New Assessment Tool for Identifying Appropriate Technology Investments in Land Records and Transaction Systems

Land Equity International (LEI) and the Millennium Challenge Corporation (MCC)
#12274 - Tony Burns, Kate Fairlie, Neil Pullar, Stevan Dobrilovic and Jill Pike

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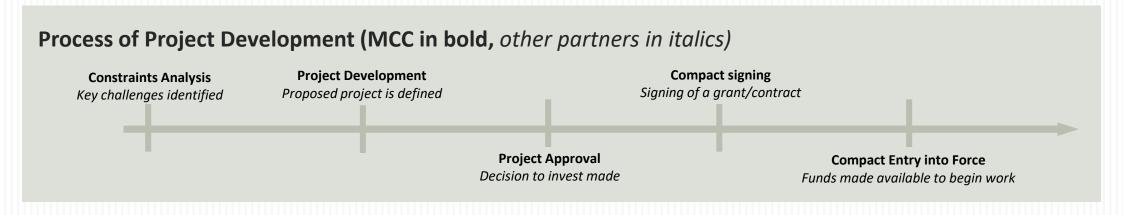**https://www.mcc.gov/resources/doc/toolkit-land-records-and-transaction-systems-technology**

A challenge, and a tool to address…

- Ensuring that new land administration system technologies are widely used and sustained after initial roll-out remains a central challenge in many countries

- Misalignment of system scope, technological complexity, and maintenance costs with agency priorities, staff capacity, internet/power, financial resources, and records quality and quantity can limit sustainability

- The LEI/MCC toolkit addresses a central question underpinning any thinking on strengthening land records and transaction systems – what level of technological complexity is appropriate for the needs, institutional environment, and resources that exist?

Toolkit overview

- Land Records & Transaction System (LRTS) Toolkit released by the MCC in 2023

- Provides a template for assessing in-country challenges relating to LRTS.

- Guides the design and selection of options and components for LRTS investment.

- Supports in-country analysis and assessment.

- Ensures systematic consideration of operability, sustainability, political and institutional risks and benefits during project design.

- Loosely aligned with the MCC process for Compact Development. Able to be used by others adopting similar project design processes.

Process of Project Development (MCC in bold, *other partners in italics)*

Constraints Analysis
Key challenges identified

Project Development
Proposed project is defined

Compact signing
Signing of a grant/contract

Project Approval
Decision to invest made

Compact Entry into Force
Funds made available to begin work

LRTS Process

Gather information → Assess → Select Option/s → Plan Scope → Plan Implementation

Analytical approach

- **The LRTS Toolkit provides a framework to assess and sustainably design reforms specifically for land registration and transaction systems (both analog and digital).**

- The Toolkit provides a structured approach to:

  - **Identify core issues**

  - **Identify up to three Investment Options** appropriate to the core issues identified - across low (or no), medium and high technology solutions

  - **Assess sustainability and risk** elements of Options and Solutions, to narrow down to a final reform option

  - Develop additional detail to design, **cost**, procure and rollout the reform.

Designed to be undertaken by MCC land sector practitioners, in collaboration with government counterparts, with minimal assistance from technical experts.

Can be used more broadly by non-MCC public and private sector institutions.

'Off-label' applications are possible. For example, to assess and design taxation systems, planning systems, and spatial data infrastructure. These may require more flexible interpretation of individual tools.

LRTS Toolkit Structure

5 stages, with a set of tools to complete at each stage.

5 Post Investment Decision **Rollout Planning**

1 **Gather Information**

2 **Identify and Assess Investment Options**

4 **Post Investment Decision** Detailed Planning and Scoping

3 **Select Investment Option** and Finalise Investment Approval Request/Details

LRTS Toolkit Structure

5 stages, with a set of tools to complete at each stage.

Stages 1 and 2 distinguish three core themes:

Legal and Institutional

Technology and Systems

Finance and Financial Sustainability

Information collection and analysis across these themes then informs the identification of up to three Investment Options. Importantly, Stage 2 requires a **sustainability and risk assessment** to promote post-project viability.

Stage 3 provides tools to guide the selection of a final Investment Option.

Stages 4 and 5 provide tools to elaborate further detail of the Investment Option, assess sustainability and risk, and plan for implementation.

LRTS Toolkit Structure

5 stages, with a set of tools to complete at each stage.

① Gather Information

A. Legal & Institutional	B. Technology and Systems	C. Finance and Financial Sustainability
• Policy, laws and regulations • Applicable tenures • Information accessibility • Existing records: location, format and quality • Existing coverage of the registry • Institutional responsibilities • Key human resource challenges • Existing national strategies addressing land • Related donor projects • Private sector entity involvement	• Existing ICT infrastructure • Available digital land data • Relevant ICT-related government directives and initiatives • Functional scope of existing systems • Technology platforms of existing systems • Technology support arrangements for existing systems	• Agency revenue collected • Agency budget and fund allocations (from externals) • Agency internal budget allocation • Agency actual expenditure • Schedule of fees and charges • Policy for distributing revenue • Level of effort for business processes • Estimation of land market activity

② Identify and Assess Funding Options

A. Summary of core issues

B. Identify Investment Options

C. Assess Sustainability and Risk

D. Supplementary Modules (See below)

I. Legal and Institutional Prerequisites

II. Basic Costing

III. Deciding when to upgrade

IV. Projecting demand

V. Backlog assessment

③ Select Funding Option and Finalise Pre-Approval Details

A. Final Option Selection

B. Procurement Packages

C. Total Cost of Ownership

④ Post Approval Detailed Planning and Scoping

A. Functional and Non-Functional Specifications

B. Assess suitable software approaches

⑤ Post Approval Rollout Planning

A. Additional Implementation Details

How to use the LRTS Toolkit: Key Steps

Indicative time frame

1 – 4 weeks

DESKTOP DATA COLLECTION

2- 6 months

MEETINGS, INTERVIEWS AND WORKSHOPS

COMPLETE WORKSHEETS

Print and manually complete

Enter digitally, either during interviews or as a write-up afterwards

Enter digitally using a tablet or mobile device during meetings

LRTS INVESTMENT DESIGN AND DECISION

How to use the LRTS Toolkit: Key Stakeholders and Information Sources

HIGH LEVEL GOVERNMENT POLICY

Leadership, existing initiatives and past experience

- President/Prime Minister's Office
- Taskforce members
- Ministers/Heads of Department
  Ministry of Lands, Ministry of Finance, Ministry of Planning Ministry of Environment etc.

GOVERNMENT OPERATIONAL

How are policies implemented, how do systems work in practice, what are the data and systems needs?

- Staff responsible for e-government initiatives
- Staff responsible for GIS and spatial data
- Staff responsible for the land registry (both high-level and operators)

EXTERNAL OPERATIONAL

How are data and systems needs being met?

- Private sector ICT companies providing services
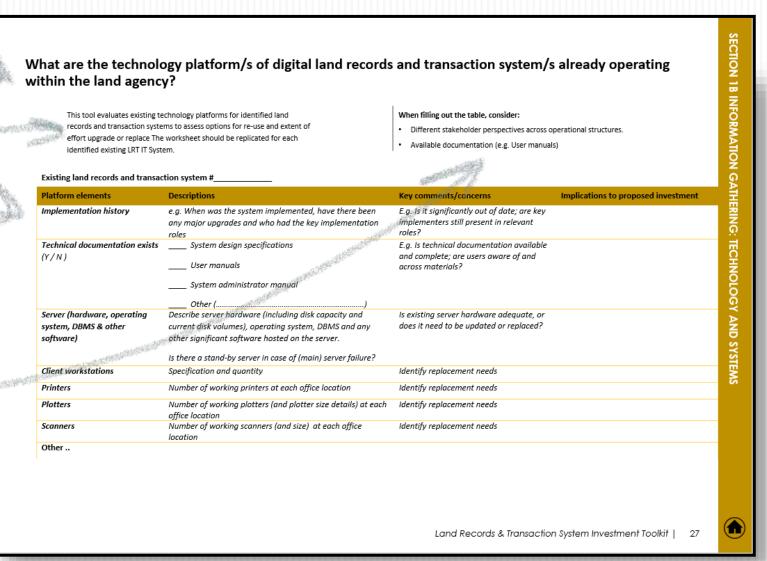- Private sector surveyors and notaries interfacing with systems

Toolkit Preview

Part I individual tool slides look like this:
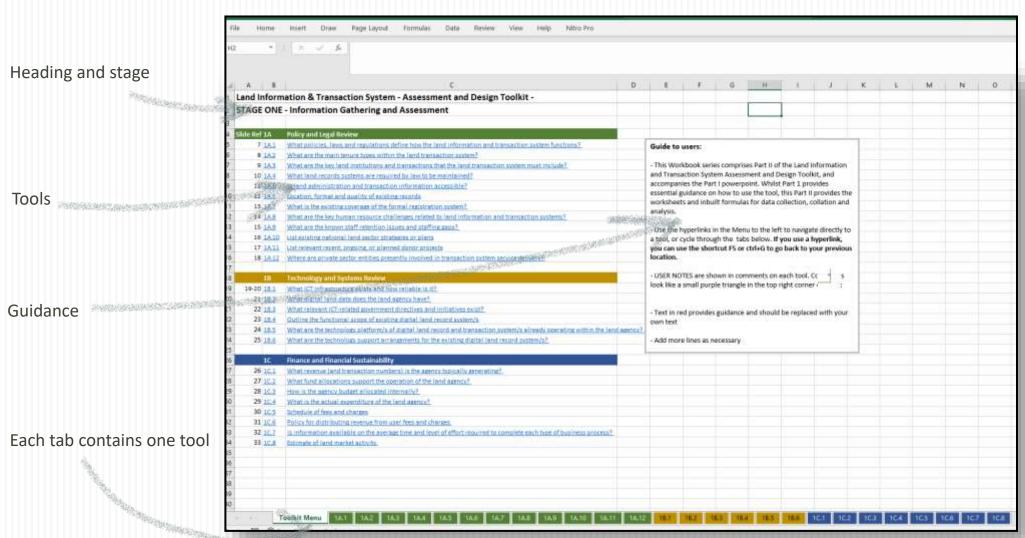
Tool title

Tool description

Tool form

Guidance and considerations

What are the technology platform/s of digital land records and transaction system/s already operating within the land agency?

This tool evaluates existing technology platforms for identified land records and transaction systems to assess options for re-use and extent of effort upgrade or replace The worksheet should be replicated for each identified existing LRT IT System.

When filling out the table, consider:

- Different stakeholder perspectives across operational structures.
- Available documentation (e.g. User manuals)

Existing land records and transaction system #_____

Platform elements	Descriptions	Key comments/concerns	Implications to proposed investment
Implementation history	*e.g. When was the system implemented, have there been any major upgrades and who had the key implementation roles*	*E.g. Is it significantly out of date; are key implementers still present in relevant roles?*	
Technical documentation exists (Y / N)	____ System design specifications ____ User manuals ____ System administrator manual ____ Other (...)	*E.g. Is technical documentation available and complete; are users aware of and across materials?*	
Server (hardware, operating system, DBMS & other software)	*Describe server hardware (including disk capacity and current disk volumes), operating system, DBMS and any other significant software hosted on the server.* *Is there a stand-by server in case of (main) server failure?*	*Is existing server hardware adequate, or does it need to be updated or replaced?*	
Client workstations	*Specification and quantity*	*Identify replacement needs*	
Printers	*Number of working printers at each office location*	*Identify replacement needs*	
Plotters	*Number of working plotters (and plotter size details) at each office location*	*Identify replacement needs*	
Scanners	*Number of working scanners (and size) at each office location*	*Identify replacement needs*	
Other ..			

Toolkit Preview

Part II contains individual tools in MS Excel tabs, with navigation shown as below:

Heading and stage

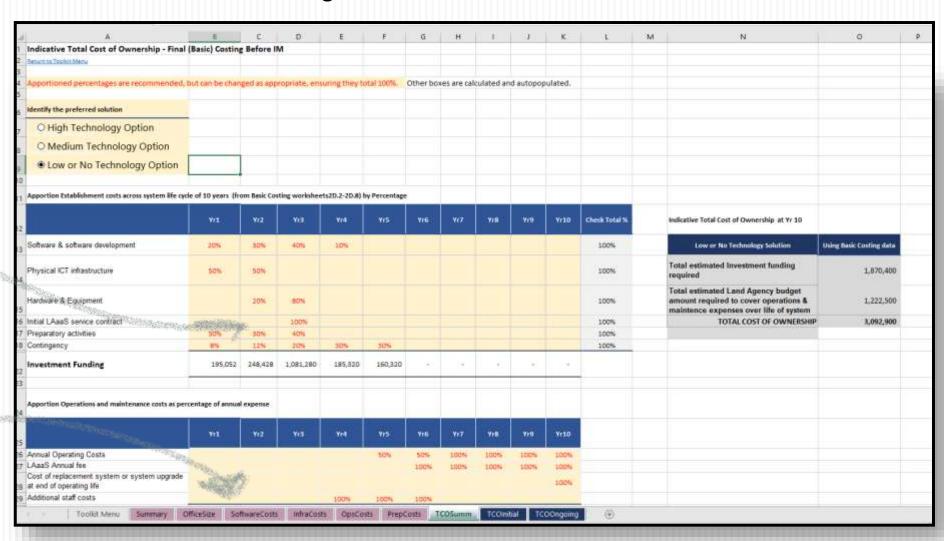Tools

Guidance

Each tab contains one tool

Toolkit Preview

Part II individual tools look something like:

Tool title and navigation

Autofill where possible

Each tab is a distinct tool

Key principles for using the Toolkit

- **Focus on availability of information**, and what missing information means in terms of viability. Do not spend considerable time on any one worksheet. If information cannot be obtained, move on and note the gap.

- **Focus on sustainability** and project design elements that support post-project viability. All design options should be considered in the context of sustainability.

- **Focus on the formal sector**, recognising the emphasis is on viable transaction systems.

- **Adopt a transparent, "comfort-level' approach to risk**. The tool and design process recognises risk as inherent to all land projects. The purpose of the tool is to systematically identify an acceptable level of risk.

Thank you!

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