania, Tigo Ghana partnered with UNICEF and Ghana's Births and Deaths Registry (BDR) in late 2015 to help develop a new automated birth registration system, called mBirth.

Despite birth registration being free, nearly 40 per cent of children in Ghana do not have their births registered before the age of five, and only 15 per cent of children own a birth certificate. As an operator working in Ghana for over 25 years, Tigo has connectivity across most of the country and was proud to be showcasing how mobile technology can transform the lives of young people, especially those in hard to reach areas.

As in Tanzania, the partners aimed to automate the registration process and make it more efficient and cost-effective. In December 2015 a pre-pilot project was launched in eleven communities and four hospitals in the Greater Accra area, which Tigo supported by providing technical expertise, data bundles, and mobile-connected devices (tablets and laptops) to allow birth registration attendants to digitally capture and transmit data. One-week training seminars were conducted with support from UNICEF to ensure the attendants were able to use the devices effectively.

Tigo helped develop an Android application that can operate in both offline and online modes. The application collects information related to the child's name, gender, date of birth and other family details, which were then sent to the central database managed by the Births and Deaths Registry. Once received, the data is stored and an automated response is sent to the registrar, confirming that a certificate can be issued. Whereas data collected though the paper-based system took up to six months to be registered in the central system, the mobile registration process achieved this in less than two minutes. During the three-month project, Tigo helped to facilitate the registration of nearly 8,000 new births - 400 more registrations than the same period one year earlier.

Following the success of this project Tigo, UNICEF and BDR have agreed to scale up the initiative across the country, covering 300 additional communities in eight regions. Tigo support will also be scaled up, with the operator providing 540 new tablets. It is expected that over 670,000 new births will be registered on the new system by the end of 2017, increasing the national registration rate to at least 70 per cent.

Tigo Bolivia

In recent years Bolivia has made significant progress in reducing unregistered births for children under the age of one - from 26 per cent in 2007, to 18.5 per cent today. Much of this progress is attributed to legislation that guarantees free registration, social awareness campaigns, and increased coordination between social organisations, municipal governments and the health sector.

However, the more difficult challenge of closing the final registration gap remains, requiring services that can reach the country's most excluded communities, including dispersed and indigenous populations, as well as children in vulnerable situations.

In partnership with the Civic Registry Service (Sereci) and UNICEF, Tigo is helping to address this issue by equipping urban and rural hospitals with internet-connected computers to allow Officers of Civil registration (ORC) to be placed in hard to reach areas and register births before the child and their parents leave the hospital. To date, over 80 hospitals have benefitted from these devices and over 10,000 births have been registered.

Participation in this initiative has helped Tigo Bolivia demonstrate how mobile technology can be used for social impact, helping children and adolescents fulfil their right to an identity.

To download the full report please visit the GSMA website at
www.gsma.com/mobilefordevelopment/programmes/digital-identity