Issues paper

Session 3.2. Electronic civil and vital statistics systems: what countries need to consider in the modernization process

Conference Theme: Innovative Civil Registration and Vital Statistics System: Foundation for Legal Identity Management

I.   Introduction

1.   The main objective of the Fifth Conference of African Ministers Responsible for Civil Registration is to discuss possible ways of adopting a holistic and integrated approach for the innovative and accelerated improvement of civil registration and vital statistics (CRVS) systems and national identification management in order to close the identity gap in Africa and contribute to the achievement of target 16.9 of the Sustainable Development Goals.

2.   Modern electronic CRVS systems can interface with management information systems in several sectors to enable more efficient and easier access to critical public services, such as education, health, social welfare and financial services. In so doing, they can produce real-time vital statistics for the planning and monitoring of programmes at national and lower administrative levels. While most countries in Africa are in the process of modernizing their CRVS systems, many factors will determine which CRVS system they choose. These include whether to build tailor-made software or procure a commercial off-the-shelf CRVS software; whether to use a local data center (server) or a cloud service; and the process involved in digitizing existing paper records.

Tailor-made or commercial off-the-shelf CRVS software?

3.   We will discuss the pros and cons of building or procuring CRVS software for CRVS systems. The advantage of tailor-made software is that it can be built according to the specific needs of each country, but there are drawbacks: it may take years to build; it requires the hiring of highly-skilled software developers; and it may be uncertain, until completed, whether it will actually work as planned. With commercial off-the-shelf CRVS software, officials have the opportunity to examine software systems that are available on the market and have already been field tested and are functional, in order to select the one that best meets the needs of their country and that their country can afford to buy. A good software package should be able to handle almost all the core functions of a civil registration system. Differences from country to country tend to be related to the details of some of the information to be collected in the registration forms, business processes, reporting formats and interfaces with other management information systems.

4.   Governments are usually concerned about vendor lock-in, namely, being dependent on a single vendor to manage their system. They should therefore ensure that mitigation measures are included in the software vendor contract, so that they have the right to test the system and agree to purchase it only when satisfied that the software will work and that they will always have full control of the data. The data should also be encrypted so that third parties cannot have access to confidential civil registration records. Lastly, the source code should be protected: it should either be held in escrow, in case the vendor becomes bankrupt, or there should be a buyout option for the code.

5.   There are currently many options for CRVS software products that countries can choose from, with varying capabilities, product features and prices. These include WCC (HERA), Plan International (OPENCRVS), Object Consulting (CRVSNOW), Canadian Bank Note (National Identification and Registry), DelaRue (DLR Identify™ for CRVS), Digitech (Civil Status solution), KP VTI (Civil Registry Systems), Axiell Group (Vital Records and Statistics Software), Genesis (WebLE), Promadis (Births, Deaths and Marriages Registry) and iCIVIL.

6.   A growing priority in many countries is ensuring that each individual at birth has a unique identification number and that the civil registration, including the unique identifier, is then linked with critical public services such as education, health, social welfare and financial services. While modern electronic CRVS systems can help to make this process more efficient and effective, most low-income countries still use paper records for the registration of births, deaths, marriages and divorces. Paper-based systems can make retrieving birth registration records, issuing duplicate copies and archiving and sharing civil registration data with other agencies both ineffective and time-consuming.

Local data center (server) or cloud service?

7.   The pros and cons of data centres and cloud-based solutions are described in detail in the forthcoming publication: McDowall, B. and S. Mills (2019), Cloud-based Services for Electronic Civil Registration and Vital Statistics Systems. *Journal of Health, Nutrition and Population*. [Forthcoming publication and the URL will be provided].

Digitization of existing paper records

8.   When a country establishes an electronic CRVS system, new registrations of vital events such as births and deaths are captured in the electronic database. However, the electronic system cannot access previous registrations that were paper-based. One way to mitigate this is to populate the electronic CRVS system from the paper records by digitizing and indexing them. This also presents an opportunity to assign a unique identification number.

9.   First, digital images of the paper records have to be created either by scanning or taking photos. Second, the digital images have to be indexed by typing specific fields associated with the digital image (such as the name, gender, date of birth and place of birth) to allow future search and retrieval of the digital images. The indexing could be partial (a few key fields are entered) or full (all fields in the image are entered). The process employed for the digitization of birth records in the Gambia will be presented.

II.   Issues for discussion

1.   What are the key considerations in choosing a software for your country's CRVS system and/or digital identification system?

2.   What are the key considerations in choosing a data centre or cloud services for your country's CRVS system?

_____