How To

Introduction
Digital Agriculture Landscape
Assessment Toolkit

JengaLab · TechChange · DEVELOPMENT GATEWAY An IREX Venture

DIGITAL AGRICULTURE LANDSCAPE ASSESSMENT TOOLKIT

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INTRODUCTION AND BACKGROUND

Understanding a digital ecosystem is crucial to understanding the gaps and challenges administrators, stakeholders, users, and others experience. This toolkit was created to support IFAD-financed partners to better understand the digital landscapes in which they operate. Specifically this toolkit uses agile, human-centered, and problem-driven, iterative, adaptive (PDIA) approaches to explore country context, existing tools, gaps, challenges, and ultimately, user needs.

IFAD-DAS PROGRAM

The Digital Advisory Support Services for Accelerated Rural Transformation (DAS) Programme is a demand-based facility funded through a grant from International Fund for Agricultural Development (IFAD). The programme aims to provide technical advisory support for information and communication technology for development (ICT4D) activities within IFAD-financed programmes across Africa, the Middle East, and Central Asia.

Development Gateway: An IREX Venture has partnered with experts in digital development, agriculture, and capacity building from Jengalab and TechChange to provide advisory services, including virtual training sessions and knowledge dissemination activities. The DAS programme has two main objectives. Firstly, the programme seeks to increase access to information and inclusive financial services by smallholder farmers. Secondly, it aims to improve targeting, monitoring, and impact measurement for agricultural development through the enhanced use of ICT4D solutions.

WHY A LANDSCAPE ASSESSMENT?

Each unique ecosystem is composed of various people, solutions, and contextual details that are interconnected and interdependent. Completing a landscape assessment allows partners to better understand and center local priorities, gaps, and needs; and to use that information to make actionable recommendations that are relevant to the context. A carefully considered assessment should foster a more sustainable impact, advance local priorities, and provide space for local leadership to give feedback throughout the process.

METHODOLOGY

The methodology underpinning this toolkit was created by Development Gateway. Called the Custom Assessment Landscape Methodology (CALM), seeks to understand how a complex ecosystem of information, tools, decision makers, and decision spaces can be optimized through data and digital solutions.

While it is not an exact science, the methodology draws heavily from human-centered design, problem-driven, iterative, adaptive (PDIA) approaches, and agile methodology to develop an understanding of an ecosystem. The assessment methodology prioritizes speaking directly with users, delivering small assessment outputs for rapid and regular feedback, and iterative processes to create actionable recommendations that meet specific needs and context. More information on DG's CALM approach.

Theory of Change	Assessment Implementation Methodology
From a theoretical perspective, CALM methodology posits that; i. Understanding **data and digital use cases.** ii. Exploring incentives, power, (im)balances and overal " **decision space** " of stakeholders, and iii. Placing users and decisions they make at the centre of our analysis.	From a project implementation perspective CALM are based on the principles that; i. Speaking directly with users, stakeholders and partners to co-design methods and ii. outputs; Delivering small analytical outputs frequently and; iii. Iterating and adapting based on feedback.

... leads to the design of more effective, equitable, and sustainable data and digital systems and solutions.

Figure 1: Overview of CALM theory of change and assessment implementation methodology

OTHER USEFUL RESOURCES

Principles for Digital Development
How to Conduct a Market Scan of Digital Agriculture Solutions: A Toolkit for IFAD-Financed Partners
How to Use the Digital Principles to Evaluate ICT4D Solutions
Digital Services Playbook
5 Whys: The Ultimate Root Cause Analysis Tool

THE PROCESS

ORDER OF OPERATIONS

In a landscape assessment, the order in which you do the work matters. Start with understanding and co-designing before collecting information, be sure to ask for feedback while receiving and analyzing that information. Below is an outline to visualize the order of a landscape assessment.

1. Kickoff

During kickoff, the goal is to develop a shared understanding of the assessment scope with key stakeholders. This should include:
1. The digital ecosystem and key users or stakeholders
2. Use case for the assessment (why the assessment is needed)
3. Assessment outputs and validation methods

2. Collect

During this phase start gathering information. The collection phase includes key informant interviews, which is the most important component of a landscape assessment.
1. Desk review (continued)
2. Key informant interviews
3. Analytical framework
4. Validation

2. Design

After kickoff, start co-designing the assessment. Ensure appropriate iteration time and feedback loops with the relevant stakeholders.
3. Design will include:
1. Desk review
2. Interview Guide
3. Draft analytical framework
4. Draft assessment outputs
5. Preliminary user analysis

4. Validate, Iterate, Adapt

In the final phase, validate, iterate, and adapt while still gathering information. Plan additional time for validation and feedback in the reporting phase as well.
1. Final assessment outputs
2. Validation and feedback
3. Iteration and adaptation

THE TOOLS: ASSESSMENT OUTPUTS

This toolkit contains the building blocks of a landscape assessment aka "assessment outputs", guidance for project management and implementation, and templates and reusable worksheets that can be applied to digital landscape assessments. The tools can be used independently or collectively but should be customized based on local context, assessment needs, and goals.

DESK REVIEW

The desk review (or "document review") is a key step in the assessment phase of landscape assessments and as a precursor to other types of project implementation and planning. At the same time, reading extensive documentation can be time consuming, especially when you have to dig for relevant information. A desk review can feel redundant without good notes to reference later. This guide will walk you through some tips and tricks for conducting an efficient desk review so that:

1. The team can be sufficiently prepared (and curious!) when it comes time for kickoff and interviews
2. The assessment team do not need to spend hours reading and referencing the same lengthy documents repeatedly throughout the assessment

The goal of a desk review is not to know everything, but to merely start informing your understanding of the digital ecosystem driving use (or lack thereof).

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INTERVIEWS AND INTERVIEW GUIDES

Interview guides are a series of questions that the assessment team anticipates asking during key informant interviews. While it is important to have a clear understanding of the type of information that should be gleaned from an interview, this approach encourages flexibility. It is also important to think about the flow of questions, specifically which questions will make an interviewee feel comfortable and build trust from the start.

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ANALYTICAL FRAMEWORK

An analytical framework is a tool that helps organize the findings from an assessment, specifically the qualitative information garnered from key informant interviews, focus groups, workshops and surveys. Usually, an analytical framework takes the form of a table, with questions asked on one axis and the respondents (listed by name or anonymized by interviewee type) on the other. Ideally an analytical framework will be a direct reflection of an interview guide. However, it should also allow for flexibility to include additional information as well.

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USER ANALYSIS

This landscape approach places significant emphasis on user-centered design. Specifically, it is built on the theory that understanding data and digital use cases, exploring incentives and the context of key stakeholders, and applying user-centered design principles to solutions and recommendations will lead

to more effective, equitable, and sustainable technology use. This tool examines how user stories and user journeys can help develop user-centered assessment methodologies, report outputs, recommendations, and technical requirements.

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STAKEHOLDER MAP

Sometimes there is an assumption that we know and understand all the key stakeholders in our fields of work. However, you may have never written or even vocalized all of your key relationships, let alone visualized or analyzed them. To that end, stakeholder mapping can be a fun test of "So you think you know your digital ecosystem?", especially if it is done in an interactive or collaborative way. One of the strongest reasonsfor a stakeholder mapping exercise is not in the final product so much as the analytical exercise itself: the process of mapping stakeholders (through an interactive, discussion-based team meeting of varying degrees of formality) creates a dialogue that gives everyone involved clarity on their individual relationship to each stakeholder in the ecosystem.

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DIGITAL ECOSYSTEM MAP

Also called "data flow chart", or "digital map", a digital ecosystem map is a way of visualizing flows of information, decisions, and finances. Data and digital ecosystem maps are similar to stakeholder maps but use data sources or digital tools as the unit of analysis; moreover, they are usually visualized with lines and shapes rather than on plots. Digital ecosystem maps can be useful to improve understanding of the various data sources or digital tools in use at your organization, agency, or sector more broadly. It can help your audience understand exactly what kinds of data or digital tools are within the ecosystem and how they relate to one another through clear visual references. Digital ecosystem maps can also be a great starting point for analysis after the analytical framework has been populated, as it can serve as a baseline as you prepare recommendations.

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RECOMMENDATIONS

Recommendations are a common component of landscape assessments and other types of reports. Knowing how to make useful and actionable recommendations can be challenging. This section of the toolkit provides helpful guidance and considerations for developing recommendations.

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