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## Issues paper

# Civil registration and vital statistics digitalization and innovation: a perspective from Eastern and Southern Africa

### Conference theme

*Innovative Civil Registration and Vital Statistics systems:  
Foundation for Legal Identity Management*



**APAI-CRVS**  
Everyone visible in Africa



**Decade for Repositioning  
of Civil Registration and  
Vital Statistics in Africa  
2017-2026**

## I. Background

1. A name and nationality is every child's right, as enshrined in the Convention on the Rights of the Child, the African Charter on the Rights and Welfare of the Child and other international treaties. Birth registration is the first step in securing children's recognition before the law, safeguarding their rights and access to social services and ensuring that any violation of those rights does not go unnoticed. Ensuring that every child is registered is also an essential part of a functioning system of vital statistics, which is crucial for sound economic and social planning. Birth registration is therefore not only a fundamental human right, but also a key to ensuring the fulfilment of other rights.

2. Despite their undisputed value, civil registration systems including birth registration are not yet complete or fully functional across most countries on the African continent. Available data reveal that the birth registration rate has flattened out and, in some cases, even declined, particularly in sub-Saharan Africa where some of the lowest birth registration rates are found. In Eastern and Southern Africa, the births of only slightly less than 1 in 3 children under 5 years of age have been registered<sup>1</sup> and prevalence varies widely across the region, from a low of 3 per cent in Ethiopia and Somalia to a high of 87 per cent in Comoros<sup>2</sup>. The systematic and coordinated implementation of the Africa Programme for Accelerated Improvement of Civil Registration and Vital Statistics Systems since 2010 has helped to build significant momentum towards the improvement of civil registration and vital statistics (CRVS) systems on the continent. The political commitment at the national level, coupled with regional technical and capacity-building support, have helped countries to make a paradigm shift from a fragmented and ad hoc approach to more holistic and integrated efforts.

3. Across the Eastern and Southern African region, countries are applying both technological and non-technological innovations to improve their CRVS systems. In line with recommendations from comprehensive assessments of CRVS systems in each of these countries, reform policies have been developed focusing on two key policy directions:

(a) Increasing the number of registration points through decentralization and, in the process, delegating registration responsibilities to local authorities and national health systems (for example, in the United Republic of Tanzania), and;

(b) Improving registration processes and registration records management by shifting registration from paper-based towards a combination of paper-based and digitized systems (for example, in Mozambique and Namibia).

4. Decentralization is viewed as a key strategy in mitigating obstacles arising from the large distances that people need to travel to registration offices, often multiple times, in order to complete the registration process.

5. Digitization of registration records is further recognized as increasing the effectiveness and efficiency of government services, through the use of an interoperable information and communications technology (ICT) framework and unique personal identifiers.

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<sup>1</sup> See <https://data.unicef.org/topic/child-protection/birth-registration/>.

<sup>2</sup> See <https://data.worldbank.org/indicator/SP.REG.BRTH.ZS?view=chart>.

*Decentralization*

6. The comprehensive assessments of CRVS systems that preceded and informed CRVS system reforms in the region recommended decentralization as a measure towards increasing registration rates. These assessments found that the distance travelled to registration centers (generally based in district centres) and the number of visits required to complete the registration and obtain a birth certificate were disproportionately high when compared with the perceived benefit from the certificate. In the United Republic of Tanzania, the decentralization process decreased the average distance travelled from 80-140 km to 5-6 km, with an increase in registration points from 53 to 3,864, contributing to an increase in registration rates of 5 children under 5 years from 9.4 per cent in 2011 to 83.3 per cent in targeted districts by 2018<sup>3</sup>.

7. Decentralization overcomes some of these problems by enlarging the scope and responsibilities of public authorities involved in the registration process. Specific aspects of the registration process, such as notification of births and deaths, are delegated to the local authorities and health facilities. However, the civil registration authority maintains the role of supervising and setting registration policies on behalf of the authorities responsible for delegated aspects of the process.

8. With the decentralization of the notification part of registration process, the number of registration points is significantly increased, reaching the lowest levels of public administration and local health facilities and in the process bringing registration points closer to the population and the locations where the vital events occur. Whereas in the past, vital life event registration certificates could be obtained either at the capital or in a limited number of registration centers, as result of recent reforms in many countries the issuance of registration certificates has been extended to the district or county level as well.

9. The gradual introduction of decentralized registration systems shows that successful decentralization is closely linked to the commitment of local authorities and to effective coordination between the district and central registration authorities. Local authorities in general have great interest in keeping track of changes in population in order to plan for and to deliver various services. With decentralization, their commitment is further reinforced by their legal obligation to record vital events. While there is generally a solid level of commitment on the side of local authorities, there is often the need to develop from scratch an elaborate coordination mechanism that not only includes registration authorities at the central, regional and district levels but also accounts for coordination between district and local community authorities. Altogether these bear the responsibility for the timely implementation of registration systems and for providing logistical, financial and technical support for the operation of registration points. Decentralization will show its full potential if it is extended to include registration points at health facilities, including at the lowest level, and in coordination with the health authorities.

10. A high level of decentralization is associated with the increased costs of maintaining an elaborate network of registration points, including over an extended period of time, where human resources take up the largest proportion of the costs. The system can be particularly costly in the period immediately after the roll-out of the decentralized system and the initial clearing of the backlog of unregistered births. Once the backlog is cleared, the workload at each registration point can dramatically decrease. However, that does not mean that the costs of maintaining the system will be proportionally lower.

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<sup>3</sup> Review of CRVS Innovations in ESAR: digitization, processes, and strategies. UNICEF, 2018.

11. The experience of Namibia in building its own CRVS system provides evidence of a different way to achieve high registration rates by generating demand for registration. The system in Namibia maintains almost universal registration rates for births and deaths, largely as a result of financial grants that are contingent upon the completion of birth or death registration. This approach allows the Namibian registration authorities to achieve high registration rates while operating registration centres in only a limited number of district hospitals and district registration offices. Despite the successful model used in Namibia, the grants that it offers as incentives have led some to carry out attempted fraud. Such problems can be seen to emerge when a system becomes widely recognized as a gateway to a range of services, including financial benefits.

### *Digitization*

12. The digitization of registration processes gradually introduced across some countries in the region marks the beginning of the phasing out of paper-based registration. The use of digital technologies has become a norm for many contemporary registers, allowing for easier aggregation of registered data as well as its processing, storing and sharing. This means that the registration record can be retrieved instantly, including remotely from a computer connected via secured networks or over the Internet using wired or wireless mobile networks.

13. For instance, in Namibia digitization is fairly cutting-edge and resembles advanced contemporary CRVS ICT platforms in upper to middle-income countries, including Estonia and the Netherlands. In many other countries, however, digitization is still in its early stages. Mozambique has achieved significant progress in digitizing registration services at decentralized levels with substantive support from UNICEF. In the United Republic of Tanzania and Zambia, digitization has largely been achieved only at the level of the central authorities, with notable use of mobile technologies for digital data capturing in the field in the United Republic of Tanzania. Uganda is determined to digitize its identity management system but for the time being the focus is on developing the central database. In South Sudan, where the legal framework for CRVS system is not yet in place, progress has been made with piloting the digital capturing of birth notifications in select health facilities.

### *Digitization by data transfer from registration forms*

14. One of the goals of the ongoing digitization of registration services across the region is to ensure that all registration records are uniquely identifiable and available in a central database. Where successful, the decision on the most suitable manner for digital capturing of registration information in the field has been informed by human-centered and service design thinking that promotes the local configuration, administration and management of the systems. Another consideration that is increasingly gaining importance is the scalability of the system and its ability to interconnect with other public administration platforms to share data or enable access to personal records for legal identity data verification purposes.

15. The practice in some countries shows a diverging approach to the digitization of registered information. In Mozambique and Uganda for instance, data capturing platforms were designed to enable digital data capturing at the district registration offices. The district authorities can communicate registered data to the central database using web-based applications. In the United Republic of Tanzania, the district offices complete the digitization of registration forms by scanning registration forms in an image file at the district registration offices, which are then transferred as scanned images to the central registration authority where the data is transferred from an image file into digital database.

16. While all these systems are custom built by the registration authorities, responding to the task at hand has resulted in varied approaches and products. In reality however, these platforms are designed to carry out very similar tasks in each country. In the absence of common standards and easily replicable and locally maintainable ICT platforms, countries resort to investing in the development of tailored solutions that usually cost far more to maintain and upgrade than standards-based, digital public goods with widely available support.

*Digitization by leveraging mobile networks*

17. One of the reasons why digitizing registration data has not been extended further than the district level in most countries is the lack of reliable infrastructure, such as the power grid and Internet access, the general low level of ICT skills among local officials and the absence of technical support.

18. The reality of most countries in the region is that wired Internet connectivity, while limited, is steadily improving and the region has witnessed an unprecedented penetration of mobile networks that provide alternative means of country-wide Internet connectivity, including in remote areas. In terms of data speeds, LTE connectivity is for the time being available only in large cities and urban areas, while remote areas are limited to 2G and 3G speeds. Based on past trends in improving mobile Internet data speeds, speeds can also be expected to increase in remote areas over time.

19. Mozambique, Uganda and the United Republic of Tanzania have each devised a system that enables birth notification data to be captured in digital format and transferred to the central birth register database over mobile networks. Working hand-in-hand with initiatives to decentralize birth notification, local community leaders and health facilities are now able to use mobile phones to transfer birth notification data directly into the central civil registration database. This allows the instant communication of information recorded on birth notification forms or registration books.

20. These systems allow central registration authorities to have an almost real-time overview of the registration process in the field, including in remote geographical areas. As a result, the authorities can accurately monitor registration trends down to the level of local communities and be prompted for follow-up, should the registration process depart from already established trends. The systems enable the central registration authorities to inform policymakers and the general public about the latest registration trends and aggregated statistics, making the process more transparent while increasing opportunities for statistical processing by external stakeholders.

21. Regardless of the perception of these benefits, the implementation of specific systems so far largely relies on services from mobile operators with significant government ownership. In Mozambique, the mobile operator that supports the programme has committed to provide technical assistance in the future. However, in Uganda where Uganda Telecom provided initial assistance building the platform under a corporate social responsibility initiative, it eventually pulled out from the project as a result of financial difficulties and changing corporate priorities. In the meantime, no other mobile provider or vendor in Uganda has expressed interest in facilitating the continuation of the programme. This experience shows that sustained operation of such systems should avoid corporate social responsibility initiatives and instead focus on financially viable models for commercial arrangements. Other concerns include private ownership or vendor lock-in of ICT platforms that not only negatively impact the ability of local registration authorities to define the product specifications, but also inhibit their ability to

administer or reconfigure the ICT platform without the express permission of the original service provider, often at exorbitant costs.

### *Interoperability*

22. The digitization of civil registration systems has assumed an entirely new dimension owing to the new opportunities available and the increased demand for data sharing among public administration actors, resulting in a new range of electronic platform services. Civil registration is no longer seen only as a framework for the certification of date of birth and other vital events. In many countries it has become the main source of identity information for various public administration electronic platforms, from national security to financial services. Rather than developing and maintaining isolated databases of beneficiaries for different services, the information can now be obtained directly from the source civil registration database. That means that vital events information can be registered once and then used multiple times for different public administration purposes. Furthermore, this means that over time, it will be possible to verify civil registration data for government services directly and electronically in the source database.

23. For adult populations, identity information used for e-government services can come from either the civil identification database or the civil register database. For underage populations, identity information can be drawn only from the civil register. Given that underage populations represent a sizeable proportion of the population of many countries in Eastern and Southern Africa, information in civil registration databases carries additional value. In many countries in Eastern and Southern Africa, cross-ministerial working groups and specialized agencies are being created to work specifically on the design of interoperability standards and on the technical framework for the implementation of data sharing platforms between various actors of public administration and providers of registration services. All future upgrades and developments of digitized CRVS platforms should therefore reflect national interoperability standards based on emerging global best practices.

## **II. Objectives of the discussion**

24. The objective of this session is to underline the importance of the most frequently implemented strategies to improve vital events registration rates, such as strengthening registration supply through decentralization, the digitization of registration services and strengthening the demand for registration by introducing new incentives. The session will also explore new opportunities resulting from digital processing and the storage of civil registration data, such as the generation of vital statistics and holistic approaches to identity management. Participants will be encouraged to identify the challenges that CRVS authorities face when implementing these reform strategies and will be invited to highlight good practices and approaches related to the implementation of decentralized systems, the digitization of data processing and cooperation with other authorities to facilitate increased use of digital verification of identity information. Recommendations from the discussions will inform and reinforce ongoing reform processes and help to develop specific policy approaches and technical assistance strategies for the implementation of reforms.

### **III. Issues for discussion**

25. In the light of the above, the following questions should be used as the basis of the discussion:

1. To what extent should decentralization be determined by strong administrative traditions and the capacities of local community authorities?
  2. How important is the role that health authorities play in the decentralization of CRVS responsibilities? What is required to ensure that registration points are extended to a wide number of local health facilities?
  3. What incentives can be offered to increase demand for registration and to what extent can such incentives offset the high costs associated with a high level of decentralization? What are the potential risks of incentives?
  4. What lessons can be learned from the experience of countries that have digitized registration processes down to the level of the district authorities? Is there room to introduce a digitized business process at the local community level?
  5. To what extent can mobile technologies can be leveraged to enable the digitization of registered data at the level of local communities and health facilities?
  6. Are the national registration authorities in a position to benefit from the support of national ICT expert communities in developing and sustaining ICT platforms for digitized CRVS systems? What needs to be in place for this to be successful? What are the limitations of this approach?
  7. What is the role of the private sector in supporting CRVS? Can this support be achieved through public-private partnerships in cooperation with national ICT companies? What are the risks?
  8. How can public administration actors and public service providers (for example in the fields of health and education) leverage digitized legal identity data as a result of digitized CRVS systems? What are the opportunities? What needs to be in place for this to be successful?
  9. To what extent can digital access to legal identity data be used to replace the traditional requirements of presenting registration certificates when enrolling for services?
  10. What conditions should be in place to enable digitized CRVS systems to be seen as providers of digital legal identity information to other State actors?
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