Fourth Conference of African Ministers Responsible for Civil Registration
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Issue Paper on Innovation and civil registration and vital statistics digitization.

Accelerating a coordinated improvement of civil registration and vital statistics for the implementation and monitoring of development in Africa:

Review of progress and the way forward

Session V: Towards accelerated improvement of civil registration and vital statistics systems in African countries – challenges in the implementation.

Parallel session 2C: Innovation and civil registration and vital statistics digitization.

Introduction

1.   Information and communications technology (ICT) has the potential to provide transformative improvements in civil registration and vital statistics (CRVS) systems based on its ability to extend registration coverage, standardize and streamline CRVS processes, integrate data from multiple systems and securely store data at scale, all in a cost-effective way. If properly employed, ICTs can make a significant contribution towards achieving the universal registration of vital events, providing legal documentation of civil registration as necessary to claim identity, civil status and ensuing rights; and producing accurate, complete and timely vital statistics.

Risks and challenges of implementing information and communications technology for civil registration and vital statistics

2.   The current capacity to implement well-designed, scalable and sustainable CRVS systems throughout Africa remains weak, resulting in a number of notable risks. Potential scenarios include:

   •   ICT investments will be wasted due to failed projects, large budgets or schedule overruns.

   •   The full potential of ICT will not be realized, resulting in CRVS systems that are not fully scalable, sustainable, flexible and interoperable.

   •   ICT solutions will not provide the necessary data protection, security and confidentiality to safeguard personal data and, therefore, may fail to deliver on rights-based objective, such as violation of privacy, identity theft, persecution and exploitation, which may all ensue).

   •   Over-reliance on the skills of software vendors, leading to cost-escalation of long-term contracts because of proprietary software and standards.

   •   System development will be iterative, reacting over time to lessons learned rather than being well planned and conceived from the outset and building towards a long-

term CRVS vision. The result will be over-complex application architectures that are difficult and costly to maintain.

• Insufficient institutional readiness and workforce capacity that constrain the adequate implementation, management and cost-effective scale-up of ICT investments.

Figure I
National Office of Births and Deaths, Ministry of Health, Sierra Leone (2015)

3. CRVS systems are prone to increased delivery risks due to their interdisciplinary nature and the difficulty of programme governance throughout a number of ministries and functions, such as civil registration, health, statistics, internal security, justice and local government. In addition, without the necessary attention, the system landscape could become highly complex because of the following typical characteristics of CRVS:

• High number of life events and processes to be handled (live birth, death, fetal death, marriage, divorce, annulment, separation, adoption, legitimation and recognition).

• Existence of legacy records (often paper-based), which need to be migrated into new systems.

• Multiple sources of data (registration offices, health facilities and judiciary).

• Primary source of personal identity information for other Government systems (national identification, voter registration and passport issuance).

4. The areas of risk and the CRVS characteristics highlighted above all present serious warning signs for ICT investments, especially considering the following common reasons that Government technology projects[1] fail:

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[1] Gartner, "Three Reasons Government Tech Projects Fail", 7 July 2014. Available at www.gartner.com/newsroom/id/2790817.

- **Business process complexity** – projects are too big, too complex, too ambitious

- **Governance** – lack of accountability and steering committee expertise

- **Project ownership** – inappropriate roles for department heads and IT directors

Resources

5.   A number of resources are now available to support countries to realize the benefits of digitized CRVS systems. These range from the CRVS specific, such as the *"Civil Registration and Vital Statistics Digitisation Guidebook"* created with and for African countries by the Africa Programme on Accelerated Improvement of Civil Registration and Vital Statistics Systems (APAI-CRVS), through to generic guidance for digital development, such as the *"Principles for Digital Development"*. In addition, there are new initiatives, such as the development of an open-source CRVS solution, Open CRVS.
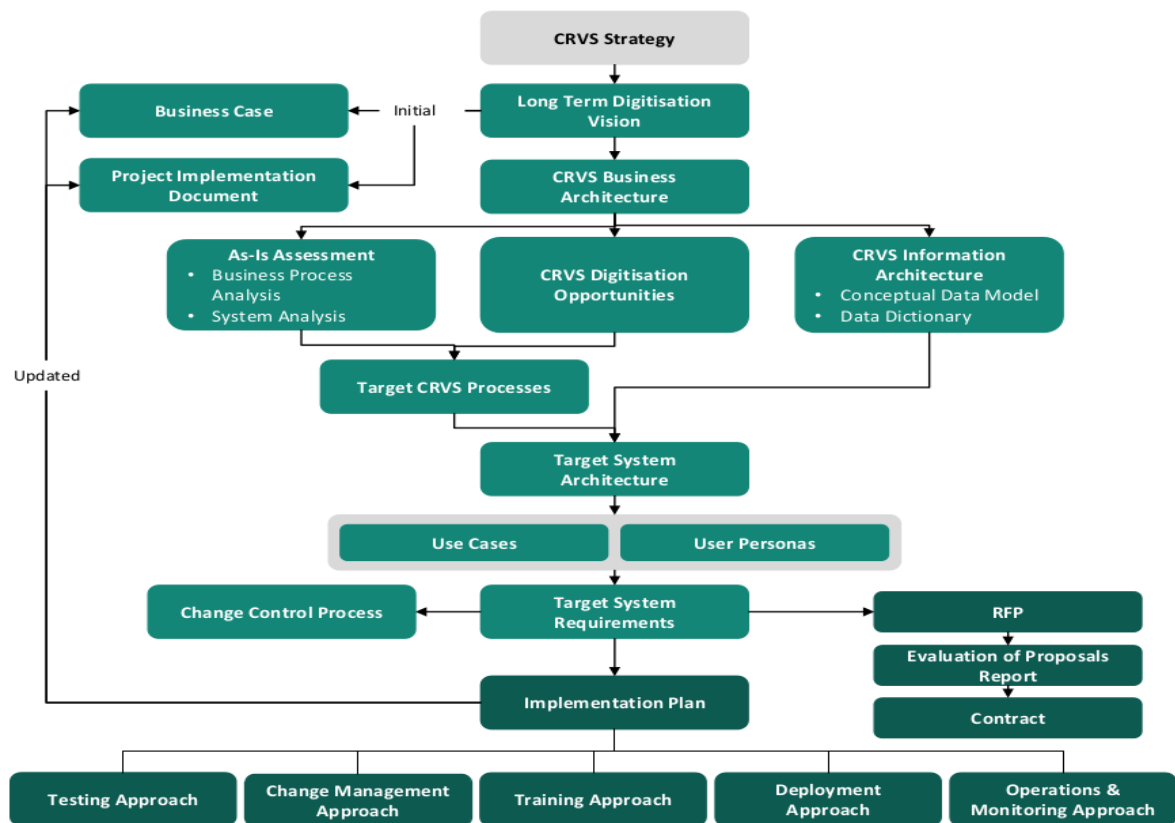
Civil registration and vital statistics digitisation guidebook

6.   The *"Civil Registration and Vital Statistics Digitisation Guidebook"* (www.crvs-dgb.org) is an online resource that provides step-by-step guidance for countries to plan, analyse, design and implement digitized systems and automated processes for CRVS. It responds to the need expressed by African countries to develop effective, scalable and sustainable CRVS systems and to maximize the affect of ICT investments. Developed in collaboration with country experts in Africa, the *Digitisation Guidebook* remains a living resource that will continue to evolve and expand over time.

7.   Use of the *Digitisation Guidebook* is widespread, with over 11,000 users having already accessed the tool (see figure 2). With the support of the Bloomberg Data for Health Initiative and APAI-CRVS, Plan International ran a training course on the use of the *Digitisation Guidebook* in Cape Town, South Africa in August 2017 for Ethiopia, Ghana, Uganda and the United Republic of Tanzania.

Figure II
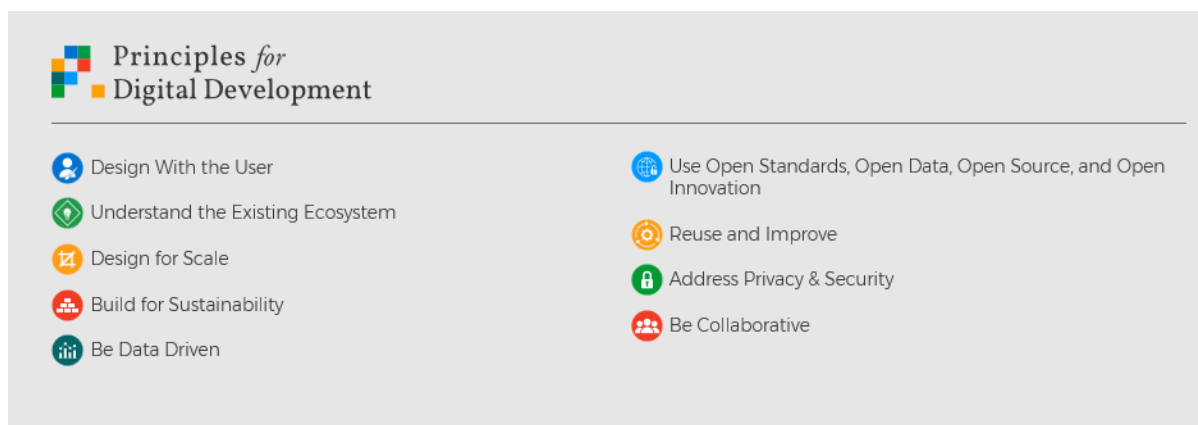**Civil Registration and Vital Statistics Digitisation Guidebook outputs**

Abbreviations: CRVS, civil registration and vital statistics; RFP, ***

Principles for digital development

8.   With the advent of accessible digital technology more than a decade ago, international development organizations began seeking new ways of including digital tools in their programing for improved outcomes. Some digitally enabled programs have failed however, and quite often, that failure was for reasons that were both predictable and preventable. The "*Principles for Digital Development"* are created as a set of living guidance intended to help digital development practitioners to integrate established best practices into technology-enabled programs (see figure III).

Figure III
Principles for digital development

Principles for Digital Development

Design With the User

Understand the Existing Ecosystem

Design for Scale

Build for Sustainability

Be Data Driven

Use Open Standards, Open Data, Open Source, and Open Innovation

Reuse and Improve

Address Privacy & Security

Be Collaborative

Source: Principles for Digital Development. Available at: https://digitalprinciples.org/principles/.

OpenCRVS

9.   CRVS software systems are often built from scratch, which means there are long periods of software development and costly application support and maintenance. Alternatively, countries can obtain proprietary solutions from software vendors, but in many circumstances, the software does not reflect the true needs of the country and can subsequently lead to vendor "lock-in", that is, long and expensive licensing terms for product maintenance and support.

10.   Plan International and Jembi Health Systems in support of APAI-CRVS, are in the process of building an OpenCRVS software that will provide a freely available alternative to home-grown solutions and proprietary CRVS packages. It will be fully compliant with United Nations standards, employ industry best-practice security features and support interoperability with other Government systems, such as Health Information Systems and Population Registers. To facilitate operations, the software will be easy to deploy and is configurable for country contexts, requiring minimal skills for customization, maintenance and support.

11.   At present, the OpenCRVS software is a prototype, but Plan International and Jembi Health Systems invite all countries to provide feedback on the software's current functionality and to work together with APAI-CRVS to create a sustainable CRVS solution that responds to various country contexts.

Issues for discussion

12.   Systematic approaches and capacity-building are required for planning, designing and implementing digitized CRVS systems that are effective, accessible and respond appropriately to country needs. In the light of the progress made to date, the following sets of questions should be considered when deliberating on ways to move forward:

•   What are the most valuable lessons learned from past efforts to digitize CRVS systems?

- How can the success of the *CRVS Digitisation Guidebook* be built on, while also building further capacity for digitized CRVS?

- What regional initiatives could support country efforts to digitize CRVS?

13.   Coordination throughout government ministries and sharing of data remain a major hurdle in building effective digitized CRVS systems.

- What eGovernment strategies have been effective in bringing line ministries closer together in terms of sharing their data?

- What institutional arrangements facilitate data sharing between civil registration, national identification and health?

- What examples exist of interoperability frameworks in Africa that could support data-sharing needs between, for example, health and civil registration?

14.   In order to make the necessary advances in CRVS effectiveness, there is a need to challenge the current orthodoxies, embrace the data revolution and leverage the latest technology enablers.

- What is the vision for long-term CRVS in Africa, without the constraints of current legal frameworks?

- What technology enablers have the most potential to support CRVS in Africa?

- What role could the private sector play in building and operating CRVS in Africa?