

Digital Revolution: Learning on CGIAR's Ways of Working

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Brief

Background

The [CGIAR 2030 Research and Innovation Strategy](#) sets the stage for doing business differently to ensure that research provides real solutions for development. To support these changes, CGIAR is committed to following seven new implementation approaches, or Ways of Working (WoWs).

Since 2022, Digital Revolution was designated as a CGIAR WoW. This brief will highlight key learnings, strategic takeaways, implications for investment, and evidence gaps related to the Digital Revolution WoW. The Summary of Learning on Digital Revolution is part of a series of summaries pertaining to the WoWs (see [Synthesis](#)). This project aims to provide evidence-based learning to inform strategic decisions of the [System Council](#), CGIAR [Integrated Partnership Board](#) (IPB), and leadership more broadly, on the implementation and future planning of CGIAR WoWs.

Methodology

This review, led by the [Independent Advisory and Evaluation Service \(IAES\) Evaluation Function](#), drew on 48 documents identified through [CGSpace](#) and targeted online searches, supplemented by a field visit to the Republic of Uganda and a stakeholder webinar. Materials included IAES-led evaluations; [Independent Science for Development Council](#) (ISDC) and [Standing Panel on Impact Assessment](#) (SPIA) reviews, center- and Board-led evaluations, inception reports from the [2025–30 CGIAR Research and Innovation Portfolio](#), and relevant external literature. Collected data was organized using ReadCube, coded in MAXQDA, and analyzed against five guiding research questions (see [Terms of Reference](#)). External sources for the literature review include [GSMA](#), [World Bank Group](#), International

Development Research Center ([IDRC](#)), and Food and Agriculture Organization ([FAO](#)).

The process highlighted systemic challenges, trends, and gaps but was constrained by limited time, reliance on secondary sources, and the fast pace of digital change, which can quickly outdate evidence. Nonetheless, the brief provides valuable insights into CGIAR's digital initiatives and their evolution, supported by tangible field examples.

Key Findings

- **FAIR data principles:** CGIAR made strides in promoting open access and applying Findable, Accessible, Interoperable, and Reusable (FAIR) data principles. Platforms such as [CGSpace](#) offer good practices, however, issues with data quality, meta data, and interoperability remain. More investment is needed to build capacity and governance structures to support FAIR data and enable advanced analytics.
- **Emerging technologies:** CGIAR past Initiatives, Programs and Accelerators are experimenting with emerging technologies such as AI, machine learning, and earth observation data, with some early successes, such as machine learning-based fertilizer recommendations that boosted wheat yields by 25% in Ethiopia.
- **Cooperation and co-development:** While CGIAR is building ties with private companies through advisory groups, platforms, and collaborations, co-development of digital solutions with industry remains limited in scope.
- **Digital Transformation Accelerator (2025–30):** This Accelerator convened a wide range of partners, including major tech firms, government agencies, AgTechs, NGOs, and donors, to drive digital innovation in agriculture.

- **Building infrastructure:** CGIAR made promising developments in building process infrastructure to support partnerships; this includes introducing mechanisms such as a Licensing Framework and the [Genetic Innovations Public-Private Partnership Platform](#) to enable structured collaboration and reduce reliance on private sector funding.
- **Inclusion:** Partnership efforts are often *ad hoc*, and face barriers related to coordination, budgets, and capacity, but inclusive approaches (e.g., training programs, innovation hubs, digital repositories) can strengthen co-development and impact at scale.
- Create more intentional approaches and gender-responsive design to ensure women benefit equitably.

Strategic Takeaways

- **Prioritizing inclusive design and last-mile access**, building on the co-design approach, would ensure digital tools address rural infrastructure, affordability, and literacy gaps, with a sharper focus on women and marginalized groups.
- **Looking beyond National Agricultural Research Systems**, CGIAR should strengthen partnerships, creating clearer incentives and frameworks to engage the private sector and foster interdisciplinary collaboration at scale.
- **Moving from endorsement to full implementation of FAIR principles**, supported by sustained investment in data curation and system-wide capacity.

Evidence Gaps and Looking Forward

- Provide clearer documentation of models, successes, and challenges for scaling and improve references to be less broad and more detailed.
- Strengthen private sector partnerships by sustaining investment and ensuring clear incentives and structured support. This would particularly strengthen interdisciplinary partnerships and address last-mile access challenges.
- Create standardized tools to measure smallholder uptake and impact of digital technologies. A consistent survey (with a gender lens) should be introduced to ensure equitable impact of digital tools.

Box 1: Digital Revolution WoW description

CGIAR plans to place the digital revolution at the core of its research and delivery by using big data analytics and AI, engaging digitally empowered end-users, and improving partners' access to and use of data and digital innovations, especially for small-scale farmers. This includes co-designing inclusive, transformative digital services across food systems, actively seeking new digital applications for faster learning and exchange, and applying FAIR data principles so data is findable, accessible, interoperable, and reusable. This will be achieved through integrated systems research and partnership-driven approaches under One CGIAR, which will leverage capacities and assets with global, regional, and national partners and investors. These approaches will be delivered *via* three-year investment plans which detail objectives, activities, and budgets for initiatives that incorporate digital tools and innovation at scale.



Learn more, visit the **Ways of Working resource page**



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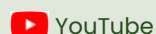
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