

LEVERAGING HUMAN-CENTERED DESIGN TO STRENGTHEN SUPPORT FOR VULNERABLE CHILDREN IN NIGERIA'S NATIONAL HOMEGROWN SCHOOL FEEDING PROGRAMME

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Approximately **11 million** Nigerian children, or **one-third** of the population, experience severe child food poverty, significantly increasing their risk of malnutrition, including a **50%** higher likelihood of wasting (UNICEF, 2024).

This mirrors a wider global issue, with 66 million children in low- and middle-income countries, including 23 million in Africa, attending school hungry every day (Bekri et al., 2023). Addressing this urgent crisis requires social protection interventions that combat child hunger and improve nutrition outcomes, such as school feeding programmes.

Nigeria's National Home-Grown School Feeding Programme (NHGSFP) is a significant social safety net initiative in Nigeria, designed to address child hunger and malnutrition while enhancing health and educational outcomes (Jacob and Abubakar, 2021). By providing nutritious meals to schoolchildren, the programme aims to improve their well-being and educational engagement, serving as a crucial element of Nigeria's social protection framework.



1 in 3 Nigerian children experience severe child food poverty



Wasting is up to 50% more likely in children experiencing severe food poverty

Despite its successes, the NHGSFP faces challenges that limit its impact. Inadequate funding is a major issue, compounded by economic difficulties. Even with the increase from ₦70 (44 cents) to ₦100 (63 cents) per child, the rising inflation makes it difficult to provide the envisioned quality of meals (Lawal, 2024). Other barriers and complications include corruption, poor coordination between federal and state governments, delays in fund disbursement, and regional insecurity. Additionally, a lack of reliable data hinders effective planning and monitoring (Bambi and Angyu, 2022).

Human-Centered Design (HCD) offers a promising approach to overcoming the challenges that hinder the reach and impact of the NHGSFP. By leveraging the valuable perspectives of children, families, and communities, HCD can enable the development of more targeted and sustainable solutions that can propel the programme into the future. In this brief, we explore an example of how GAIN's HCD Toolkit for Nutrition-Sensitive Social Protection was used to catalyse innovative ideas in Nigeria's NHGSFP, and present a policy roadmap for further mainstreaming the application of HCD across the social protection sector in Nigeria.

Background on Nigeria's National Home-Grown School Feeding Programme

The NHGSFP is a pivotal initiative in Nigeria's strategy to address child malnutrition and enhance educational outcomes. By providing a daily nutritious meal to primary school children, the programme tackles both hunger and low school enrolment. The government fully funds the programme, directly supporting schools to prepare and serve meals to students. Initially set at ₦70 (44 cents) per meal, the provision was increased to ₦100 (63 cents) to better manage rising food and logistics costs (Okechukwu, 2024)

The programme was initially launched as a pilot initiative in September 2005 by then-President Olusegun Obasanjo with the objective of alleviating hunger and improving educational outcomes (Bambi and Angyu, 2022). Despite its potential, it encountered challenges related to inadequate funding and management, resulting in its discontinuation in most states by 2008 (Musliudeen, 2017).

In 2016, the Federal Government reintroduced a restructured NHGSFP. The revised programme aimed to provide nutritious meals while also stimulating local economies by sourcing food from smallholder farmers. This approach not only addressed immediate nutritional needs but also integrated agricultural development with school feeding, thereby promoting economic growth at the grassroots level (Olawale and Okafor, 2022)

Since its relaunch in 2016, the NHGSFP quickly achieved significant success, serving over 300 million meals to more than 7.5 million children in grades 1 to 3 across 46,000 government schools by 2017. This achievement has contributed to reduced hunger and improved school enrolment and retention rates (Action Health Incorporated, 2018).

The programme also has had significant economic impacts. By sourcing food locally, it has supported smallholder farmers, boosting agricultural production and income. Additionally, it has created jobs in catering, food processing, and supply chain management, stimulating local economies and generating broader economic benefits within participating communities (Giunti et al., 2022).



Human-Centered Design (HCD) Principles and GAIN's HCD Toolkit



Figure 1: GAIN's Human-Centered Design (HCD) Toolkit for Nutrition-Sensitive Social Protection

Human-Centered Design (HCD) focuses on understanding and addressing the needs and experiences of end-users. It involves engaging with users to gain empathy, actively involving them in the design process, and using iterative cycles of prototyping and feedback to refine solutions. The approach ensures that designs are contextually relevant, sustainable, and tailored to the specific challenges users face.

GAIN's Human-Centered Design (HCD) Toolkit for Nutrition-Sensitive Social Protection¹ (Figure 1) is designed to enhance the application of these

principles in nutrition-sensitive social protection (NSSP) programmes. The Toolkit aims to improve social protection systems by making them more responsive to the needs of vulnerable populations, particularly women and children experiencing extreme poverty. It aligns with GAIN's commitment to gender sensitivity, sustainability, and climate-awareness, with a strong focus on human-centeredness.

The Toolkit offers practical guidance for implementing HCD principles, including through structured pathways called Journeys. These Journeys guide users through processes such as advocating for nutrition wins, building new nutrition-specific features, and fixing existing programme elements to

enhance nutrition outcomes. The Toolkit also includes Activity Cards detailing customizable activities and Guidance for Facilitators to support effective planning and execution of HCD processes.

In Nigeria, GAIN used the HCD Toolkit to support ongoing work to improve the design of nutrition-sensitive social protection programmes in the country. The roll-out in Nigeria was undertaken strategically to enhance the capacity of social protection practitioners, administrators, and other system actors to apply HCD principles in the design of nutrition-sensitive social protection programmes. The primary objective was to improve the effectiveness of these programmes, particularly the HGSFP, in addressing the nutritional needs of vulnerable populations, especially women and children in extreme poverty.

Process Overview

In May 2024, the HCD process was implemented across three locations: Kaduna State, Kebbi State, and the Federal Capital Territory (FCT). The process was divided into the four phases of GAIN's HCD Toolkit—**Plan**, **Listen**, **Ideate**, and **Test**—each designed to guide participants through the steps of understanding, designing, and implementing user-centred solutions for the HGSFP.

¹ The Toolkit is available for download here: <https://www.gainhealth.org/human-centered-design-hcd-toolkit>

PLAN

This phase focused on setting goals, identifying team members, and developing timelines. Participants began by analysing the existing HGSFP system, selecting the most relevant design ‘Journey’ for their goals, and establishing a timeline for the entire process. Tools such as the Rose, Bud, and Thorn and journey selection were used during this phase to facilitate critical thinking around the programme’s successes, opportunities, and challenges, ensuring the process was tailored to their specific goals.



Figure 2: Outputs from the “Plan” phase of the HCD process

LISTEN

In this phase, participants engaged directly with the beneficiaries of social protection programmes to understand their needs and challenges. Activities included systemigram mapping to visualize the NHGSFP’s interconnected elements; conducting interviews with teachers, cooks, students, and farmers; and synthesizing the findings. A problem tree analysis was also conducted to identify root causes of the challenges within the HGSFP.



Figure 3: (left) participants interviewing children in Kebbi; (right) participants creating a ‘systemigram’ in FCT

IDEATE

This phase focused on brainstorming and developing solutions based on the insights gained in the Listen phase. Participants used creative tools like Future Headlines, which helped them envision successful outcomes by imagining where they want the programme to be in 20 years’ time. Additionally, the Round Robin tool facilitated group ideation by allowing participants to collaboratively generate and build on ideas. After prioritising the most promising concepts, participants created storyboards to visualise the proposed solutions.



Figure 4: Examples of ‘Ideate’ phase activities.

TEST

In the final phase, participants were expected to develop simple prototypes of their solutions and test them with the intended recipients. Feedback was gathered during this process, allowing for iterative refinements to ensure the solutions were both practical and effective.

The centrepiece of the process in each state was an interactive workshop, which featured field testing with real beneficiaries, collaborative design exercises, and daily evaluations. The process involved a diverse group of stakeholders:

- **HGSFP Stakeholders:** Government officials and members of the multisectoral team overseeing the HGSFP.
- **Aggregators and Farmers:** Representatives from the Poultry Association of Nigeria (PAN) and smallholder farmers.
- **Community Members:** Teachers, cooks, students, and other beneficiaries of the HGSFP.
- **Relevant MDAs:** Ministries, Departments, and Agencies involved in school feeding and social protection programmes.



Figure 5: Stakeholders engaged in HCD processes in FCT, Kaduna, and Kebbi states.

Key findings and takeaways from the HCD process

Effectiveness and engagement: The HCD toolkit testing process was both effective and engaging, with participants actively involved in addressing real-world challenges. The hands-on approach fostered a deep connection to the problems and solutions, enhancing the overall impact of the process. The methodology proved successful in developing practical and innovative solutions tailored to participants' needs.

Successes and challenges: In all three states, the HCD process successfully engaged multilateral stakeholders, facilitated direct interaction with programme beneficiaries, and yielded critical insights that can be used to improve design and delivery of the programme. A notable success was the FCT team's ability to develop a prototype monitoring and evaluation (M&E) solution that addressed specific local challenges. This outcome underlines the toolkit's effectiveness in translating insights into tangible results. However, not all states were able to take their prototypes to fruition in the allotted time frame, signaling a need for continued design efforts amongst those stakeholders.

Participants feedback and insights: From the feedback survey, it was clear that participants expressed enthusiasm for several aspects of the process, a few verbatim comments on the survey include:

"If I come across any problem on my project, I can quickly look for solutions using the tool."

"I like the interview/ interview synthesis tool, because we got to engage directly with the students, to hear from them firsthand."

However, though participants loved the Systemigram, they also noted that it was the most challenging aspect. In their words, they noted that:

"Systemigram was most challenging because it takes a lot of time to understand."

"The Systemigram was most challenging because it involves different and many sectors in the programme."

Regarding the expected benefits from the HCD process, participants observed that:

"It will help in designing feasible and impactful methods/strategies to solutions. It will also help in simplifying one-to-one relationships."

"Effective M&E reporting and feedback mechanisms in NHGSFP to build solutions based on end-user needs and perspectives."

Facilitators also provided feedback, noting several positive impacts of the process. As one facilitator put it, *"The process helped participants gain a better understanding of the social protection system and its real challenges and solutions. When implemented, this approach has the potential to significantly enhance the outcomes of the National Home-Grown School Feeding Programme in the targeted states"*.

Each state embarked on a unique design journey, starting from different points and shaped by the distinct contexts and priorities of their regions. Despite these variations, all three states made meaningful progress by gaining valuable insights and developing solutions. In particular, Kaduna and Kebbi generated important learnings that have laid a strong foundation for future advancements. FCT, building on its journey, went further to successfully develop a prototype – an M&E solution specifically tailored to address its unique challenges. See the Pop-box below for further details.

Spotlight: FCT's M&E Solution

FCT's Success Story: Developing a Tailored M&E Solution

The FCT team's development of a prototype M&E solution was a standout achievement in the HCD toolkit testing process. This prototype specifically addressed the state's monitoring and evaluation challenges, demonstrating the potential of the HCD approach to produce actionable outcomes.

The FCT team's ability to translate insights from the HCD process into a practical solution was a game-changer," From the word of one of the participants, *"We now have a clear roadmap for improving our M&E processes, which we are eager to implement."*

This prototype not only serves as a model for other states but also illustrates how tailored solutions can be effectively developed and implemented through the HCD process.



HCD process outputs and next steps

The design process resulted in several impactful outputs and a notable prototype, each enhancing our understanding and improving the social protection systems. Key outputs include:

State specific system maps: Each state used the systemigram tool to create detailed visual maps of their Home-Grown School Feeding Programme (HGSFP). These maps enabled participants to visualize and analyze the intricate connections

within their social protection systems, highlighting areas for potential improvement and integration.

Insights into system dynamics: Through the Rose, Bud, and Thorn tool, states identified key aspects of their systems.

This reflective exercise provided states with a structured approach to assess their strengths and areas needing improvement.

Comprehensive M&E Prototype by FCT: The FCT team developed a detailed Monitoring and Evaluation (M&E) prototype tailored to streamline data collection and reporting. This prototype effectively addressed local M&E challenges and was accompanied by a robust action plan, including clear outcomes, actions, performance indicators, time, and resources required. This structured plan ensured that the FCT's prototype was not only actionable but also aligned with measurable outcomes, setting the stage for effective implementation and evaluation.



Envisaged Next Steps:

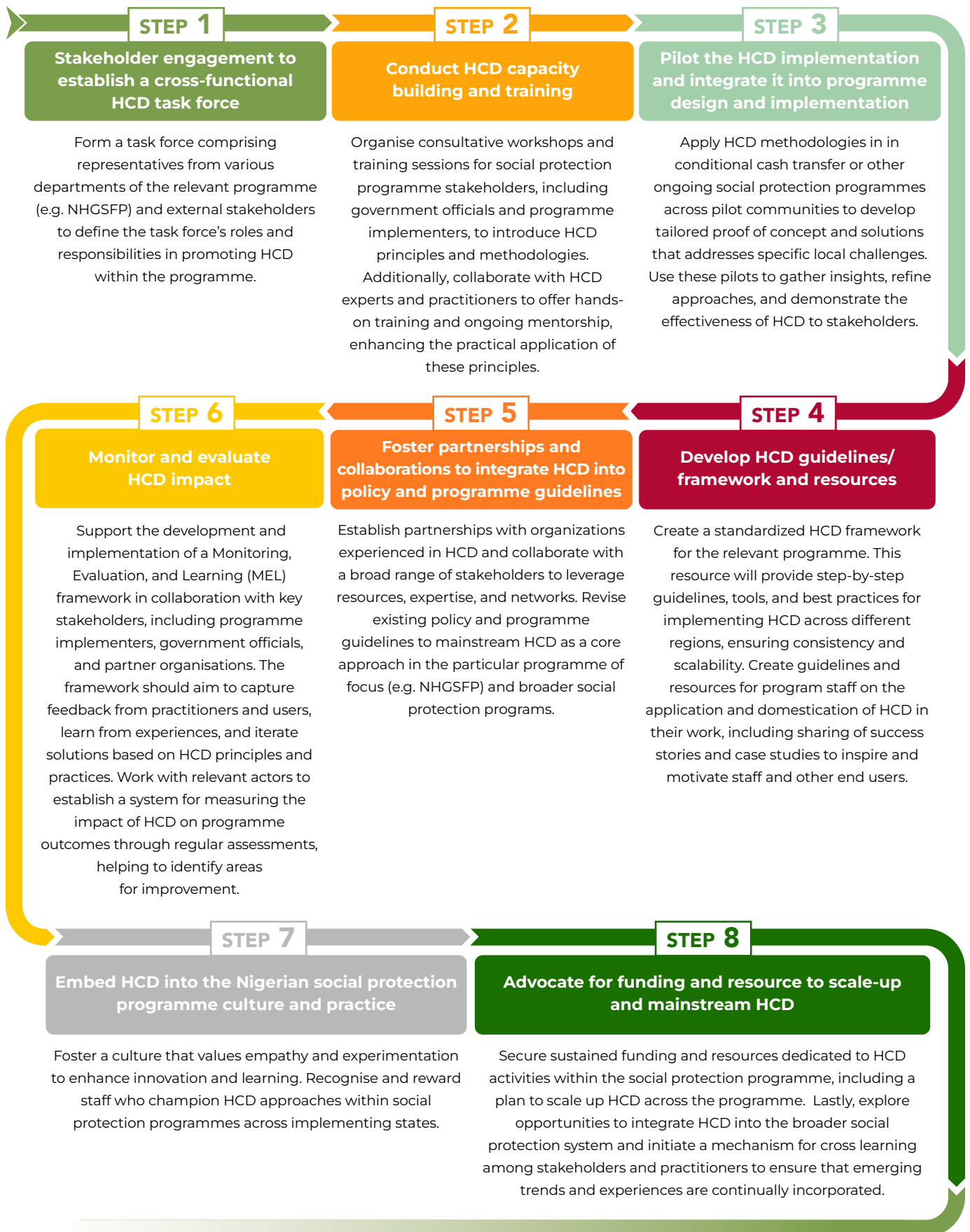
- **Implement recommendations:** Based on feedback, incorporate updates to the toolkit, including adjustments to the systemigram guidance and the addition of tools like Problem Tree Analysis.
- **Engage Aggregators and Farmers:** Expand the implementation of successful prototypes, such as the FCT M&E solution, across various contexts.
- **Explore future Innovations:** Build on the insights gained from the design process to explore new directions for social protection design, focusing on user-centered and actionable solutions.

A roadmap for mainstreaming human-centered design (HCD) in the social protection sector

The vision for integrating HCD into social protection programmes is to foster more responsive, adaptable, and inclusive systems that prioritize the lived experiences of those they serve. By embedding HCD principles into policy and implementation, social protection programmes can shift towards approaches that co-create solutions directly with communities, ensuring interventions are both effective and sustainable. This integration promotes innovation and empathy, making social protection systems more capable of addressing complex challenges while delivering impactful outcomes.

Consequently, based on specific field experience among key stakeholders across three states in Nigeria, 8 critical steps are recommended for the government in optimizing social protection outcomes through the HCD approach. These core recommendations detail processes on how HCD can be systematically embedded to enhance decision-making, programme design, and long-term success across social protection initiatives.





Call to action

- To enhance sustainable scale-up, the Nigerian NHGSFP critical stakeholders at all levels must collaborate to ensure that this vital component of the National Social Investment Programme deliberately supports initiatives prioritizing local homegrown meals in schools.
- In addition to optimizing nutritional outcomes, the Nigerian school feeding programme also promotes school enrolment and overall attendance rate since hungry children from vulnerable and base of the pyramid households are motivated to attend schools to have access to nutritious meals. Therefore, social protection efforts through school feeding initiatives are essential in promoting early child education and the attendant long-term developmental benefits.
- All levels of government and private sector leadership must endeavour to support efforts that promote regular and periodic increases of the NGHSFP budgets to enhance regular and nutritious diets for children.

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