EVALUATION



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Evaluation of Innovation in UNICEF

East and Southern Africa Regional Thematic Case Study Report

Evaluation of Innovation in UNICEF:
East and Southern Africa Regional Thematic Case Study Report

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For further information, please contact:

Evaluation Office
United Nations Children's Fund (UNICEF)
3 United Nations Plaza
New York, New York 10017
evalhelp@unicef.org

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Acronyms and abbreviations

ADDA	African Drone and Data Academy
ALNAP	Active Learning Network for Accountability and Performance in Humanitarian Action
CFB	Complementary Feeding Bowl
CO	Country Office
COAR	Country Office Annual Report
DPG	Digital Public Good
ESA	East and Southern Africa
ESAR	East and Southern Africa Region
ESARO	East and Southern Africa Regional Office
GIZ	German Agency for International Co-operation
HQ	Headquarters
ICT	Information and Communication Technology
ICTD	Information and Communication Technology Division
ISC	Innovation Steering Committee
ITU	International Telecommunication Union
IYCF	Infant and Young Child Feeding
M&E	Monitoring and Evaluation
MENA	Middle East and North Africa
MUST	Malawi University of Science and Technology
OoI	Office of Innovation
PG	Programme Group
PIC	Product Innovation Centre
RCT	Randomised Controlled Trial
RO	Regional Office
SD	Supply Division
SDG	Sustainable Development Goal
STEM	science, technology, engineering and mathematics
T4D	Technology for Development
UNECA	United Nations Economic Commission for Africa
UNEG	United Nations Evaluation Group
WASH	Water, Sanitation and Hygiene

WCA	West and Central Africa
YOMA	Youth Marketplace and Opportunities

Executive summary

Introduction

This regional thematic case study was developed as part of the global Evaluation of Innovation in UNICEF, which assessed the organization's ability to accelerate progress toward child rights and the Sustainable Development Goals (SDGs). Although published separately, it is one of seven regional thematic case studies comprising Annex 6 of the global evaluation. This regional thematic case study from the East and Southern Africa (ESA) region contributes to the global evaluation evidence base by examining the relevance, effectiveness and sustainability of three innovations supported by UNICEF, and by identifying the enabling and hindering factors that influence their implementation and outcomes. Its purpose is to provide insights and lessons learned, rather than a full standalone evaluation, and should be read in conjunction with the main report. This case study was conducted between March and October 2025.

A structured and comparative case study approach was adopted to generate insights from purposively selected innovations. This case study explores the following three initiatives: (1) the African Drone and Data Academy (ADDA), an education initiative in Malawi designed to train young people in drone, geospatial, and data skills to build local capacity and support humanitarian response; (2) the Complementary Feeding Bowl (CFB), a physical bowl and spoon product with built-in messaging to support infant and young child feeding counselling programmes, with a focus on Madagascar, one of 15 countries of implementation; and (3) Giga, a global initiative and partnership with ITU aiming to connect every school to the internet by 2030 through school connectivity mapping, infrastructure development and strategic partnerships, with a focus on Kenya, Rwanda and Botswana. The thematic focus of the case study was scaling; these three cases represent two digital education innovations and one product innovation, all of which have scaled or are transitioning to scale following successful development and piloting.

An appreciative inquiry methodology was applied as a participatory and strengths-based approach to guide data collection and analysis. Evidence was triangulated through document review, portfolio analysis, and semi-structured interviews with UNICEF staff and partners. The approach adhered to UNEG norms and UNICEF ethical standards, ensuring informed consent and confidentiality. Findings are primarily qualitative and illustrative and should not be interpreted as representative of the entire regional innovation portfolio.

Key findings

Programme effectiveness: All three initiatives aimed to address systems-level problems and gaps and demonstrated strong alignment with national and regional priorities. *ADDA* aimed to fill a gap in the market in drone and data skills and offer employment opportunities to young people, training over 1,300 graduates from 2021-2023. The *CFB* was designed as a physical feeding product with integrated 'take home' messaging to accompany and support Infant and Young Child Feeding (IYCF) counselling. It has been distributed in over 15 countries, including 5 countries in the ESA region (ESAR). The *Giga* initiative aims to connect all schools to the internet, with real-time school connectivity mapping, procurement support and financial support to mobilise connectivity infrastructure. The initiative has mapped over 149,000 schools in ESAR and has contributed to connecting schools to both government and private sector internet infrastructure.

Equity, gender equality and inclusion: Equity, gender equality and disability inclusion were considered across all three initiatives, but approaches were often ad hoc rather than systematic. For example, *ADDA* met gender enrolment targets but missed opportunities to address deeper structural barriers for women in science, technology, engineering and mathematics (STEM) and did not systematically consider disability inclusion. *Giga* prioritised last-mile connectivity to reach the most marginalised and included schools for children with disabilities, but disaggregated data was limited.

Cost-effectiveness: All three initiatives were associated with high resource investments. *Giga* and *CFB* showed notable cost-efficiency due to their scale and reach. *Giga* achieved a low cost per child reached (under $3 to date) and leveraged procurement innovations, partnerships and tools to reduce connectivity costs and attract external funding. *CFB* represented a low-cost innovation at less than $1.54 per bowl, though additional costs were required for delivery, distribution and integration into broader programming. *ADDA* had higher per beneficiary costs and faced resource challenges related to set-up and personnel costs but provided in-depth training that was considered to have a transformative impact and was potentially cost-effective compared to market alternatives.

Scale and sustainability: All three initiatives are making progress in terms of scaling. *ADDA* has been replicated in Ethiopia, and progress is also being made in South Africa. The team is exploring options to scale the programme primarily as a Digital Public Good, while actively considering the trade-offs between scaling wide and scaling deep. It was also reported that other organisations, such as the German Agency for International Co-operation (GIZ) and the World Bank have replicated similar programmes, indicating external diffusion. *Giga*'s global school mapping and procurement and financial support to over 13 countries is reported to have reached more than 11 million children globally with improved access to connectivity. Country Plans have been developed quantifying the number of schools not yet connected to the internet, the resources needed to connect them, and the projected impacts on the GDP. The *CFB* has distributed over 1 million bowls across 15 countries, with the Madagascar government directly procuring 260,000 bowls after a successful UNICEF-funded pilot of 20,000 bowls.

Lessons and the way forward

Key enablers for scaling included strong government partnerships, alignment with national priorities, prioritisation of learning and evidence-based iteration, a demand-driven approach to scale up and internal leadership support. Hindering factors included challenges with UNICEF's 'business as usual' procurement and regulatory processes, limited long-term financing models and over reliance on small teams and individual champions. The case study highlights the importance of early planning for sustainability and scale, systematic approaches to considering inclusion and accessibility challenges, and the need for innovation capacity and leadership at country and regional levels to drive success and underscores the importance of embedding innovation efforts into national systems to ensure sustainability and impact at scale.

1 Introduction

1.1 Purpose of the evaluation, objectives and scope

Innovation was made a key change strategy in UNICEF's Strategic Plans for 2018–2021 and 2022–2025, aimed at accelerating progress toward the Sustainable Development Goals (SDGs) by addressing stubborn barriers and stagnating progress with new solutions. UNICEF defines innovation broadly as a new or significantly improved solution that advances results for children and young people across five categories: Data, Digital, Innovative finance, Product and Social innovations.

The Evaluation of Innovation in UNICEF (2025), carried out by the Evaluation Office, aimed to provide a credible and independent assessment of UNICEF's 'fit for purpose' to use innovation as a change strategy to achieve transformational organizational outcomes and goals. Combining formative and summative elements, **the evaluation had four objectives:**

Objective 1: To assess the relevance, coherence and sustainability of UNICEF institutional arrangements to integrate innovation as a change strategy;

Objective 2: To examine the relevance, effectiveness, efficiency and sustainability of UNICEF innovation approaches;

Objective 3: Assess the relevance, effectiveness, efficiency, impact and sustainability of innovation initiatives to enhance programme effectiveness and accelerate positive outcomes for children; and

Objective 4: To identify and analyse the enabling and hindering factors influencing innovation within UNICEF, the generation of new knowledge and thought leadership to influence the innovation ecosystem and promote child rights.

Innovation at UNICEF involves a wide range of distributed activities and diverse stakeholders at multiple levels. **The primary audiences for the evaluation are internal UNICEF stakeholders:**

- Global level (particularly the Global Innovation Board, the Innovation Steering Committee (ISC), the Office of Innovation (OoI), Supply Division (SD), Information and Communication Technology Division (ICTD) and Programme Group (PG));
- Regional level (particularly Regional Programme and Planning Chiefs, Regional Evaluation Advisers, and Regional Technology for Development (T4D) Specialists); and
- Country level (particularly Country Office (CO) staff developing innovation strategies, thematic teams involved in portfolio governance, and staff working on specific programmatic innovations).

Secondary audiences include the UNICEF Global Leadership Team, UNICEF National Committees, the Executive Board of UNICEF, as well as external development partners and governments. The findings will inform UNICEF's approach to innovation as a change strategy, including the internal governance and systems for innovation at the global level.

The temporal scope of the evaluation is the period from 2019 to 2024, encompassing both the management response to the 2019 Evaluation of Innovation in UNICEF's Work,[i] and implementation of the current Strategic Plan (2022-2025).

1.2 Purpose of this regional thematic case study

Thematic case studies were developed during the global evaluation to explore how innovation is implemented across UNICEF's seven regions. These case studies aim to assess the **relevance, effectiveness, and sustainability of innovation initiatives** (evaluation Objective 3), and to generate insights into **enabling and hindering factors** (evaluation Objective 4). The case studies were not intended as standalone evaluations, but rather as explorations of what is working in different regions and the challenges associated with implementing and scaling different types of innovations. They were designed to draw out common learnings of relevance to the global evaluation, rather than assessing the regional innovation situation or specific individual innovation initiatives. They contribute to evaluation questions under Objectives 3 and 4.

Evaluation questions under Objective 3:

- 3.1 To what extent did innovations implemented through the regional portfolios contribute to programme effectiveness and accelerate positive outcomes for children?
- 3.2 To what extent did they address considerations of equity, gender, and disability inclusion in achieving child rights?
- 3.3 What specific outcomes were achieved for marginalised or underserved populations through these innovations?
- 3.4 Is there data on the cost-effectiveness of the innovations compared to alternatives?
- 3.5 How are the innovations being scaled or sustained over time?

Evaluation questions under Objective 4:

- 4.1. What factors have enabled (or hindered) the successful implementation of innovation, scaling and replication of innovation within UNICEF?
- 4.2. What new knowledge and insights have been generated through UNICEF innovation initiatives, and how have these contributed to thought leadership and influence within innovation ecosystems?
- 4.3. In what ways has UNICEF's approach to innovation disrupted traditional sector practices, and what impact has this had on the broader field of child rights and development?

Each regional case study has a distinct thematic focus and includes two to three illustrative examples to generate comparative insights into how innovation is identified, supported and scaled across UNICEF's programming. The initiatives have been selected to highlight specific dimensions of innovation—such as scale, participatory design or systems integration.

This regional thematic case study for the East and Southern Africa region (ESAR)focuses on scaling. For ESAR, two of the innovations sampled were digital education innovations aiming to expand access to 21st century digital skills and opportunities. The other was a product innovation aiming to improve nutrition. The initiatives were supported through different approaches and have different resourcing levels and scale of reach. All three had scaled or were transitioning to scale in late 2024. The initiatives explored were:

- ***African Drone and Data Academy* (*ADDA*),** an education initiative based in Malawi to train young people from Malawi and other countries in the region in skills relating to drones,

geospatial technologies and data, while also creating a wider enabling environment for the use of drones in humanitarian programming. The initiative was developed and led by the Malawi CO, and replication is supported by the East and Southern Africa Regional Office (ESARO).

- ***Complementary Feeding Bowl* (*CFB*),** a physical bowl and spoon product with built-in nutrition information designed to be distributed as part of Infant and Young Child Feeding (IYCF) counselling programmes. The initiative was developed by the Product Innovation Centre (PIC).
- ***Giga***, a large-scale, global initiative with the goal to connect every school to the internet by 2030, providing global school connectivity mapping, infrastructure support, partnerships and resource mobilisation. *Giga* has a dedicated team and resources located in OoI.

The case study report is structured into six sections, findings are organised by sub-question. Following this introduction, Section two provides a brief methodology. Section three is an overview of the three case study initiatives, situating them within the region's broader structures and in relation to other innovation initiatives. Section four provides an analysis of the findings relevant to the five evaluation sub-questions, and Section five draws out common enabling and hindering factors to innovation related to the thematic focus of this case study. Finally, the report concludes with a summary of the achievements and challenges of these initiatives, as relevant to the broader evaluation.

2 Methodology

2.1 Case study sampling strategy

A total of seven regional thematic case studies were developed during the global evaluation, each focusing on a different thematic area (scaling, co-creation, emerging technologies and innovation strategy). The themes were strategically selected and assigned to each region in consultation with UNICEF stakeholders to ensure alignment with strategic, portfolio and learning priorities in each region and ensure thematic diversity across the global sample.

The thematic focus of this case study was scaling. During the inception phase, a number of consultations were conducted with global and regional stakeholders to identify key priorities for the case studies and thematic areas of interest relevant to each region. Thematic areas were identified to include a focus on a specific type of innovation (e.g., digital), a stage of innovation (e.g., scaling) or a key enabling factor (e.g., strategy and culture). A focus on scaling was identified as a key interest in order to identify key enabling and hindering factors to scaling and explore what other innovations can learn from successfully scaled solutions.

Once a theme was assigned to a region, one to three innovation initiatives were purposively selected to illustrate the assigned theme and to enable comparative insights into how innovations are identified, supported and scaled within different regional and country contexts. The selection of initiatives was guided by the sampling strategy for the global evaluation, which was designed to ensure a balance of initiatives based on the following factors: type of innovation (data, digital, innovative finance, product and/or social innovation), stage of development (early stage pilot through to scale), sector (i.e. health, learning, youth etc.), and design origin/approach (i.e. country, regional or globally led).

Following extensive consultation, portfolio review and document review (described below), a sample of 18 innovation initiatives was identified for the global evaluation sample. Once the initiatives for each region were selected, the implementing countries were identified, with the most suitable CO invited to participate in data collection. The original data collection approach proposed in-depth in-person data collection in one or two of the countries, with lighter touch remote data collection in the other one or two countries per region. Organizational changes[ii] in some COs meant alternative countries and/or innovation initiatives had to be selected in line with the regional theme and overall global sampling strategy. To accommodate staffing capacities, some regions shifted to highlighting a regional innovation initiative that involved lighter-touch data collection across multiple countries. A total of 16 initiatives were included in the final global sample.

The three innovation initiatives featured in this regional thematic case study (*ADDA*, *Giga*, and *CFB*) were selected from a number of ongoing initiatives in the East and Southern Africa region (ESAR), including more than 40 OoI-supported initiatives, several of which had progressed towards scale. *ADDA, CFB* and *Giga* were identified as examples of innovations at different stages of the scale pathway. In this evaluation, scaling is understood as increased reach and depth of an innovation, including geographic expansion, increased user uptake and institutional adoption. While UNICEF does not have a single formal definition of scale, the Strategic Plan defines that "Priority projects for scale are in multiple countries and reaching more than 1 million people." The OoI's 5D Framework defines scale as the adoption and operation of a solution at the desired level or exponential growth, sustained by an ecosystem of actors and describes that "innovating at scale means making a transformational impact for children at the

national level and across multiple countries". The Framework highlights that scalability depends on strategic alignment, proven need, team capacity, adaptability and reliable resourcing. An assessment of scalability or the level of scale of the three sampled innovations is outside the scope of this case study. Instead, the analysis reflects on progress in expansion and external adoption (Section 4.4), and enablers and challenges associated with this (Section 5).

2.2 Summary of the approach to data collection and analysis

A structured and comparative case study approach was adopted to generate insights from the purposively selected innovations. Appreciative inquiry methodology was used as a participatory and strengths-based approach to guide data collection and analysis. This approach was well-suited to the evaluation's focus on relevance, effectiveness, sustainability and the enabling and hindering factors influencing innovation, as outlined in Objectives 3 and 4. The robustness of the appreciative inquiry approach was enhanced though triangulation of the following data:

- **A document review** of 20 documents, including country strategy documents, implementation reports, and case study and evaluation reports where available (see Annex A.1). The evaluation team used a structured format to map documents against the evaluation questions. The evaluation team also utilised the natural language processing (NLP) tool Claude.ai to conduct a keyword and sentiment analysis of Country Office Annual Reports (COARs) for the 21 countries in the ESA region, exploring the ways innovation is implemented in the region.
- **11 interviews** were conducted with UNICEF staff. Interviewees included five CO, three Regional Office (RO) and three Headquarters (HQ) staff (see Annex A.2). Six interviewees were women, five were men. A sampling frame was developed during the inception phase; interviews were conducted from April to July 2025. The interview data was transcribed, coded in MaxQDA, reviewed and discussed by the evaluation team. Key findings were categorised in an evaluation matrix, ensuring alignment with evaluation objectives and facilitating triangulation across data sources.
- **The portfolio review** collated dashboard data available from the OoI Dashboard, Venture Fund Dashboard and INVENT. Analysis identified a number of initiatives supported across innovation type, region, stage and thematic area. Analysis also explored alignment to priorities, budget allocation, reach and outcomes, where this was recorded.

Three meetings were held with regional T4D, Operations, and Monitoring and Evaluation (M&E) focal points, to receive feedback on the case study design and to validate emerging findings.

To assess effectiveness, the evaluation used three outcomes for innovation based on the Active Learning Network for Accountability and Performance in humanitarian action's (ALNAP)[iii] work on evaluating humanitarian innovation. The outcomes are:

- **Consolidated knowledge and learning:** New knowledge generated, or the evidence base enhanced around the area the innovation is intended to address, or around the performance of the innovation itself.
- **Improved solution:** The innovation offers a measurable, comparative improvement in effectiveness, quality or efficiency over current approaches to the problem addressed by the innovation.

- **Widespread adoption of the solution:** The innovation is taken to scale and used by others to improve humanitarian performance.

The evaluation approach and framework were developed in line with **UNICEF[iv] and United Nations Evaluation Group (UNEG) standards and principles on evaluation ethics and quality**, as outlined in the UNEG Norms and Standards for Evaluation;[v] the UNICEF Adapted UNEG Evaluation Reports Standards; the UNEG Ethical Guidelines for Evaluation; and the UNICEF Procedure on Ethical Standards in Research, Evaluation, Data Collection and Analysis.[vi] The obligations of the evaluators include: independence, impartiality, credibility, transparency on any conflicts of interest, and accountability.

The approach to data collection and storage prioritised **confidentiality and informed consent**. The evaluation team provided a full disclosure of the study's context. Interviewers informed respondents that they had the right to decide whether they wanted to participate or not, and they could leave at any time. Information is stored anonymously, protected, and will be deleted six months after closure of the assignment. The anonymized data collected in the course of the evaluation will be given and stored by the Evaluation Office.

2.3 Limitations and mitigation measures

This case study report aims to contribute to the evidence base for the broader evaluation and is not intended to serve as a stand-alone evaluation nor were case studies intended to generate formal recommendations. While the evidence has been triangulated and confirmed based on the primary and secondary data sources available, the findings cannot be interpreted as representative of, or as confirming patterns across, the overall global or regional innovation portfolio. Specific limitations of the case study, and their impact, are listed in Table 1 below.

Table 1: Case study limitations and mitigation measures

Limitation	Impact on case study and mitigation measures
Case selection	There was no comprehensive list of innovation initiatives in the ESARO region from which to systematically select case studies. Instead, the selection of cases involved a consultative process with Regional Offices (ROs) and COs to ensure relevance and buy-in, as well as a review of portfolio data and discussions with the OoI. This was a time-consuming process, particularly as several COs declined to participate due to competing priorities. While consultations were important for alignment, they reduced the time available for primary data collection and analysis. The limitations of the sampling were mitigated through the inclusion of regional-level cases that allowed lighter-touch consultation with multiple COs as well as by incorporating regional documents and other evaluations of innovations conducted in the region.
Document review	The documentation varied widely in detail and quality. In particular, internal documentation on *Giga* was not made available to the team. The case study relies on external published documentation. This provided a helpful overview, but analysis of internal learning and insights was limited.

	Gaps were mitigated by triangulating across available documents and interviews to fill gaps; limitations around data are discussed in the report.
Interviews and site visits	This evaluation has taken place during a time of significant organisational change at UNICEF. The availability of RO and CO staff was consequently affected by concurrent strategic planning processes and restructuring. The total number of interviews conducted for ESAR was notably lower than the target. Twenty stakeholders were identified and contacted, but it was only possible to organise interviews with eleven stakeholders within the data collection time frame. No in-person observations or site visits were possible for this case study. The original methodology for the case study included an in-person mission to at least one country. However, due to lack of capacity in COs (as described above) and risks of duplicated efforts (with past evaluation and data collection exercises), it was not possible to organise a visit. The remote approach meant it was not possible to include beneficiaries and end users in data collection and limited the evaluation team's contextual depth of insight compared to case studies where in-person missions were conducted. It is noted that this case study is therefore more light-touch and high-level than initially planned; a regional evaluation of innovation in ESAR is forthcoming (late 2025), which is expected to add greater depth and insight. Interviewees were identified through UNICEF focal points and partners, which may have led to a positive bias or limited dissenting views. Staff turnover may also have affected the completeness of responses. The evaluation prioritised interviews with those most involved in implementation or decision-making and triangulated their views with documentary evidence.
Data and analysis	Due to limited quantitative data (including data on outcomes, cost and cost-effectiveness), findings were largely based on qualitative feedback and anecdotal evidence. The analysis could not fully capture outcomes, impacts, cost-effectiveness nor efficiency relative to alternative solutions. The evaluation used a structured coding matrix aligned with evaluation questions and relied on team debriefs to validate emerging findings. Where data was anecdotal, findings were clearly framed as illustrative rather than definitive.
Limited evidence and external triangulation	The scope was limited to 20 documents and 11 interviews due to limited availability of some countries and a preference for light-touch desk-based reviews. Restricted document access further reduced engagement. As a result, the study offers a high-level reflection and synthesis from UNICEF

	staff, without triangulated findings from external stakeholders or beneficiaries.

3 Context of the innovations

UNICEF operates across 21 countries in Eastern and Southern Africa, where children are at the epicenter of overlapping crises, from protracted conflicts and recurrent droughts to disease outbreaks and economic instability. Many children face multiple, simultaneous risks, including displacement, malnutrition, and lack of access to basic services. UNICEF's priorities include young child survival and development, children and AIDS, basic education and gender equality, child protection, and emergency preparedness and response, with growing emphasis on climate-adaptive and community-based solutions to build resilience.[vii,viii]

In 2024, UNICEF invested $1,542 million across the region. Spending concentrated on ensuring every child survives and thrives (Goal Area 1), particularly through programming aligned with SDG 2 (Zero Hunger) and SDG 3 (Good Health and Well-Being), which accounted for 53 per cent of regional resources. There was also sizeable investment in ensuring every child learns (Goal Area 2) and ensuring every child lives in a safe and clean environment (Goal Area 4), both of which received 16 per cent of the regional investment. This was followed by ensuring every child is protected from violence and exploitation (Goal Area 3, with 8 per cent of funding allocation), and ensuring every child has an equitable chance in life (Goal Area 5, with 6 per cent of funding allocation). With large humanitarian responses, Ukraine and Türkiye received the largest funding shares in the region. Ethiopia, South Sudan, and Somalia received the largest funding.[ix]

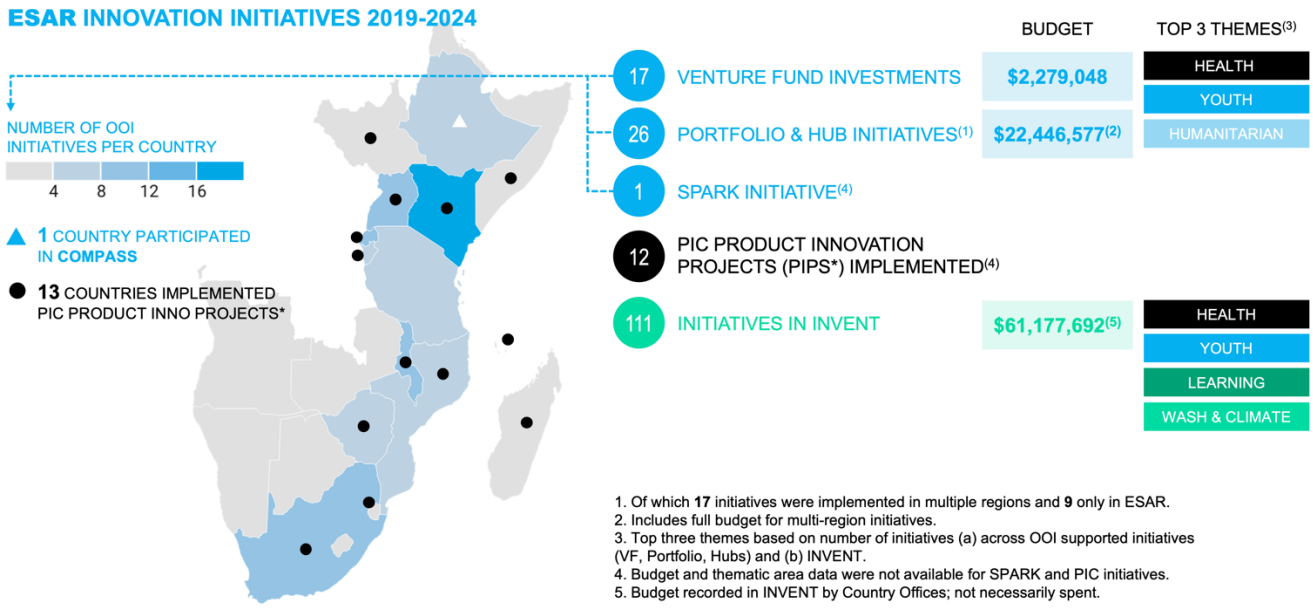
3.1 Innovation in ESA

Since 2019, ESAR has developed and driven a range of innovations, both through UNICEF's central innovation approaches and independently. Within the OoI's Portfolios, 11 initiatives spanned multiple countries in ESAR, such as UPSHIFT, U-Report, Oky, YOMA, FunDoo and HealthBuddy+. The Youth Portfolio had the largest number of initiatives in the region (seven initiatives). The region has also been supported to innovate through Venture Fund CO funding for a number of digital, data and financial initiatives, such as the Medical Drones Network in Namibia, the Flood Modelling in Malawi initiative, the Rapid Drone Response Unit in Malawi, and the Blockchain Financial Registry in Burundi. Of the 21 COs in ESAR, Kenya, Malawi, Rwanda, South Africa and Uganda have been particularly engaged in OoI-related innovation initiatives.

INVENT has been used by the region to log numerous country-led initiatives, such as the *ADDA*, Generation Unlimited, the 4P2C Data Intelligence Node, Cloudline Africa and the Gender-Based Violence Digital Referral Pathway. Eighteen of the twenty-one ESAR countries have logged at least one initiative in INVENT. Seventy per cent of the logged initiatives were digital innovations, spanning health, youth, education and WASH and climate as the main thematic areas.

OoI and INVENT dashboard data was analysed to summarize innovation efforts in the region, including the COs involved in different OoI initiatives, budget allocation and key thematic areas (Figure 1). It is noted that INVENT is an open repository and is used in different ways by COs; it includes early ideas that may not been developed and implemented.

Figure 1: Overview of ESAR innovation initiatives (2019-2024)



3.2 Evidence from regional evaluations

Several research studies and evaluations have been carried out in the region relevant to innovation, contributing to the region's innovation knowledge base and learning:

- **An evaluation of *ADDA* as a case study to enhance the youth and learning innovations portfolio in Malawi was carried out in 2024.** The evaluation reviewed the *ADDA* programme established in 2020 to build local capacities in drone technologies and data for humanitarian and development purposes. It found that *ADDA* was successful in providing new skills to over 1,000 graduates, with a subsequent 80 per cent employment rate and graduates contributing to emergency response, climate resilience and agricultural monitoring projects in Malawi and other countries in the region. However, it found that the programme faced sustainability challenges due to high costs, dependence on UNICEF funding and a need for improved coordination and local ownership to enable longer-term viability.
- **An evaluation of community-based prevention of violence and social cohesion using innovation for young people in displaced and host communities was conducted in Burundi in 2022.** The initiative aimed to strengthen peace-building capacities among young people (including displaced persons and host communities) in areas affected by conflict and enable youth-led innovation. Over 15,000 young people were trained in peace-building skills and supported to develop new solutions. The evaluation reported that the initiative was relevant and effective, with young people demonstrating improved conflict resolution skills and developing innovative solutions to community conflict using the UPSHIFT methodology, with over 200 project ideas developed. There was reported sustainability through continued functioning of solidarity groups and continued application of new skills.

- **Several reports were developed prior to 2019** (the scope of the evaluation), such as a report on State of Technology 4 Development and innovation in ESAR in 2013, an ESAR Country Programme and Innovations Landscaping and Gaps Report in 2013, a Multi-Country Independent Review of Technological Innovations in ESAR in 2016, and a school handwashing tap innovation product trial in Mozambique in 2018, indicating pre-existing interest and investment in innovation and related learning in the region prior to the establishment of UNICEF's current central innovation support structures in 2019.

3.3 Examples for this case study

This case study explores three key innovation initiatives implemented across the ESAR region, representing different approaches to innovation development and scaling.

Case 1: African Drone and Data Academy (Malawi)

The ***ADDA*** is an education and training programme that equips young people with skills and experience in drones, geospatial technologies and related data analysis and technical skills. Initially conceived in 2016 as part of UNICEF's exploration of drone technologies for humanitarian response, *ADDA* later developed as a youth development and education initiative, responding to identified gaps in local drone and data skills as well as high youth unemployment. *ADDA* was launched by the Malawi CO in 2020 in partnership with the Government of Malawi, Virginia Tech, and the Malawi University of Science and Technology (MUST). From 2020 to 2023, the initiative trained more than 1,000 graduates and has since expanded to Ethiopia, South Africa and the United Arab Emirates (UAE), in the early stages of scaling. The investment in the Malawi initiative from 2020-2023 was $2,176,978. The Ethiopia CO received $278,000 from the OoI Venture Fund in 2023 to support replication.

Case 2: Complementary Feeding Bowl (Madagascar)

The *CFB* is a physical bowl and spoon with integrated nutrition messages, designed to support IYCF programmes for children aged 6-23 months. The product was developed by UNICEF's Product Innovation Centre, with initial testing in five countries. Thirteen countries in the Middle East and North Africa (MENA), East and Southern Africa (ESA) and West and Central Africa (WCA) have procured and distributed bowls as part of IYCF programming, with a total of 1 million bowls ordered globally. This case study looked in particular at its implementation in Madagascar, where the government made an order of over 260,000 bowls after a successful UNICEF-funded pilot of 20,000 bowls.

Case 3: *Giga* (Kenya, Rwanda, Botswana)

Giga is a large global initiative aiming to connect every school to the internet by 2030. The initiative provides mapping, real-time monitoring, procurement support and advocacy tools to enable government-led school connectivity at scale. It aims to ensure the most vulnerable, including girls, children in poverty and children in rural areas, are not left behind due to lack of connectivity and a growing digital divide. Since launching, *Giga* has mapped over 2 million schools across 142 countries and mobilised $400+ million USD in funding commitments, providing increased connectivity to an estimated 11 million children globally.[x] This case study explored *Giga* in ESAR, with particular insights drawn from Botswana, Kenya and Rwanda. The total investment in this initiative from 2019-2024 was $32,330,592.

4 Case study findings

4.1 Effectiveness and outcomes

All initiatives demonstrated strong strategic alignment with regional and country priorities, including government interests and priorities. Digital technology was identified as a significant priority for the region, and was a key theme across the region's COARs, with strong government interest in investing in technology and digital upskilling. *Giga* was driven by evidence of the growing digital divide, contributing to increasing inequality. Country-level implementation aligned with existing national strategies, such as Kenya's updated competency-based curriculum requiring digital literacy and Botswana's national digital transformation strategy. Some staff questioned whether connectivity, and therefore the Giga initiative, was part of UNICEF's core mandate, to uphold and promote the rights and well-being of every child. However, others saw connectivity as an essential enabler of 21st century education and skills, and therefore an important role for UNICEF. ADDA was informed by learning from UNICEF's humanitarian corridor project, which identified limited local capacities in drone and data technology, together with government interest in addressing high youth unemployment. The *CFB* was designed to support existing UNICEF IYCF programming, national IYCF task forces and government nutrition priorities by providing a physical product alongside counselling and support.

All three have successfully piloted and moved into a transition to scale phase, with different levels of expansion and reach.

- *ADDA* was successfully established and piloted in Malawi, with enrolment of 3,979 students and 1,345 graduates by 2023. The programme continues to be maintained in Malawi, and learning from the pilot has contributed to adaptations in several countries, including Ethiopia which implemented its first training programme in 2025.
- An initial pilot of *CFB* in five countries indicated the efficacy of the prototype product, which has been followed by significant scale up to 15 countries globally, with over 1 million bowls procured and distributed globally and 280,000 bowls distributed in Madagascar.
- *Giga* represents an innovative business domain for UNICEF. It has a dedicated support team that engages globally. A global school connectivity map was established and continues to be maintained and used for advocacy and decision making. Giga-supported improvements in school-based connectivity is reported to have reached more than 11 million children globally.

All initiatives were supported by a range of internally led and independent monitoring and evaluation reports that documented implementation, reach, early outcomes and learning. Documentation and learning were a strong focus for *ADDA*. A comprehensive independent evaluation was commissioned in 2024, which evidenced early successes and outcomes for graduates, and which has supported reflection, programme iteration and improvement. The *CFB* was developed on the basis of research conducted by Emory University of the efficacy of a similar bowl prototype, and the HQ IYCF team, together with COs, have made considerable efforts to document progress and learning, including qualitative feedback and a quantitative impact study in Uganda. *Giga* had strong operational data and documentation, and a number of research papers have been commissioned to support *Giga*'s strategy. However, quantitative evidence of direct results for children (i.e., learning outcomes) is not available.

There was a combination of both evaluative and anecdotal evidence of contributions to programme effectiveness and outcomes for children across the innovations:

- ***ADDA*** had high retention and graduation rates. The independent evaluation evidenced students' satisfaction with the programme, with 75 per cent reporting the programme had contributed to 21st-century skills acquisition and 82 per cent reporting that they had applied the skills learned from *ADDA* programmes to real-world problem-solving. The post-graduation employment rate was 80 per cent, which was recognised as particularly positive in a context of high youth unemployment. Graduates went on to secure roles in international and local organisations, including drone companies, and some set up their own companies which have gone on to collaborate with government and INGO programmes, highlighting the relevance and impact of the skills gained through *ADDA*.
- Supporting evidence for ***CFB*** outcomes was drawn from historic research on bowl and spoon products that pre-dated UNICEF's *CFB* development, and several small studies conducted during piloting of the *CFB*. In 2017, a randomised controlled trial (RCT) was conducted in Malawi by Concern Worldwide, with a control group receiving nutrition education and the intervention group receiving both nutrition education and a simple bowl and spoon product. This study found that meal volumes increased by up to 20 per cent in the intervention group, representing a significant increase. A UNICEF study on the *CFB* in Uganda found an increase in mean weight among children 6-23 months from 8.7 to 10.2 and an increase in meal frequency of 2-3 times from 65 to 72 per cent. Caregiver knowledge about IYCF practices also increased. It was flagged that a key barrier or risk to effectiveness of the bowl was the availability of food, and stakeholders described the need for complementary work in the food security system to tackle this wider systemic issue.
- A global report commissioned in 2021 by UNICEF and the ***Giga*** team projected that a 10 per cent increase in school connectivity can increase effective years of schooling by 0.6 per cent, and GDP per capita by 1.1 per cent (it is noted that this study did not include countries in ESAR). *Giga*'s Country Plans estimate the potential impact on GDP growth of connecting every school. For example, it estimates that connecting 23,300 public primary schools in Kenya will enable up to $3.3 billion USD in GDP (1.4 per cent growth). Results for children in ESAR were primarily indicated through qualitative testimonials, including positive perceptions from teachers, who reported that their teaching and classroom engagement had improved as a result of connectivity. However, quantitative evidence of impact on school attendance, engagement, learning or social outcomes for children was not available. Wider literature on the impact of connectivity in schools shows mixed results overall, and highlights dependencies on teaching and implementation quality.[xi]

The outcomes for innovation can be considered not only in terms of demonstrated contributions to programmes, but also the addition of knowledge and learning and of improved solutions. The evaluation utilised the ALNAP innovation success criteria to assess the project's outcomes. Table 2 illustrates **achievements in these three areas.**

Table 2: Innovation outcomes based on the ALNAP criteria for evaluating humanitarian innovations

Innovation outcomes	*ADDA*	*CFB*	*Giga*
Consolidated	Concerted efforts to	Extensive internal	Resourcing of strategic

knowledge and learning	document learning and robust evidence, including a commissioned evaluation of the Malawi programme covering 2021-23.	documentation of learning and feedback on product usability, accessibility and durability, which has supported iteration and improvement. Several RCT studies and qualitative studies have documented successes, challenges and learning.	research papers by The Economic Intelligence Unit, Boston Consulting Group, etc. to support advocacy and strategic planning. Internal documentation and sharing of lessons learned was less clear.
Improved solution	*ADDA* fills a gap in local drone and data education and skill development in Malawi and has contributed to graduates' employment opportunities, with anecdotal examples of graduates contributing to impactful humanitarian initiatives. Comparative analysis to alternative course (e.g., online courses) is not available.	*CFB* design iterated and improved on previous bowl and spoon prototypes that demonstrated improvements compared to nutrition education alone. RCT in Uganda showed improved meal frequency and weight, but comparative analysis against alternatives is not documented.	*Giga*'s scale and strategic partnerships is reported to have helped reduce connectivity costs compared to alternative approaches.
Widespread adoption of the solution	Interest from other countries, with early replication by UNICEF in Ethiopia and South Africa. Reports of replication of a similar model by German Agency for International Co-operation (GIZ) and World Bank.	Procurement and distribution of over 1 million bowls across 15 countries globally. Government procurement of 260,000 bowls in Madagascar after a successful UNICEF-funded pilot of 20,000 bowls.	Mapping of schools in 142 countries globally and improved connectivity for an estimated 11m children. Strong government buy-in and resource mobilisation in ESAR countries.

4.2 Equity, gender equality and inclusion

All three initiatives included inclusion and equity considerations to some extent. Equity and inclusion were a driving factor for *Giga* in particular, to address a growing digital divide due to poor last-mile connectivity. However, overall, there were mixed levels of systematic equity considerations in design and implementation.

While gender inclusion was considered, the initiatives were not gender-transformative and missed opportunities to design more ambitious, targeted programming for women and girls. For example, *ADDA* had specific gender inclusion targets of 60 per cent women enrolment, which was achieved. However, an independent evaluation noted that there were opportunities for *ADDA* to better address the significant gender divide in STEM in Malawi, such as including a women's mentoring programme and targeted support to young women to secure employment opportunities after graduation. The evaluation recommended increased consideration of the systemic cultural barriers affecting girls' participation and

employment. In the case of *CFB*, the feeding bowl was designed to be gender-neutral and benefit both boys and girls. Data on reach and outcomes was not disaggregated by gender.

Similarly, disability inclusion was not systematically applied, creating several outstanding gaps. *Giga* included schools for children with disabilities in targeted schools for connectivity, with one stakeholder estimating that approximately 10 per cent of newly connected schools in Kenya were focused on children with disabilities and learning needs. The design and iteration of the *CFB* has addressed feedback on disability inclusion to improve accessibility, incorporating "contrasted colours and tactile lines for children with visual impairment and caregivers with conditions like night blindness" and a "chunky spoon design to accommodate users with arthritis or children with cerebral palsy". Conversely, the independent evaluation of *ADDA* found no explicit inclusion of people with disabilities in the design, and no disability-focused targets or data collection. There was no evidence of enrolment of students with disabilities, and this was highlighted as an area for improvement.

All three initiatives considered economic inclusion, for example, *Giga*'s geographic targeting and *ADDA*'s use of scholarships and reimbursed expenses for students. However, systemic barriers presented a persistent challenge to reaching the poorest households. *Giga* is a school-based programme, and while it has explored ways to include wider communities through community internet hubs, it primarily benefits children with access to education. Similarly, *ADDA*'s eligibility requirements for its higher education programme limited participation to those who have completed secondary education, excluding those who lacked access to quality foundational education. The identification of this gap in the independent evaluation resulted in recent developments to add a new climate education project for both in-school and out-of-school children. Furthermore, *ADDA* was positioned as a 'youth for children' initiative, with graduates of the *ADDA* programme going on to work on humanitarian projects using drones and data (e.g., medicine delivery, cholera detection) with the aim to support the most vulnerable children.

***Giga* represents an innovation specifically designed to address systemic gaps in digital infrastructure and skills.** The broader evaluation of innovation identified that these gaps could hinder access to digital innovations, which has been a focus of UNICEF's innovation investments. This highlighted the need for parallel investments in connectivity, hardware and digital literacy, which *Giga* directly targets. By doing so, *Giga* has the potential to enable more equitable access to wider technological innovations.

4.3 Cost-effectiveness

While all three initiatives received substantial resource investments compared to smaller UNICEF innovations, both *Giga* and *CFB* demonstrated promising cost-efficiency on a per capita basis due to their broad reach.

***ADDA*'s budget of $2 million (2021-2023) represented approximately $1,400 per graduate (up to 2023).**[xii] However, this included high initial set up costs, which have reduced over time. The 2024 evaluation noted several cost inefficiencies related to reliance on international partners, regulatory constraints and high personnel costs (e.g., instructors). However, one case study participant highlighted that in countries such as South Africa, a basic drone licence can cost $2-3,000, making *ADDA*'s scholarship programme comparatively cost-effective. The 2024 evaluation also noted the absence of a robust M&E framework, limiting the ability to assess value for money or comparative efficiency.[xiii] Case study participants noted the importance of considering the long-lasting impacts of *ADDA*, including anecdotal

stories of "life-changing" skills development and opportunities. The initiative intentionally focused on quality over quantity, developing a comprehensive, immersive programme, rather than a low-cost online course. As identified in the 2024 evaluation, "*ADDA* has fostered the creation of a workforce that is talented and skilled in many ways, and not only limited to drones and data",[xiv] indicating significant individual impacts that cannot be compared to large-scale light-touch initiatives, as well as potential added value through trained graduates' contributions to wider outcomes as a 'youth for children' initiative.

In its inception, the *CFB* was identified as a low-cost innovation with minimal financial and implementation risks, which motivated its development. When procuring bowls, purchasers had a choice of three bowl and spoon kits via the UNICEF Supply Catalogue, depending on the level of adaptation and type of material, with prices ranging for $0.20 - $1.54 per bowl, although this did not reflect the additional costs of delivery, distribution and complementary education and counselling, which was embedded into wider IYCF programming. The product minimum order was 10,000 to 12,000. Stakeholders raised the challenge of balancing standardisation and rapid purchasing through centralisation, versus local manufacturing and adaptation which was felt by some to be potentially more cost-effective, particularly in terms of delivery. The design of Version 2 of the bowl and spoon focused on cost reduction and improved durability to reduce the need for replacement. There were three options for production location at the time of the evaluation, in China, South Africa or Kenya. It was reported that India CO was pursuing independent production.

At the global level, a simplified analysis of *Giga*'s $32m investment and estimated 11 million children reached puts costs at just under $3 per child in terms of UNICEF costs up to 2024. It was not possible to disaggregate data by region. This does not take into account the significant external resources required to continue to scale and reach *Giga*'s ambitious aim to connect every school by 2030. For example, the Kenya Country Plan requires an investment of $124m upfront and $67m annual expenditure to connect 23,000 schools, potentially benefiting 8.5 million children; a simplified cost of $22.5 per child in Year 1 and $8 per year thereafter.

***Giga*'s scale was reported to have contributed to improved efficiencies through cost reduction strategies for last mile connectivity at national and regional levels**, including through innovative procurement mechanisms, cross-sector coordination and strategic partnerships. Participants reported that in Rwanda, UNICEF supported country-led procurements that achieved a 55 per cent reduction in internet costs compared to previous national benchmarks. Cost modelling and financial structuring tools developed by *Giga* were reported to have contributed to large-scale investments, such as the EU funding in Kenya and World Bank funding in Mozambique. *Giga*'s bulk procurement model, which aggregates demand across multiple countries, is being scaled in partnership with Smart Africa and United Nations Economic Commission for Africa (UNECA). The team also helped broker partnerships with mobile network providers (e.g., Airtel, Safaricom, Nokia), resulting in in-kind contributions and reported cost reductions. While difficult to quantify, *Giga* has also contributed to UNICEF's visibility and wider decision-making; for example, the *Giga* map has been shared and used beyond UNICEF staff, including by governments, the Broadband Commission and the GSM Association.

4.4 Scale and sustainability

Both *Giga* and *CFB* have achieved the 2021-25 Strategic Plan indicator of reaching over one million people and implementation in multiple countries, while *ADDA* is transitioning to scale with early replication

taking place in Ethiopia and South Africa. The following section describes the progress of each individual innovation in terms of expansion and wider adoption.

Since the successful implementation of *ADDA* in Malawi, the OoI has supported the exploration of several different models in different countries. The Venture Fund provided seed funding to Ethiopia CO to replicate *ADDA* as a similar campus-based programme, and to Niger CO to develop the programme as a Digital Public Good (DPG). A small core team responsible for *ADDA* transitioned from Malawi to the RO to support scale up efforts across countries.

ADDA Ethiopia completed its first intake of students, but in 2025 was on pause due to wider restructuring and uncertainty within UNICEF. South Africa CO expressed interest in launching its own version of *ADDA*, and an adapted high-school-focused model was implemented in the UAE, funded by the UAE government.[xv] Participants also cited examples of GIZ and the World Bank initiating similar programmes,[xvi,xvii] with initial interest in partnering with UNICEF. Although formal partnerships with UNICEF did not materialise, these cases reflect growing external buy-in and adoption of the model.

***ADDA*'s evolution highlights the long timeframes and iterative adaptation required for sustainability and scaling.** Initially conceived in 2016 as part of UNICEF's exploration of drone technologies for humanitarian response, the initiative lacked well-defined objectives and struggled to demonstrate clear outcomes for children. Over time, however, *ADDA* repositioned itself as a skills development and education initiative, responding to gaps in local labour markets and strong government interest in youth employment.[xviii] This shift, and related organisational and technical challenges, required significant time and capacity to resolve. While the model has since matured and demonstrated positive outcomes for trained individuals, *ADDA* Malawi continued to face systemic sustainability challenges in 2024.

The 2024 Malawi evaluation found that the model in Malawi did not offer sustainable revenue generation and a scalable business model. The main in-country partner, MUST, had limited capacity to independently manage and sustain the programme, and the evaluation recommended a multi-stakeholder governance structure with shared ownership. However, there were signs of progress since this evaluation. For example, it was reported that public servants from the Malawi Revenue Authority had received training directly from MUST based on the *ADDA* curriculum, which was paid for directly and delivered without UNICEF involvement. While anecdotal, this case indicates increased local ownership and revenue generation since the 2024 evaluation.

Following the 2024 evaluation, the *ADDA* team was actively reflecting on its future scaling strategy. A central consideration was the potential trade-offs between quality and quantity, and whether to primarily invest in the *ADDA* global DPG model (already approved), which would potentially be more scalable and less resource-intensive for UNICEF but also less controlled in terms of quality assurance and institutional value, or whether to maintain a hands-on, UNICEF-led approach. There was recognition that university and government integration was critical to enable longer-term sustainability and local ownership for both options.

For the *CFB*, the product successfully transitioned through UNICEF's five stage product innovation process to 'transition to scale' and has experienced widespread take up of the product, with implementation in 15 countries globally and over 1 million bowls procured. In ESAR, the bowl was implemented in Malawi, Mozambique, Madagascar, Uganda and Burundi, with all five countries adapting different elements of the bowl (food groups, colours and descriptions) to ensure local relevance. Over

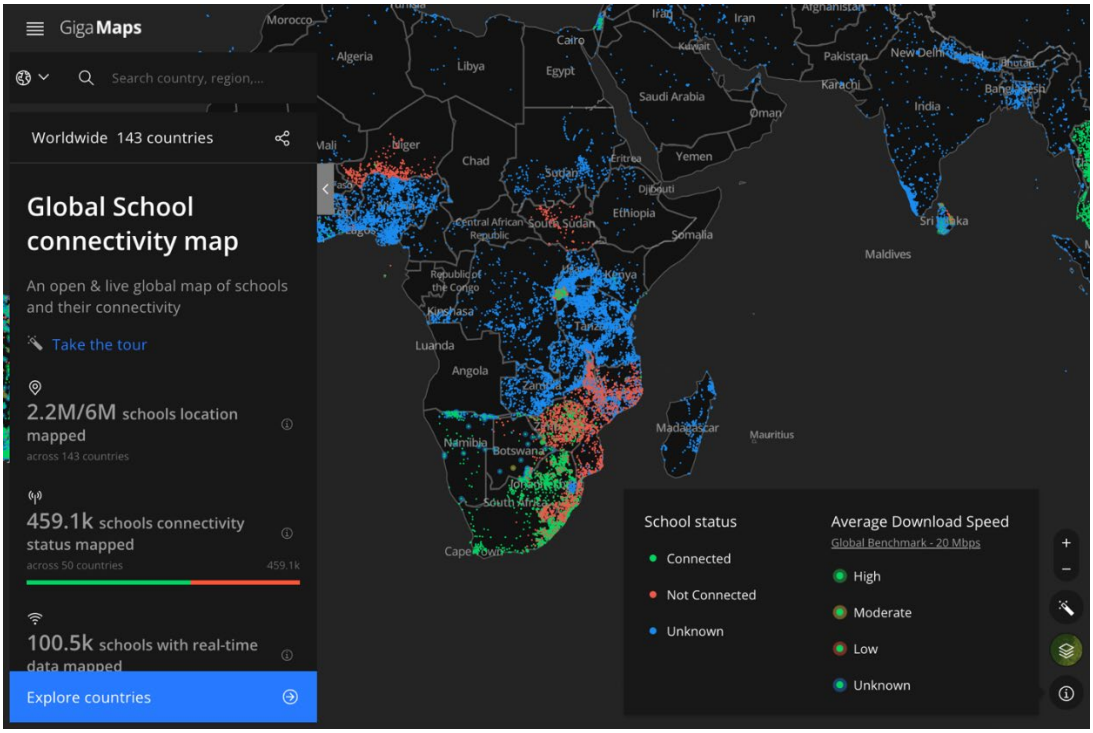
600,000 bowls have been distributed in ESAR, with notably high orders in Madagascar (283,376) and Malawi (217,500).

While there have been multiple examples of follow-up procurement of additional bowls following the initial pilot (typically 20,000 bowls) this has primarily been UNICEF-funded. However, in Madagascar, the government placed an order for 260,000 bowls, using World Bank funding, to distribute as part of its national IYCF programme. Involvement and coordination with the government and National IYCF Task Force during the pilot, early buy-in and government recognition of nutrition as a key problem and priority, was reported to have helped enable government investment. Lessons learned from this success story could be utilised by other countries, but constrained government budgets and funding availability continue to be a limiting factor. In terms of production, there were reports of India CO exploring independent production, with technical support from the team in HQ, indicating potential pathways to more local ownership and production.

Like *ADDA*, stakeholders commented on the importance of bottom up, demand-driven scale up. One participant said the primary goal was not to scale, but to "strengthen programming so that we respond to barriers", as a product that is deeply embedded into IYCF programming by design. Long-term sustainability was conceptualised as contextually relevant systems integration, rather than number of bowls distributed.

***Giga* has expanded significantly both globally and in ESAR.** The school mapping covers 142 countries worldwide and 16 of 21 countries in ESAR. Over 149,000 schools have been mapped in ESAR. At the time of the evaluation, approximately 40 per cent of these schools had a known connectivity status (connected or not connected), with most reliable data in Rwanda, South Africa, South Sudan and Zimbabwe. The mapping has been used in UNICEF COs, but also widely by governments and private sector partners to support decision-making and mobilise resources for connectivity road mapping and associated infrastructure. Figure 2 depicts the ESAR school mapping available in July 2025.

Figure 2: Screenshot of Giga School Connectivity Map, 7 July 2025



In addition to the school mapping and connectivity monitoring, the *Giga* team has supported over 14 countries with procurement and financial support, including Botswana, Kenya and Rwanda in ESAR. COs have worked closely with governments, with government ownership and leadership built into *Giga*'s country level governance structures. For example, in Kenya, the *Giga* Steering Committee is chaired by the Ministry of Information and Communication Technology (ICT) and the Ministry of Education. This strong government involvement has led to concrete commitments and resource mobilisation which is reported to have "opened up government infrastructure for last mile school connectivity", enabling schools to connect to the internet at "substantially lowered costs".[xix] For schools unable to access government infrastructure, *Giga* collaborated with private sector partners to enable connectivity at mutually acceptable rates. This low-cost connectivity is thought to improve the potential sustainability of the programme. It was also noted that the significant digitalisation of government services in countries like Kenya in recent years contributes to the significant need and demand for *Giga*. COs have worked with governments to explore the use of connected schools as community connectivity hubs in order to enable wider access to critical government information and services, which also contributes to potential sustainability.

Stakeholders commented that while the support from UNICEF so far has been important, *Giga* now needs to transition more fully to government ownership and away from UNICEF funding. One stakeholder commented that UNICEF's primary role going forward should be as a convener sharing knowledge and experience. The scale-up of *Giga* also serves as an enabler for further innovation, with stakeholders commenting that it has put countries in a strong position to "experiment with other edtech solutions" and "laid the groundwork for the integration of digital [solutions] into policies and cross-sector collaboration".

5 Enabling and hindering factors

A range of enabling and hindering factors emerged from this case study, as detailed in Table 3. This section highlights those most strongly evidenced in the data and most relevant to the global evaluation findings, rather than providing an exhaustive list. While the majority of these factors were most relevant to scaling efforts, some also applied to earlier innovation stages. The relevance to different stages of innovation is described within each example.

Table 3: Enabling and hindering factors to innovation from the case study examples

Enabling factors	*ADDA*	*CFB*	*Giga*	Hindering factors	*ADDA*	*CFB*	*Giga*
Government partnership and buy-in	X	X	X	Inflexible contracting and procurement systems	X		X
External collaboration and partnerships	X	X	X	National regulatory frameworks	X		X
Senior leadership support	X	X	X	Financial constraints and donor dependency	X	X	X
Local ownership, contextualisation and adaptation	X	X	X	Overstretched internal capacity		X	X
Problem-driven demand	X	X					
Knowledge documentation and sharing		X					
Evidence-based approach	X	X					

5.1 Enabling factors

The expansion of all three initiatives has been enabled by strong government alignment and support. All three included early, strategic and deep government engagement, which has been a key enabler for scaling. This was most evident in the case of *Giga*, where improved connectivity was a high priority and closely aligned with national digital transformation and education strategies. The initiative also enjoyed strong government leadership and endorsement, as well as multi-agency collaboration, all of which helped mobilise government resources. Strong government interest and partnership was also a key enabling factor to the scale up of the *CFB* in Madagascar, with direct government procurement of the product, enabled by the government's prioritisation of IYCF in the country, and buy-in to the *CFB*'s potential. Local adaptation of the bowl and a pilot of 10,000 UNICEF-funded bowls was coordinated with the government and multi-agency National IYCF Task Force, which supported buy-in. For *ADDA*, the initiative aligned well with the Malawi government's interest in innovative programmes and establishment of the Department of Innovation and Creativity in 2021. The *ADDA* team worked closely with government departments, such as the Department of Civil Aviation, at the outset to develop the regulatory environment needed to enable success. For both *Giga* and *ADDA*,

the context of the COVID-19 pandemic catalysed political will for digital solutions, driving momentum and support for these initiatives.

Similarly, wider partnerships with universities, donors and INGOs have supported success. *ADDA*'s partnership with Virginia Tech and MUST was critical to developing a high quality, technically sound programme. For *CFB*, collaboration with Emory University, the National IYCF Task Force in Madagascar, and partnerships with WFP and LEGO have supported the design, resourcing and scale-up of the product. For *Giga*, the UNICEF-International Telecommunication Union (ITU) collaboration helped build government relationships with different ministries, and partnerships with financial institutions and the private sector have supported cost reduction and scale-up.

Senior leadership support was identified as a key enabler across all three initiatives, with the support of senior 'champions' at different levels of the organisation driving prioritisation, funding and scale-up. As a country-led innovation, CO senior leadership support for *ADDA* enabled the design, development and funding of the initial idea, and RO leadership supported continued iteration and early replication in other countries, with resourcing for dedicated RO staff to lead on scale-up. For *Giga*, high-level organisational support enabled significant resource allocation to expand *Giga* globally. Senior leadership support was also a key enabler to creating a culture of innovation at the country level, which was particularly key in Malawi, with support for experimentation and openness to risk-taking and potential failures and ensuring sufficient allocation of resources for internal capacities and dedicated staff time.

Local ownership, contextualisation and adaptation of the solution was identified as important for success. *ADDA* was conceptualised and led at the country level. Based on learning since its initial conceptualisation in 2016, adaptations were made to *ADDA* to improve alignment with the needs of the government and the national context and young people in Malawi. As of 2023, *ADDA* transitioned to local custodianship, with MUST as the lead implementer, which was reported to have supported the development of a broader national ecosystem in support of the innovation.[xx] National government ownership of *Giga* and integration with national strategies, policies and context have also been critical to success and scale-up. For *CFB* a number of countries adapted the bowl to the local context, which was reported to support relevance and uptake, though participants noted that in some locations, local manufacturing would be a further improvement. As initiatives expand or replicate across countries and regions, local ownership and contextual adaptation are particularly important; the same solution will not necessarily be viable or achieve the same outcomes in a different context.

Several other factors, including problem-driven demand, mechanisms for internal knowledge sharing and evidence-based approaches have also supported scale-up, which aligns with the 5D Framework 'scalability' requirements for adaptability, evidence and a proven need. As with all the factors outlined in this section, the absence of these factors is likely to hinder innovation.

5.2 Hindering factors

Innovation initiatives largely operate within UNICEF's existing contracting and procurement structures, particularly for innovations funded and led outside OoI-led approaches, which was highlighted by multiple stakeholders as a hindering factor, requiring significant staff time and complicated workarounds. UNICEF's systems are designed for traditional programming and often require detailed terms of reference and competitive tendering, which can be a constraint due to the

adaptive and evolving nature of partnerships required for innovation. One participant described the difficulty of contracting private sector partners when the end product of a co-design process is not yet defined. While OoI has developed some tools and processes that offer more flexibility within its innovation funding streams, participants noted that CO-led innovations (such as *ADDA* Malawi) typically rely on standard procedures that are not well designed to support risk-taking, agility and collaborative models and were said to risk undermining momentum and trust with partners. This presents a hindering factor to initial conceptualisation and implementation, but also to scaling, as innovations are adapted in new contexts.

External to UNICEF, national regulatory frameworks were also identified as a hindering factor that added time and complexity for all three initiatives. *ADDA* faced challenges with drone regulations in Malawi, which resulted in uncertainty and delays, and required significant staff time to work with the government and create the underlying enabling environment for the programme. *Giga* has also experienced fragmented or conflicting regulatory frameworks in different countries. This highlights the need to consider the wider systems change needed for a project and factoring in the real costs of these as part of the innovation process.

Financial sustainability emerged as a hindering factor across all three initiatives, with continued dependency on UNICEF funding and limited long term financial planning or sustainable business models. For *CFB*, the cost of the bowl and spoon remains prohibitive for some COs, particularly in the context of global funding cuts, and there remain several barriers to local production. While the Madagascar case highlights the potential for governments to find other sources of funding to procure bowls, other countries face constrained government budgets and remain dependent on UNICEF funding for continued procurement. Financial sustainability was identified in the 2024 *ADDA* initiative as a key hindering factor and risk for the programme, with expensive partnership agreements and running costs in Malawi. *Giga* has also faced challenges mobilising resources in some contexts. For example, in Botswana, as an upper-middle income country, mobilising external donor support is a challenge even where there are demonstrated needs. *Giga*'s Country Plans highlight the significant resources needed to connect every school by 2030 (e.g., in Kenya, $124 million of capital expenditure and $67 million of annual operating expenditure funding is needed).

Both *CFB* and *Giga* have faced growing demand and scale up while relying on fairly limited internal human resources. Staff are faced with additional responsibilities as more countries have come on board, which affects time and capacity for quality technical support, monitoring and evaluation and stakeholder engagement. More generally, staff also flagged the reliance on individuals for innovation initiatives and individual leaders 'championing' and enabling innovation in general, with staff turnover presenting a significant risk to innovation efforts and the culture of innovation.

6 Concluding achievements and challenges

The three initiatives explored in this case study demonstrate successful innovation development, implementation and scale up. *ADDA* successfully established a drone and data education programme in Malawi, training over 1,300 graduates, achieving a post-graduation employment rate of 80 per cent, and expanding to Ethiopia and South Africa. The *CFB* demonstrated effective contribution to increased meal frequency and mean weight in Uganda, and has scaled to more than 15 countries, with over 1 million bowls procured, including government procurement in Madagascar of 260,000 bowls. *Giga* has achieved notable global reach, mapping schools in 142 countries and providing increased access to connectivity to an estimated 11 million children worldwide, with strong implementation across three ESAR countries.

The case study highlights the critical importance of government partnership and local ownership as enabling factors. Strong government alignment and buy-in enabled success across all initiatives, with COVID-19 catalysing political will for digital solutions (*ADDA* and *Giga*). Overall, though the innovations were different in terms of the type of solution, implementation approaches and current scale, several patterns emerged as key enabling factors for scaling, including government and wider stakeholder ownership, which supported legitimacy, demand and local relevance; internal UNICEF capacity and expertise to provide tailored support, build partnerships, generate evidence and learning and enable evidence-based iteration; and ensuring a genuinely contextualised, problem-driven and demand-driven approach to wider adoption.

A tension between depth of impact and breadth of reach when scaling was particularly highlighted by the *ADDA* example, raising important questions for UNICEF in terms of its scaling ambition and prioritisation and the trade-offs between cost, reach and impact. *ADDA* highlights an example of a high-cost, intensive initiative that has potentially transformative and "life-changing" impacts on individual graduates but is not itself readily scalable to reach high numbers of young people. On the other hand, *Giga* represents an example of a global initiative with large scale reach, but that offers potentially limited direct outcomes for children in and of itself (without complementary initiatives in teaching, curriculum, etc.). As an innovation that functions primarily as an enabler to improved education and equity, further evidence is needed to demonstrate the extent to which *Giga* has contributed to learning outcomes and UNICEF's core mandate.

A.1 Documents reviewed

Regional and CO documents

- UNICEF. 2023. *Country Office Annual Report 2023 – Malawi.*
- UNICEF. 2023. *Country programme document: Malawi.*
- UNICEF. 2024. *Malawi Annual Management Plan 2024.*

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A.2 List of people consulted

Organisation	Role
UNICEF	*ADDA* Lead / Impact YOMA
UNICEF	Early Childhood and Maternal Nutrition Lead
UNICEF	Education Officer
UNICEF	Education Specialist
UNICEF	Innovation Manager
UNICEF	Innovation Specialist
UNICEF	Nutrition Innovation Specialist
UNICEF	Nutritionist
UNICEF	Nutrition Specialist
UNICEF	Programme Manager
UNICEF	Senior Programme Manager

1 Endnotes

[i] Evaluation Office, *Evaluation of Innovation in UNICEF's Work* (New York: UNICEF, 2019).

[ii] This evaluation took place during a time of significant organisational change for UNICEF. The availability of country staff was consequently affected by concurrent strategic planning, restructuring and downsizing processes associated with the restricted funding context and the Future Forward Initiative.

[iii] ALNAP is a global network to advance humanitarian learning.

[iv] Economic and Social Council at the United Nations. 2023. *Revised Evaluation Policy at UNICEF.*

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[vii] UNICEF, East and Southern Africa, What we do

[viii] UNICEF, East and Southern Africa, Annual Report (2024)

[ix] UNICEF, Transparency tool, 2024

[x] *Giga.* 2025. 2024 Annual Report

[xi] UNICEF. 2018. *Raising learning outcomes: The opportunities and challenges of ICT for learning.*

[xii] Total budget spent 2021-23: [$1,911,163.74] divided by Total graduates 2021-23: [1,345] = [$1,421] per graduate. Source of numerical figures: UNICEF, 2024, Formative evaluation of the African Drone and Data Academy (*ADDA*) as a case study to enhance the Youth and Learning Innovations portfolio in Malawi (2019-2023).

[xiii] UNICEF. 2024. *Formative Evaluation of The African Drone and Data Academy (ADDA).*

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[xv] UNICEF. 2025. *A2RL and DCL drone stem program equip 100 UAE students with future-ready skills:* https://www.unicef.org/gulf/press-releases/unicef-a2rl-dcl-drone-stem-program-equip-100-uae-students-future-ready-skills

[xvi] For example, GIZ Triangular Cooperation for Digital Innovation "Made in Africa", which includes building skills and national ecosystem for drones and data: https://www.giz.de/en/downloads/giz2025-en-digitale-innovation.pdf.

[xvii] "… opportunity to boost the local drone ecosystem in Nepal and build sustainable capacity for drone pilots, analysts, engineers and entrepreneurs, a model that has shown promising results in Africa through the African Drone and Data Academy, supported by UNICEF. As a result, the World Bank, with grant funding provided by the Korean World Bank Partnership Facility (KWPF), is engaging with the government, the private sector, academia, and local drone experts to better understand how it can support Nepal's burgeoning drone ecosystem and build sustainable capacity." World Bank, 2023, Drones, Reaching New Heights in Nepal's Fight Against Climate Change: https://www.worldbank.org/en/news/feature/2023/07/26/drones-reaching-new-heights-in-nepals-fight-against-climate-change

[xviii] UNICEF. 2019. *Drones for Delivering Results for Children.*

[xix] Case study interviews

[xx] The 2024 evaluation of *ADDA* stated that "Key actors like MUST and the Government of Malawi have strengthened their implementation and regulatory support, embedding *ADDA* programs into academic structures and setting up necessary frameworks for drone operations." (Formative Evaluation of The African Drone and Data Academy (*ADDA*), 2024)

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For further information, please contact:

UNICEF
Evaluation Office
3 United Nations Plaza
New York, NY 10017
USA

www.unicef.org/evaluation
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@unicef-evaluation.bsky.social
@UNICEFEval
Evaluation YouTube channel
evalhelp@unicef.org

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