eRegistries Initiative

learning package

# implementation & operations

# core principles

***The implementation and operations learning package contains tools and guidance for countries and organizations seeking to implement and maintain an eRegistry.***

The audience includes implementers, research teams, software developers, IT staff, and other individuals involved in planning timelines and activities from development to rollout, carrying out direct implementation support, selecting software and hardware, providing IT support, maintaining an eRegistry, etc.

This package contains the core implementation guidance, with supplementary information on training, assessments and planning in learning packages 2 and 5. In terms of sequencing, these tools would be best used after the needs assessment and planning phase, overlapping with the development phase.

When reviewing the materials in this learning package, and when carrying out the implementation and operations phases, the user should **keep in mind the following core principles, from the *Principles of 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 and security**
- **Be collaborative**

# step by step guide

***This step by step guide provides information on the implementation and operations activities for eRegistries.***

## STEP I: IDENTIFY APPROPRIATE SOFTWARE

Working with appropriate stakeholders, assess a country's information and communication technology (ICT) needs and investigate what functions are preferred for an eRegistry. This assessment should also review data security, data harmonization and collaboration, clinical decision support and other potential technical areas.

- **Tool**: ***eRegistries Functional Scoring Toolkit***. To be completed in collaboration with MOH IT staff and stakeholders

Once the ICT needs have been assessed, conduct an evaluation of potential free and open source software (FOSS) to match those needs. This evaluation should consider first and foremost the existing software being used in country, and should assess technical capabilities, suitability, cost, etc. In accordance with the principle to "reuse and improve," preference should be given to adapting existing eRegistries or similar tools.

- **Tool**: ***eRegistries Compatibility Toolkit***. To be completed by project staff, conducting a hands on review of various FOSS.
- **Research**: Frost, et al. "eRegistries: architecture and free open source software for maternal and child health registries" 2016. Publication pending.
- **Link**: ***The RMNCH eRegistry*** (Testing account username: User password: Testing123)

## STEP 2: IDENTIFY SOFTWARE DEVELOPER

One benefit of using FOSS to create an eRegistry is the ability to select from a variety of software developers one that is best suited for the country context and project parameters. To identify an appropriate software developer, first draft the initial system criteria for the requested eRegistry.

This will contain information about the desired software and hardware, information about users and system utilization, potential data structure, storage and output, limiting factors and potential hurdles, proposed timeline, pricing, etc. Use the initial system criteria to identify a software developer that is capable of working within the identified FOSS to deliver an eRegistry matching the suggested functionality.

## STEP 3: CREATE / UPDATE IMPLEMENTATION PLANNING TOOL AND TIMELINE

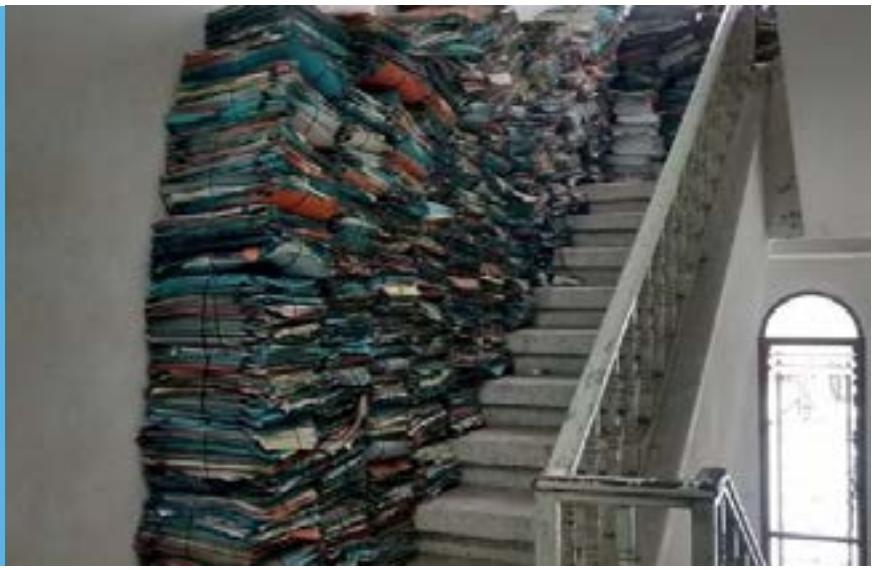
Using information gathered during the needs assessment and planning phase, develop/update a master implementation planning tool and timeline that includes activities in various phases (e.g. development; validation, roll-out, operating). The full planning tool should be thought of as a living document and management tool that will be adapted regularly throughout the life of the project,

and will contain subsections for core activities such as training, infrastructure, etc. The software development deadlines should be negotiated with the developer, and formalized in a contract with deliverables.

- **Tool**: *eRegistry Planning Tool*
- **Tool**: *eRegistry Implementation Timeline*

*Also refer to Needs Assessment and Planning and Training learning packages.*

# field notes



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In Palestine, the implementation of an RMNCH eRegistry required integration with various existing paper and electronic systems being managed by the Ministries of Health in both the West Bank and Gaza. In addition, significant ANC services are provided to women with refugee status through UNRWA facilities, which have their own electronic and paper systems.

A significant component of implementation included working with the stakeholders for these various systems to ensure proper data sharing, to make possible continuity of care for women that visited more than one kind of primary care provider during, or between, pregnancies.