



ToT

Empowering Organizations,
Enriching Lives



D3 FRAMEWORK: A DISCOVER- DESIGN-DELIVER APPROACH

2025

BRIEF

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Acronyms

D3	Discover, Design, Deliver (Framework)
CICS	Crop Inspection & Certification System
GIS	Geographic Information System
HCD	Human-Centered Design
CIC	Crop Inspection & Certification
ICE	Institution of Civil Engineers
GPS	Global Positioning System
M&E	Monitoring and Evaluation
IPPC	International Plant Protection Convention
ISPM	International Standard for Phytosanitary Measures
NGO	Non-Governmental Organization
MAAIF	Ministry of Agriculture, Animal Industry & Fisheries
NIN	National Identification Number
NPPO	National Plant Protection Officer
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary
ToT	Training of Trainers
UK	United Kingdom
WVS	World Vision Somalia

Executive Summary



THE CONTEXT:

Climate-related disasters are placing increasing pressure on Uganda's infrastructure and the communities that depend on it. However, conventional risk assessment approaches often overlook local knowledge and the interconnected nature of infrastructure systems, limiting the effectiveness of resilience planning and climate adaptation efforts.

WHAT WE DID:

thinkIT, in collaboration with the UK Institution of Civil Engineers (ICE) and Makerere University, developed and piloted a participatory six-step climate-linked infrastructure mapping framework in the communities of Awoja and Gerenge. Through community-led mapping, residents identified critical infrastructure, documented climate hazards, analyzed system interdependencies, and co-developed practical resilience actions. The findings were digitized into maps and dashboards to support evidence-based planning by local authorities and other stakeholders.

WHY IT MATTERS:

The project demonstrates that participatory risk mapping is a practical, low-cost, and scalable approach to climate adaptation. By integrating community knowledge into infrastructure planning, the initiative strengthened local ownership, improved understanding of climate risks, and generated actionable insights for more resilient and inclusive decision-making. The framework offers a replicable model for embedding community perspectives into climate resilience planning across Uganda and beyond.



Introduction



3

**ITERATIVE
PHASES:
DISCOVER,
DESIGN, DELIVER**

4

**PARTICIPATORY
TOOLS IN THE D3
TOOLKIT**

Global

**REACH VIA THE
KAYA LEARNING
PLATFORM**

World Vision Somalia needed a way to design humanitarian training that truly reflects the realities of the communities it serves not another generic, top-down curriculum. Working with a multidisciplinary team spanning INGOs, local NGOs, academia, government, and the private sector, thinkIT developed the D3 Framework: a Discover–Design–Deliver approach to human-centered curriculum design.

Piloted through a Training of Trainers workshop in Borama, Somaliland, the framework has since been packaged into a public course on the Kaya humanitarian learning platform, giving practitioners worldwide a practical, participatory alternative to static training methods.

Problem Statement

World Vision Somalia, like many humanitarian organizations, faced the challenge of designing effective training curricula to tackle complex crises. Traditional program design approaches often lacked structured tools to include community perspectives and iterative innovation, leaving field staff to rely on static, one-directional training methods.

In Somalia's context, where humanitarian crises are protracted and resources limited, empowering staff with creative problem-solving skills was critical. The organization needed a human-centered design framework that could guide humanitarian workers in discovering local needs, designing solutions, and delivering training that truly resonates with communities.

Fragmented Program Design

Without structured tools for community input, curricula risked being generic and disconnected from the realities of protracted crisis settings.

Limited Creative Capacity

Aid workers needed practical skills in creative problem-solving to co-design solutions with the people they serve, not just deliver fixed content.

The challenge, in short, was to develop a curriculum framework that would be participatory, contextually relevant, and easy to adopt enabling aid workers to co-create solutions with communities rather than prescribe them.



Our Approach

thinkIT partnered with World Vision Somalia to develop the D3 Framework, structured around three phases: Discover, Design, Deliver using a human-centered design (HCD) methodology. A multidisciplinary team worked collaboratively to create a suite of practical tools tailored for humanitarian education settings.



The D3 Framework: an iterative, human-centered design cycle for humanitarian curriculum development.

Figure 1. The D3 Framework: an iterative human-centered design cycle moving from Discover through Design to Deliver.

Discover

The team conducted user research, needs assessments, and stakeholder interviews to understand the on-the-ground challenges facing communities and humanitarian workers alike.

Design

Ideation workshops and rapid prototyping sessions engaged Somali trainers and community members directly in shaping curriculum modules. These prototypes were tested in a pilot Training of Trainers (ToT) workshop in Borama, Somaliland, gathering feedback to refine the tools.

Deliver

Chosen solutions were implemented and fine-tuned, with an emphasis on monitoring and evaluation to measure what works in practice closing the loop between design and real-world impact.

The end result was a comprehensive toolkit tailored for humanitarian education settings, ready for use by facilitators in Somalia and beyond.

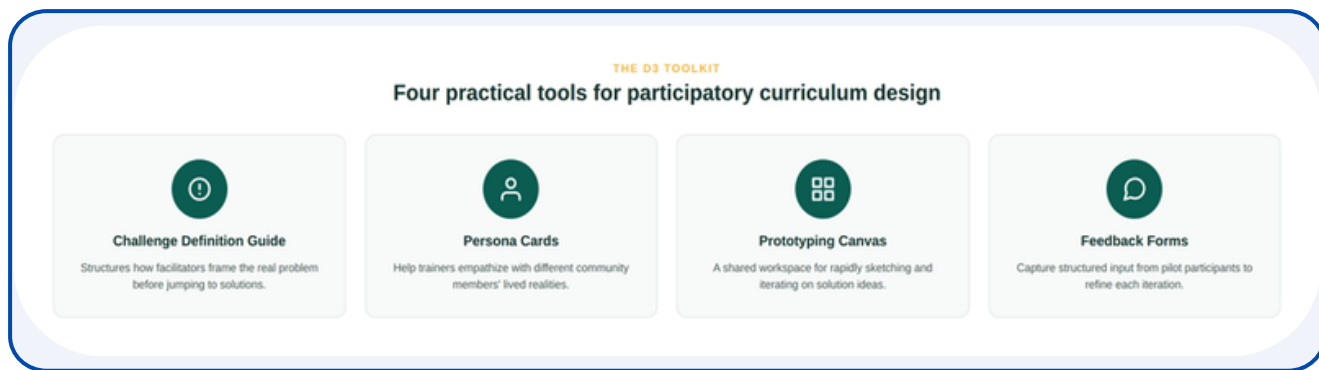


Figure 2. The D3 Toolkit four practical tools underpinning participatory curriculum design.



Impact and Results

The CICS Digital Platform has fundamentally transformed Uganda's SPS inspection landscape, delivering measurable results within its first year of operation. By digitizing documentation and workflows, the system has eliminated redundant paperwork and cut inspection-to-certificate turnaround from as much as three weeks to a matter of hours.



Exporters can now submit and track SPS certificate applications online, receiving approvals in hours instead of days. MAAIF inspectors conduct inspections using tablets, upload results with photographic evidence, and issue e-certificates that are tamper-proof and instantly verifiable giving MAAIF, for the first time, a centralized database for oversight and data-driven decision-making.

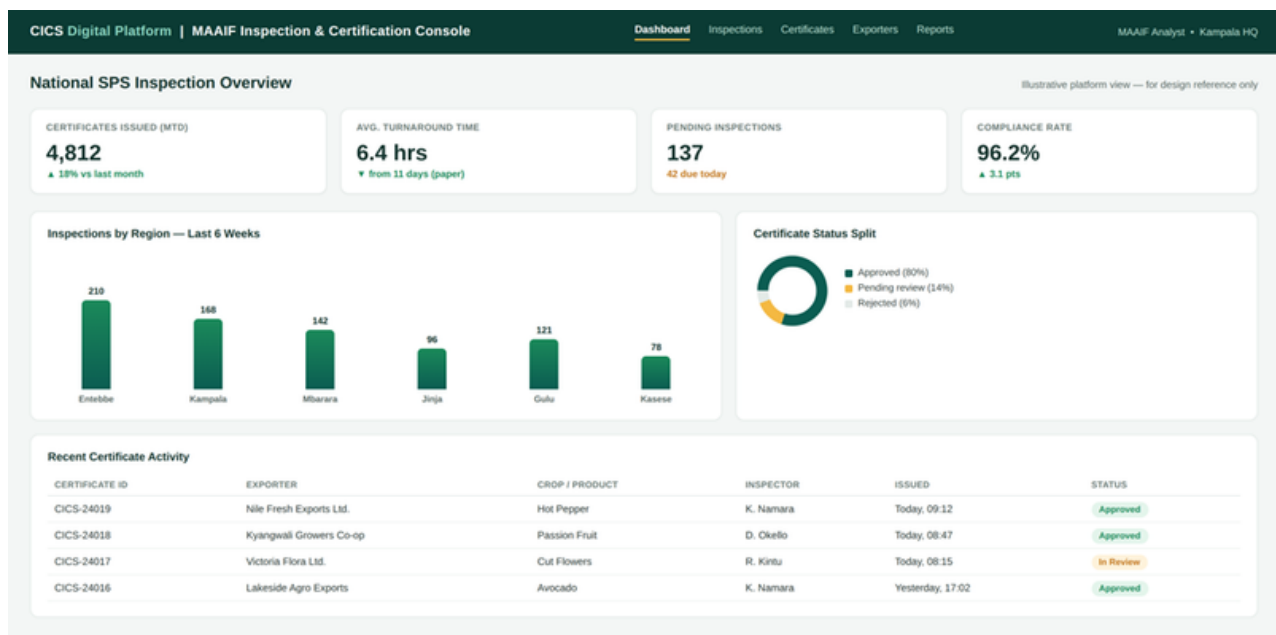


Figure 3. Illustrative view of the MAAIF inspection and certification console, showing real-time throughput, regional inspection volumes, and certificate status.

The platform also fosters better communication across the value chain: farmers, packhouses, and airport officials are now connected through shared, real-time updates.

An exporter who might once have lost a shipment to a misplaced paper form can now track every step digitally. As confidence in Uganda's SPS compliance regime rises, trading partners abroad have more reason to trust the integrity and speed of Uganda's inspection process a trust dividend that helps open doors to new markets.

"The CICS platform is a game-changer. It has brought order to chaos, restored trust in our national exports, and empowered our farmers to reach global markets faster than ever before."

Commissioner of Crop Inspection and Certification, MAAIF

Next Steps

Building on the platform's early results, thinkIT and its partners recommend a set of coordinated actions to sustain momentum, protect gains already made, and extend the model's benefits to other parts of Uganda's trade ecosystem.

Deepen deployment and capacity-building

1. Continue structured, hands-on training for MAAIF inspectors, customs officers, and export companies, with particular attention to transitioning long-serving staff from paper-based habits to digital workflows.

2. Track training completion and system-usage data by region to target refresher sessions where adoption is lagging.

Institutionalize maintenance and support

3. Maintain a dedicated helpdesk for user inquiries and continuous monitoring of system uptime, backed by periodic independent security audits to protect sensitive trade data.

4. Establish a transparent, user-driven feature-request process, prioritizing enhancements such as additional local-language support and integration with other trade systems.

Align policy with digital practice

5. Accelerate the update of relevant regulations to formally recognize electronic phytosanitary certificates as legally equivalent to their paper predecessors, both domestically and with key trading partners.

6. Codify data-protection and record-retention standards for the centralized inspection database to reinforce trust among exporters and international buyers.

Replicate and scale the model

7. Explore extending the same digital infrastructure to adjacent certification domains, such as veterinary certificates and broader quality-standard compliance.

8. Position the CICS platform as a reference blueprint for other public agencies pursuing similar digitization of inspection and certification workflows, and document implementation lessons for that purpose.

Strengthen monitoring for continuous improvement

9. Formalize the dashboards' analytics such as common causes of rejection or pest-incident hotspots into a regular reporting cadence for MAAIF leadership and development partners.

10. Use early adoption and turnaround-time data to set measurable year-two targets for further reducing administrative delay and expanding platform coverage nationally.

Conclusion

The D3 Framework shows how a human-centered, phased approach to curriculum design can shift humanitarian training from static content delivery to dynamic, community-owned problem-solving. By equipping World Vision Somalia's staff and partners with practical tools grounded in Discover, Design, and Deliver, thinkIT has helped embed a culture of participatory innovation that is already extending beyond its original pilot. As the framework scales through the Kaya platform and into new sectors and languages, the D3 Framework stands as a replicable model for how humanitarian organizations can design with communities, not just for them.

Ready to bring human-centered design to your programs? Contact thinkIT's Impact Team at we@thinkit.africa to discuss how the D3 Framework can be adapted to your organization's training and capacity-building needs.



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