Report

Knowledge Exchange Event Summary

Future-Proofing Digital Agriculture

JengaLab TechChange DEVELOPMENT GATEWAY An IREX Venture

KNOWLEDGE EXCHANGE EVENT SUMMARY: FUTURE-PROOFING DIGITAL AGRICULTURE

JULY 2023

IFAD

JengaLab

TechChange

DEVELOPMENT GATEWAY
An IREX Venture

KNOWLEDGE EXCHANGE EVENT SUMMARY: FUTURE-PROOFING DIGITAL AGRICULTURE

DATE: 14th and 15th March 2023
VENUE: Radisson Blu, Upperhill Nairobi (Both in-person/Virtual)

Key participants during Digital Agriculture: Building the Agricultural Systems of tomorrow workshop at Radisson Blu on 14th and 15th March, 2023.

REPORT BY: Development Gateway

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INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Development Gateway: an IREX Venture (DG), Jengalab, and TechChange, with a grant from the International Fund for Agricultural Development (IFAD), held an event on digital agriculture on Tuesday, March 14th, and Wednesday, March 15th, 2023 at Radisson Blu in Nairobi. The event's main aim was to share lessons learned in addressing the gaps in digital tools and information access as part of the dissemination strategy for the Digital Advisory Support Services for Accelerated Rural Transformation (DAS) Program.

Key learning goals for the event included:

a) Understanding and applying a conceptual framework of digital agriculture to solve systemic problems;
b) Clarifying the link between digital innovations, data infrastructure, and resources at the different stages of digital maturity;
c) Identifying the appropriate infrastructure for digital agriculture to be functional;
d) Understanding the impact of the policy environment on digital data and agriculture; and
e) Clarifying how to establish user-centric data governance practices and policies.

1.2 TARGET AUDIENCE

The event targeted government decision-makers, digital technocrats and advisors, development partners, and other implementing partners who are key actors or experts in digital agriculture. The focus was on technical professionals with the necessary skills and decision-making roles to influence the government's approach to digital agriculture. Development partners at both regional and national levels were invited to contribute to understanding the systemic change approach and highlight good practices from other regions.

KEY TAKEAWAYS

2.1 ACHIEVING AGRICULTURAL TRANSFORMATION

The Digital Agriculture Framework (developed by The Commonwealth) `was discussed from a policy angle and its role in ensuring tech tools are harnessed for growth. It was agreed there was a need for a holistic approach to digital agriculture from the county level to guide content development for digital agricultural strategies and help build a universally acceptable index for monitoring, assessing, and comparing how countries leverage digitalization into the agricultural sector.

The Commonwealth Connectivity Agenda aims to boost trade and investment across the Commonwealth and, in the process, grow intra-commonwealth trade to US$2 trillion by 2030 and expand investment. This can be achieved through the following key actions.

a) Physical connectivity is achieved by reducing physical barriers to trade,

b) Digital connectivity by taking advantage of the opportunities presented by digital trade,

c) Regulatory connectivity by addressing the capacity deficit and improving the regulatory environment,

d) Supply-side connectivity encourages participation in global value chains and

e) Business-to-business connectivity by exploring the role of the private sector in promoting the blue and green economy.

2.2 DESIGNING FOR TOMORROW

Lessons from IFAD's presence in Malawi and Sudan pointed to barriers to adoption, which spills over to the sustainability of the tools. Research findings indicate that the last-mile reach of farmers remains a major challenge.

The key recommendations for designing better systems include:

a) Integrating the current innovations with the existing technology, such as short message service and radio to reach more farmers.

b) Utilising an integrated mobile phone platform. In Sudan, for instance, call centres had an impact on helping farmers access financial services and markets. This, coupled with the flow of money transactions on phones, increased the digital-centred decision solutions.

c) Creating an enabling environment for people, processes and technology to co-exist. The need to capacity-build farmers on technology adoption and use was amplified.

d) Funders need to de-risk farmers financially, for example, by creating flexible grant structures allowing farmers to try new tools, inputs, non-traditional farming methods, etc.

2.3 DATA MANAGEMENT & GOVERNANCE

In the various sessions throughout the two days, speakers and participants unilaterally agreed that data is an important factor in production. However, several gaps in the data pipeline, especially around data governance, need to be addressed.

The key takeaways included:

a) The need for data analytics and the application of data-driven decisions in emerging technologies for predictive and real-time solutions.

b) Investing in local expertise and sector coordination is necessary to avoid duplication.

c) Regional policy discussions are needed to discuss the data governance framework, data protection, data sharing, and sustainability of the different interventions.

d) The need for policy formulation aimed at compensating the private sector for data aggregation and improved data sharing (as compensation for working in silos and public-private partnerships).

e) Developing proper data centres to merge and integrate existing sources and link them for solution search.

f) The need to create open data sources and develop publications to share data. Data should be standardised, fair and open.

g) The need to ensure different actors play the right roles with the collected data. Farmers need to be educated on their data, and engagements need to be tracked back to inform the farmer that data has been collected and will be used for their benefit.

h) The need to create internal policies for securing data. Data stewardship is crucial for key value chain activities such as good agricultural practices, agricultural finance, marketing, insurance and soil testing, among other activities in creating farmer-centric solutions.

i) The need to ease data acquisition, which can be used in decision-making for different aspects such as credit scoring, farmer derisking, bundled insurance, weather advisory, linkage to business development services, and access to markets among a broad spectrum of scalable solutions.

Data can be harnessed using a multi-stakeholder approach and used to end hunger through;

a) Creation of early warning systems,
b) Development of viable insurance options,
c) Creation of data governance framework and data sharing mechanisms,
d) Creation of traceability systems,
e) Creation of unified data platforms.

An additional observation on data management was that dashboards have more advantages than Excel sheets as they allow data entry and validation in real time and fix bugs and errors. It was recommended that tables be standardised to create versatility in products. Dashboards can also be used to share knowledge and measure impact.

2.4 SYSTEM INTEROPERABILITY

Digital infrastructure is growing, and more stakeholders are getting involved, hence the need for integration to draw meaningful insights. Data needs to talk to each other, leading to data-driven decisions.

There were four key recommendations for system interoperability:

a) The use of application programming interphases (APIs). This could be modular compatible standards, which are flexible, community-driven and optimised for speed.
b) Collaboration is necessary to create. It is also paramount to rethink business models that hinder data sharing, rethink data sharing incentives, policy changes on the Data Protection Act, new uses of data, responsible data guidelines, and responsible artificial intelligence (AI).
c) Define different data sets to make them interoperable. Share key learnings on digital advisory services. Also, set standards at technical and cultural levels to allow data to communicate with one another.
d) There is an opportunity for investment in the value chain. Investors need to invest in digitising and digitalising seed systems and value chains.

CONCLUSION

Sharing in-country learnings and experiences increased participants' understanding of the best-fit infrastructure for extension services at the local level and identified collaboration opportunities with key institutions to drive value and solution search.

Participants discussed data systems, data governance, and the key considerations that decision-makers and programme designers need to understand to support sustainable implementation in the medium and longer term.

Overall, focusing on DAS' use cases and learnings helped attendees start identifying solutions, channels and approaches needed in an ecosystem-wide approach to the digital transformation of agriculture.

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