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DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH

FINAL EVALUATION OF THE SCCIF-FUNDED PILOT PROJECTS IN KENYA AND UGANDA

Evaluation Report

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ABBREVIATIONS

DAC	Development Assistance Committee
EnDev	Energising Development project
EUR	Euro
KES	Kenyan Shilling
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
NGO	Non-governmental organisations
OECD	Organisation for Economic Co-operation and Development
RACI	Responsible, Accountable, Consulted, and Informed (matrix)
SACC	Savings and Credit Cooperative Organisation
SCC	Smart Communities Coalition
SCCIF	Smart Communities Coalition Innovation Fund
SRL	Società Cooperativa a Responsabilità Limitata (Cooperative Society with Limited Liability)
UGX	Ugandan Shilling
USD	United States Dollar
USG	United States government

0 Executive Summary

Context and objectives

The existence of **energy** markets in displacement setting is often overlooked, although displaced people around the world spend more than $1.6 billion a year to light their homes and cook their food. As a consequence, every dollar spent on better energy access generates between $1.40 and $1.70 in the form of employment, environmental benefits, productivity and time savings. Moreover, with access to electricity, displaced populations can feel safer at night, keep shops open after dusk and power their productive activities. Against this background the **Smart Communities Coalition Innovation Fund (SCCIF)**, managed by Energising Development (EnDev) and co-chaired by Mastercard and USAID, aimed at enhancing service delivery, economic empowerment and social integration for displaced populations, including refugees and host communities in East Africa. The fund was designed to address three strategic pillars energy, connectivity and digital tools to trigger a paradigm shift in humanitarian settings. Since the beginning of the SCCIF, seven awardees from Kenya and Uganda were selected from +50 eligible proposals. The awardees represented collaborative alliances between local Savings and Credit Co-Operative Societies (SACCOs), non-governmental organisations (NGOs) and renewable energy companies, as well as a different basic services such as e-mobility, internet connection and clean water.

GIZ commissioned Syspons to conduct the **Final Evaluation** of the SCCIF-funded pilot projects in Kenya and Uganda. The **objective** of the final evaluation was to systematically assess the fund and five selected pilot projects along the OECD-DAC criteria. At the same time, the analysis was also to focus on the potential scalability of the projects, their effects on employment creation and reduction of CO2 emissions as well as their adherence to the Do-No-Harm principle. Based on these results, the evaluation developed recommendations for the future development of the projects and for similar future projects.

The following **five SCCIF-funded pilot projects** were the object of this final evaluation:

1. **TryKE Group Limited: Sustainable E mobility solution**, implemented in the Nairobi and Kakuma-Kalobeyei settlement (Kenya)
2. **Infrastructure for Sustainable Development (I4SD): Digital Hub and E-Mobility**, implemented in the Rubondo area of the Nakivale Refugee Settlement (Uganda)
3. **Fenix International Uganda Limited trading as ENGIE Energy Access Uganda: Educational Access** Through Solar Solutions, implemented in the Adjumani, Kamwenge, and Kiryandongo refugee settlements (Uganda)
4. **PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming**, implemented in the Kiryandongo settlement (Uganda)
5. **Akvo International SMC Limited: Solar-Powered Water Kiosk**, implemented in the Rhino Camp (Uganda)

The evaluation was implemented between November 2024 and May 2025.

Methodology

In order to achieve the objectives of the evaluation, the evaluation team developed a special **evaluation design** tailored to the central aspects of the assignment. The evaluation was structured around the **OECD-DAC criteria** of relevance, effectiveness, efficiency, impact, and sustainability. To assess effectiveness and impact, this evaluation applied **Mayne's Contribution Analysis model**, a structured approach to

understanding causal linkages between interventions and observed outcomes. To analyse implementation efficiency, this evaluation used a **RACI** (Responsible, Accountable, Consulted, and Informed) matrix to systematically assess the clarity, distribution and execution of project roles and responsibilities. Recognizing SCCIF's nature as an innovation fund for pilot projects, this evaluation also paid particular attention to the innovative character and scalability of the solutions implemented by the awardees. In this context, **Rogers' Diffusion of Innovation Model** was used to understand how new ideas, technologies, or approaches were adopted and spread within target communities.

The **methods** used included a desk review of all available documentation, exploratory interviews, a Theory of Change workshop and an on-site evaluation mission to Kenya and Uganda. During the on-site visit, the evaluation team conducted **21 interviews and focus groups with +60 people** to collect data, as well as a hybrid debriefing workshop in Uganda to present and validate the preliminary findings with the GIZ teams and awardees.

Key findings

The final evaluation showed that the SCCIF and the SCCIF-funded pilot projects were highly relevant. The SCCIF addressed national priorities of the Kenyan and Ugandan governments, particularly in the areas of sustainable energy access and support for refugee and host communities. The use of solar-powered innovative solutions for basic service delivery and income generation aligned well with their policy frameworks and development goals. Residents of the refugee settlements and host communities confirmed the relevance of the interventions to their daily needs, especially in connectivity, sustainable mobility, clean water access, and livelihoods. At the same time, the SCCIF enabled the private sector actors selected as awardees of the fund to engage in challenging markets. Awardees were motivated by a range of incentives to expand their services to the refugee settlements and host communities, including commercial interests, institutional missions, and personal motivations. Therefore, the SCCIF provided a relevant mechanism that responded to the needs of governments, refugee settlements and host communities, and private sector participants alike.

The SCCIF successfully facilitated the temporary introduction of private sector-led, innovative solutions aimed at improving basic service delivery and enhancing economic opportunities for displaced populations and crisis-affected host communities – aligning with the fund's core objective (effectiveness). All pilot projects focused on deploying solar-powered innovations within refugee settlements and/or host communities. These included e-mobility services implemented by TryKE and I4SD; solar-powered poultry farming promoted by the consortium led by PHB; solar-powered water provision by Akvo; and solar home systems with adapted financing schemes provided by ENGIE. Furthermore, ENGIE and I4SD also integrated components targeting improved access to education. However, while all awardees succeeded in temporarily establishing their services and creating economic opportunities for the target groups, several awardees encountered **significant implementation challenges** that affected the continuity or timely establishment of their services. Therefore, **outcomes varied across projects**. Only the consortium led by PHB fully achieved the intended objectives, including the planned scale and functionality of their intervention. The other pilot projects implemented by TryKE, I4SD, ENGIE and Akvo demonstrated innovative potential but fell short of their intended outcomes due to contextual, operational, or institutional constraints.

The SCCIF has contributed, to some extent, to some of its intended impacts. The evaluation showed that the SCCIF has had positive long-term effects in **poverty alleviation, economic opportunities and resource mobilisation** (with a particular focus on **women**). But it was also clear that some innovative solutions were discontinued or paused and could not contribute to long-term effects. When looking at **low-carbon development paths**, it became evident that the SCCIF was also able, to some extent, to achieve long-term effects in refugee settlements and host communities, mostly in Uganda. The SCCIF also aimed at contributing to

long-term improvements of the **health** of the residents of refugee settlements and host communities. The evaluation identified positive effects on nutrition in Uganda. It is plausible that the SCCIF will contribute to further long-term effects on health if I4SD continues its activities and/or if Akvo inaugurates the water kiosk. The evaluation also focused on potential long-term contributions to the **education** of the residents in the refugee settlements and host communities. However, as for ENGIE, school fee loans played a minor role compared to the solar kits, only limited effects were identified.

The sustainability of the SCCIF-funded pilot projects varies considerably, shaped by contextual, operational, and institutional constraints. The evaluation showed that the innovative solutions presented by the pilot projects are most durable where local structures were effectively leveraged or embedded from the outset, for instance, in the partner structure. Importantly, sustainability challenges were not primarily linked to a lack of incentives (as target groups generally demonstrated a strong willingness to continue engaging with the services, especially where clear financial benefits were perceived) nor to an absence of ownership, with the notable exception of the ENGIE school fee loans and the Akvo pilot which was to select the local SACCO. Rather, it was the combination of internal and external challenges that interrupted or prevented service delivery, ultimately undermining the continuity of results. A notable example is the consortium of PHB, BrightLife, and the Yelekeni SACCO, where farmers have already expressed interest in expanding their operations, indicating both ownership and potential for scale.

The SCCIF piloted different innovative solutions for basic services in refugee and host communities in Kenya and Uganda, with varying degrees of efficiency. The pilot projects showed different levels of cost-efficiency that did not directly align with the budget distribution as some lower-budget projects were more cost-efficient than some higher-budget projects. The evaluation also showed that all SCCIF-funded pilot projects experienced delays in their implementation, and identified the procurement of equipment as main bottleneck. Finally, the evaluation team assessed the implementation efficiency at fund level. The implementation efficiency analysis highlighted that roles and responsibilities were clearly defined. Both Awardees and members of the GIZ project team expressed satisfaction with the overall structure, division of tasks, and procedural clarity throughout the implementation process.

To conclude, the SCCIF piloted a range of innovative solutions aimed at addressing specific challenges faced by refugee settlements and host communities in Kenya and Uganda. All the pilot projects leveraged solar energy as a central enabler for providing essential services, such as connectivity, sustainable mobility, and access to clean water. These innovative solutions were well-received by the target groups and succeeded in engaging a group of early adopters. However, several of the SCCIF-funded projects encountered significant challenges during implementation, such as: Issues with equipment quality, rapid growth that outpaced their capacity, diverging understanding among the Awardee and the SCC of the pilot project's innovation solution, and/or limited financial commitment from stakeholders. As a result, some of the innovations were discontinued, scaled back, or paused during the implementation. These experiences underscore the need for adjustments before they can be scaled to other regions or populations facing similar challenges. This reflects the nature of the SCCIF itself, which supports high-risk, innovative pilot projects in challenging contexts, where uncertainties and obstacles are inherent, but also offer valuable insights for future efforts.

Beyond the OECD-DAC criteria, the final evaluation of the SCCIF-funded pilot projects also revealed **important insights into how reporting, knowledge management, and learning processes** were approached in the SCCIF. In this regard, it became clear that although the templates provided for reporting were short and concise and provided a structured approach, reporting was inconsistent with limited quantitative data provided by the awardees. In addition, some Awardees expressed a strong interest in increased collaboration and exchange within the SCCIF –with GIZ as well as other Awardees –, for further learning and improvement in the implementation of their pilot projects in refugee settlements.

Recommendations for action

Based on the findings and analysis, the following eight recommendations for action are proposed.

Recommendation 1 'Innovation Fund': The Smart Communities Coalition Innovation Fund (SCCIF) has proven to be a relevant funding mechanism, and it is recommended that the fund be continued, either in its current form or in a similar format.

Recommendation 2 'Proposal – Time': Future pilot projects should consider enough time for procurement of their necessary equipment.

Recommendation 3 'Proposal – Budget': Future pilot projects should confirm the budgets for their planned activities when drafting their proposal.

Recommendation 4 'E-mobility': Future pilot projects on e-mobility should carefully select electric vehicles that are well-suited to the context and conditions in which they will operate. Furthermore, these projects should ensure the availability of the necessary spare parts.

Recommendation 5 'Partner structure': Future pilot projects should establish partnerships with local organisations from the outset of the pilot project design and implementation phase.

Recommendation 6 'Upscaling': Future pilot projects should carefully manage the scaling of their services facing growing demand, to ensure that technological capacity and financial re-sources are scaled in parallel.

Recommendation 7 'Reporting': With future pilot projects, the SCCIF should make sure that awardees submit complete and accurate reports of their pilot project activities and results.

Recommendation 8 'Exchange': With future pilot projects, the SCCIF should further support awardees, for in-stance, through joint brainstorming. The SCCIF should also further facilitate exchange among pilot projects.

1 Introduction

The existence of **energy** markets in displacement setting is often overlooked, although displaced people around the world spend more than $1.6 billion a year to light their homes and cook their food. As a consequence, every dollar spent on better energy access generates between $1.40 and $1.70 in the form of employment, environmental benefits, productivity and time savings. Moreover, with access to electricity, displaced populations can feel safer at night, keep shops open after dusk and power their productive activities.

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GIZ commissioned Syspons to conduct the **Final Evaluation** of the SCCIF-funded pilot projects in Kenya and Uganda. The **objective** of the final evaluation was to systematically assess the fund and five selected pilot projects along the OECD-DAC criteria relevance, effectiveness, efficiency, impact and sustainability. At the same time, the analysis was also to focus on the potential scalability of the projects, their effects on employment creation and reduction of CO2 emissions as well as their adherence to the Do-No-Harm principle. Based on these results, the evaluation developed recommendations for the future development of the projects and for similar future projects. The evaluation was implemented between November 2024 and April 2025.

This evaluation report showcases the findings of this evaluation. It outlines the objectives of the assignment as well as the methodological approach for analysis and reporting. Then, it depicts the findings, following the OECD-DAC criteria and additional questions, as well as conclusions and recommendations. As annexes, it includes a list of the documents that were consulted, the analysis grid, the list of interviewees and participants of focus group discussions, and the interview guides.

2 Object of the Evaluation

The **Energising Development (EnDev)** project is a multi-donor partnership dedicated to expanding access to modern energy services globally. Since its launch in 2005, EnDev has focused on providing modern energy services to low-income households, social institutions, and small businesses, aiming to improve economic opportunities, social well-being, and environmental sustainability. It employs an outcome- and performance-based approach, pioneering innovative market-driven solutions and supporting the scaling of clean energy technologies. EnDev is currently funded by the governments of the Netherlands, Germany, Norway, and Switzerland, with additional support from the European Union, IKEA Foundation, IrishAid, the Korea Foundation for International Healthcare (KOFIH), and USAID. The project is jointly managed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Netherlands Enterprise Agency (RVO).

The **Smart Communities Coalition (SCC)** is a public-private partnership co-chaired by Mastercard and USAID, with over 60 members. It focused on transforming the humanitarian model by empowering host communities and the private sector to drive positive change in refugee settings. It brings together stakeholders based on their core expertise to focus on three strategic pillars: energy, connectivity, and digital tools. The objective of the SCC is: To establish innovative and sustainable approaches to basic service delivery, enhancing economic opportunities and future prospects for refugees and host communities.

In this framework, the SCC launched the **Smart Communities Coalition Innovation Fund (SCCIF)**. The **objective** of the SCCIF is that private sector-led innovative solutions are brought to displaced populations and crisis-affected host communities in East Africa. The fund aims to do so by following the SCC's three **strategic pillars** to trigger a paradigm shift in humanitarian settings: Energy – off-grid, renewable electricity and cooking (Pillar 1); Connectivity – hardware and communication devices (pillar 2); and Digital tools – information and communication (Pillar 3). The fund operates through Calls for Proposals, allowing applicants to target at least one of the three pillars while focusing on specific geographic or thematic areas. At the same time, SCCIF emphasizes **innovation**, encouraging new technological and partnership solutions; **scalability**, expanding successful initiatives; and **partnerships**, leveraging multi-stakeholder expertise. It prioritizes sustainability, aiming for long-term impact, and job creation, promoting employment opportunities for target communities. SCCIF also adheres to the "Do-No-Harm" principle to ensure ethical and responsible implementation practices. EnDev manages the SCCIF to ensure effective fund disbursement, project monitoring, and impact assessment. EnDev also integrates the SCCIF within its broader energy access program, leveraging its expertise in market-based approaches, private sector engagement, and sustainable development models.

As depicted in the Theory of Change in Figure 1, by enabling relevant local stakeholders to integrate the private sector-led innovative solutions into their local systems, the SCCIF aims to contribute to the overall objective of the SCC. At the same time, the SCCIF was also to contribute to **EnDev objectives** at outcome level, namely an improved access to affordable, reliable, sustainable and modern energy (Sustainable Development Goal 7), the creation of job opportunities and to economic development (SDG 8), the transition towards clean and renewable energies, to reduce greenhouse gas emissions and combat climate change (SDG 13 and Paris Agreement), and social cohesion between refugees and host communities.

The following **five SCCIF-funded pilot projects** are the object of this final evaluation:

Table 1: List of SCCIF-funded pilot projects (part of the evaluation)

#	Location	Awardee	Project
Kenya			
1	Nairobi and Kakuma-Kalobeyei settlement	TryKE Group Limited (here: TryKE) (previously: Solar E-Cycle Limited)	Sustainable E mobility solution
Uganda			
2	Kiryandongo settlement	PHB Development Società a Responsabilità Limitata (SRL[1]), Bright Life and Yelekeni Farmer SACCO[2] (here: PHB, Bright Life and Yelekeni SACCO)	Solar-Powered Poultry Farming
3	Rubondo area of Nakivale Refugee Settlement	Infrastructure for Sustainable Development (I4SD)	Digital Hub and E-Mobility
4	Adjumani, Kamwenge, and Kiryandongo refugee settlements	Fenix International Uganda Limited trading	Educational Access Through Solar Solutions

[1] S.C.R.L. stands for Società Cooperativa a Responsabilità Limitata, which translates to Cooperative Society with Limited Liability.
[2] Savings and Credit Cooperative Organisation (SACCO)

		as ENGIE Energy Access Uganda (here: ENGIE)	
5	Rhino Camp	Akvo International SMC Limited (here: Akvo)	Solar-Powered Water Kiosk

The **Sustainable E-mobility solution** project conducted by TryKE aimed to implement a sustainable mobility solution, using electric bicycles, motorcycles, and tuk-tuks. As depicted in the Theory of Change in Figure 1, TryKe aimed to train two experts to assemble, maintain and lease electric motorbikes and electric tricycles (R1), so that 15 electric motorbikes and 5 electric tricycles could be available in Nairobi and the Kakuma-Kalobeyei settlement in Kenya (R2). In addition, business and user training was to be provided by the Strathmore University located in Nairobi (R3). Finally, TryKE aimed to develop and establish an online platform for vendors that intended to use the motorbikes and/or tricycles (R4). This way, food vendors, farmers etc. were to obtain access to sustainable, accessible transport (R5).

The **Solar-Powered Poultry Farming** project aimed to combine solar energy and poultry farming to increase incomes and provide electricity. The pilot project was to be conducted through the consortium of PHB, Bright Life and Yelekeni SACCO, in the Kiryandongo settlement in Uganda. The roles of the consortium partners were as follows: PHB was the grant recipient (awardee), Yelekeni SACCO was the implementing organisation (as such, Yelekeni SACCO members received training by PHB), and Bright Life acted as the distributor of the technologies piloted. The following activities were to be implemented: First, the pilot project intended to install solar home lighting systems, to increase productivity of refugee and host farmers (R6). Then, a solar hatchery was to be installed at the Yelekeni SACCO (R7). Finally, home-based incubators were to be introduced to farmers and households, with a PAYGO model (R8). The Yelekeni SACCO was to be trained to be able to manage the solar technologies after the project ended (R9). This way, poultry farmers were to obtain access to solar technologies that could improve their productivity (R10).

The **Digital Hub and E-Mobility** project aimed to transform a local Youth Center into a solar-powered Digital Hub with broadband connectivity and vocational training to bridge the urban-rural connectivity gap. The pilot project was conducted by I4SD in the Rubondo area of the Nakivale Refugee Settlement. The following activities were to be implemented: First, solar power was to be provided to the Youth Center, together with internet connectivity (R11). This way, and also including equipment such as servers, projectors, printers and similar, the Youth Center was to become a modern digital hub (R12) where relevant vocational training classes could be conducted (R13). An e-mobility pilot with electric motorbikes and a battery swapping station was also to be introduced to support income generation of the Youth Center (R14). This way, the habitants of the refugee settlement were to obtain access to digital services and batteries (R15).

The **Educational Access Through Solar Solutions** project aimed to expand education access by offering digital financial solutions that used solar home systems as collateral. The pilot project was conducted by ENGIE in the Adjumani, Kamwenge, and Kiryandongo refugee settlements in Uganda. The project aimed to implement a pay-as-you-go model, allowing families to purchase solar kits on credit and use them as security for education loans. The following activities were to be implemented: First, ENGIE aimed to recruit sales agents within the refugee and host communities (R16). Those sales agents then were to activate the markets in the refugee settlements, such as through marketing material (R17). ENGIE aimed to give refugees access to discounted tier 1 solar home systems. To do so, they implemented a payment model with less conditionalities. At the same time, they offered school payment support for those customers that completed their payments regularly (R18). This way, refugee households were to have more investments into the education of their children, health care and security (R19).

The **Solar-Powered Water Kiosk** project aimed to establish a solar-powered water kiosk to provide clean drinking water to refugees. The pilot project was conducted by Akvo in the Rhino Camp in Uganda. The pilot project was based on the following activities: Four access point water dispensers were to be installed. Those water dispensers were to be operated with pre-charged Near Field Connection (NFC) smart taps. At the same time, at the water treatment plant, a solar system was to be set up (R20). A local SACCO was to be recruited and trained, so that it was able to manage and operate the water kiosk business (R21). This way, the habitants of the refugee settlement were to be able to obtain access to clean water (R22).

Furthermore, two additional pilot projects had been part of the SCCIF but were not the focus of this evaluation:

Table 2: Other SCCIF-funded pilot projects (not part of the evaluation)

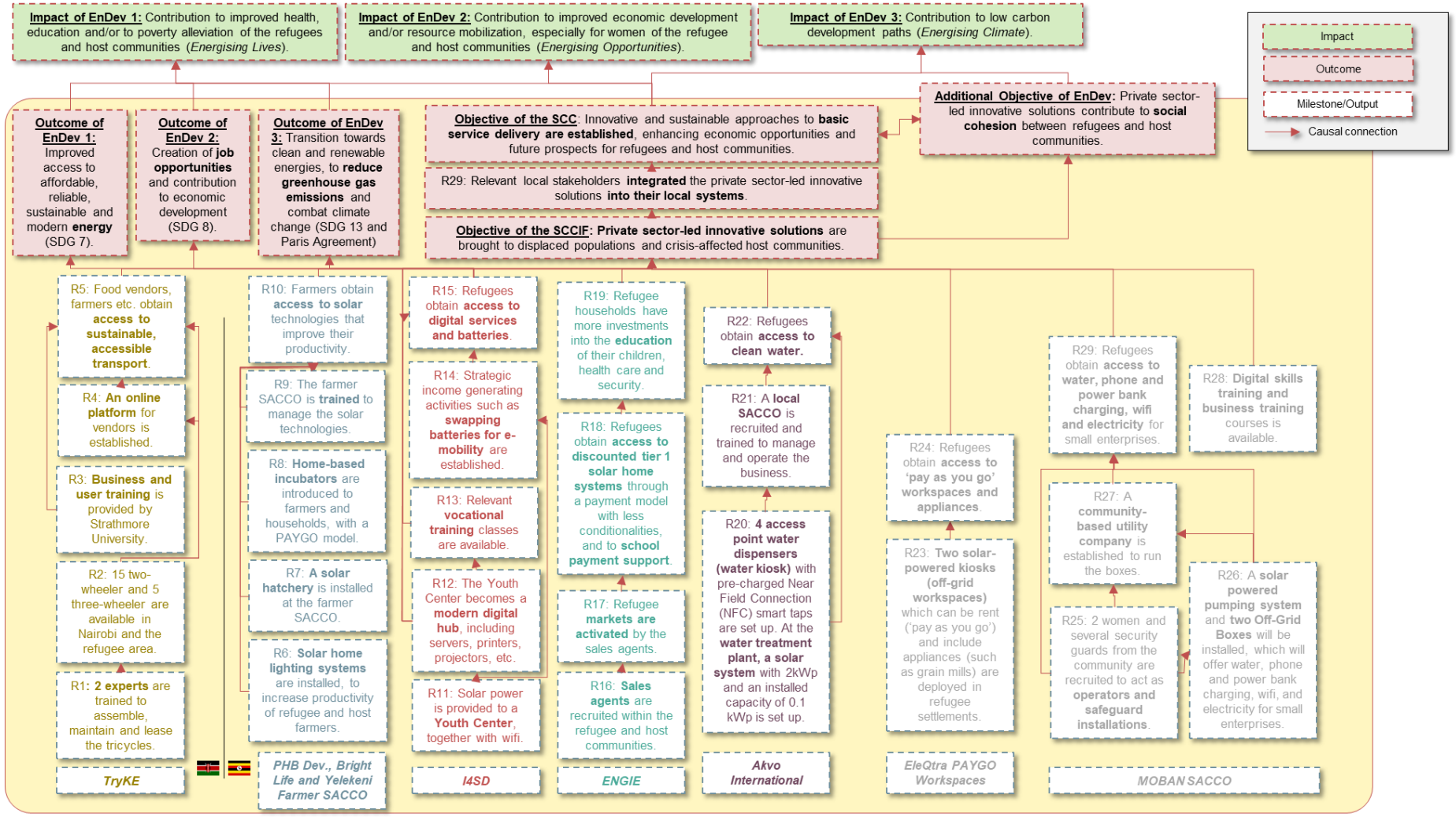
#	Country	Awardee	Project
6	Uganda	EleQtra PAXGO Workspaces	Sharing Tools and Space
7	Uganda	Moban Co-Operative Savings and Credit Society Limited (here: Moban SACCO)	Solar-powered connectivity, energy and water services

All hypotheses rested on the **assumption** that the population of the refugee settlements and host communities were willing and able to provide funding and actively participate. The SCCIF also assumed that relevant stakeholders from local systems would be willing/able to integrate the private sector-led solutions into the local systems and would have ownership to maintain the results achieved by the SCCIF-funded pilot projects.

By bringing private sector-led innovative solutions to displaced populations and crisis-affected host communities (objective of the SCCIF) and establishing innovative and sustainable approaches to basic service delivery (objective of the SCC), the pilot projects were also to contribute to the achievement of multiple **impacts**. Those impacts were derived from the EnDev program and the 2030 Agenda and are depicted in the Theory of Change in Figure 1. They include the contribution to improved health, education and/or to poverty alleviation of the refugees and host communities (*Energising Lives*), to improved economic development and/or resource mobilization, especially for women of the refugee and host communities (*Energising Opportunities*) and to low carbon development paths (*Energising Climate*).

The intended objectives lie within the **system boundary**, which is depicted graphically by a yellow background in Figure 1. The objectives of the SCCIF and SCC were also located within the system boundary. By placing the objective within the system boundary, the results model emphasizes the SCCIF's ability to directly influence and therefore reach its objective. As the aspect of social cohesion is influenced by the pilot projects but also by other actors and context factors, it is located on the system boundary. Finally, beyond the system boundary, the remaining impacts can be found. These long-term results were placed outside the system boundary as a variety of external factors may either foster or hinder the achievement of those results. Thus, they should not be placed within the SCCIF's sphere of responsibility.

Figure 1: Theory of Change (February 2025)



Source: Syspons GmbH, 2025

3 Methodology

3.1 Evaluation approach and design

The evaluation was structured around the **OECD-DAC criteria**, ensuring a comprehensive assessment of the SCCIF-funded pilot projects. These criteria – relevance, effectiveness, efficiency, impact, and sustainability – provided a standardized framework to evaluate the projects' performances, identify lessons learned, and inform future programming.

The **relevance** criterion assessed the extent to which the concepts of the SCCIF and the SCCIF-funded pilot projects (such as their objectives) aligned with the needs, priorities, and contextual realities of displaced populations and host communities. This involved assessing how well the SCCIF and the SCCIF-funded pilot projects responded to the specific conditions in the target areas, ensuring they addressed pressing challenges and contribute to sustainable solutions. This evaluation examined relevance through three key dimensions (see annex 2): (1) Contextual analysis, (2) alignment with needs and priorities of beneficiaries, and (3) analysis of stakeholder perceptions. By examining these aspects, the evaluation ensured that SCCIF's approach remains responsive, demand-driven, and contextually relevant, ultimately strengthening its effectiveness in supporting displaced populations and host communities.

The **effectiveness** of SCCIF-funded pilot projects assessed the extent to which the interventions have successfully met their intended objectives and delivered tangible results for displaced populations and host communities. This evaluation considered quantifiable progress, the impact on beneficiaries, as well as influencing factors. The assessment of effectiveness was guided by four key dimensions (see annex 2): (1) Performance metrics, (2) achievement of intended objectives, (3) effect on beneficiaries, and (4) contextual influences. To assess effectiveness, this evaluation applied **Mayne's Contribution Analysis model**, a structured approach to understanding causal linkages between interventions and observed outcomes. Contribution Analysis helps determine the extent to which SCCIF interventions contributed to changes such as in service delivery by: Developing a Theory of Change (see figure 1) that outlines expected causal pathways; identifying external factors that may have influenced outcomes; assessing available evidence to validate or refine causal assumptions; and strengthening the credibility of findings by considering alternative explanations.

The **impact** of SCCIF-funded pilot projects assessed their long-term effects on displaced populations and host communities, beyond immediate outputs and short-term outcomes. This evaluation examines whether SCCIF interventions have led to sustainable improvements in dimensions such as health, education, economic development, gender, and low carbon development paths, while also identifying any unintended consequences that may have emerged. The impact assessment was guided by two key dimensions (see annex 2): (1) Long-term effects, and (2) unintended consequences. To assess causal linkages between SCCIF interventions and their long-term impact, this evaluation applied **Mayne's Contribution Analysis model**. This approach helped determine whether SCCIF's activities plausibly contributed to observed changes by: Defining a clear Theory of Change (see figure 1) that linked interventions to long-term effects; assessing alternative explanations to differentiate SCCIF's role from broader contextual factors; and evaluating available evidence to strengthen or refine assumptions about impact.

The **efficiency** of SCCIF-funded pilot projects assessed how well resources – financial, human, and operational – were utilized to achieve intended results. This criterion examined whether project activities were executed in a timely and cost-efficient manner, whether management processes were well-structured and responsive, and whether SCCIF interventions maximized outputs relative to inputs. The efficiency assessment focused on

four key areas: (1) Timeliness of execution, (2) resource utilisation, (3) Cost-efficiency analysis[3], and (4) Implementation efficiency. For the cost-efficiency analysis, the evaluation team assessed the outputs of the pilot projects in relation to their costs. For the implementation efficiency analysis, to systematically analyse the clarity and efficiency of project roles and responsibilities, this evaluation used a **RACI** (Responsible, Accountable, Consulted, and Informed) matrix (see figure 2). The RACI framework helped to: Clarify decision-making structures, ensuring accountability in project implementation; identify gaps or inefficiencies in coordination between stakeholders; and assess adaptability in response to operational challenges.

Figure 2: RACI matrix (template)

	Actor					
Process/Task	EnDev Project Team	Donors	Implementing partners	Beneficiaries	Other GIZ units	…
Task 1						
Activity 1.1						
…						
…						
Task 2						
Activity 2.1						
…						
…						
Task 3						
Activity 3.1						
…						
…						
Task 4						
Activity 4.1						
…						
…						

R	Responsible	C	Consulted
A	Accountable	I	Informed

The **sustainability** of SCCIF-funded pilot projects assessed the extent to which their benefits will continue beyond the project's duration. This criterion examined whether the interventions have been institutionalized within local systems, whether they have built sufficient local capacity to ensure long-term impact, and whether continuation plans are in place to maintain and expand project benefits after SCCIF funding ends. The sustainability assessment focused on four key areas: (1) Continuation plans, (2) capacity building, (3) institutionalisation, and (4) sustainability of benefits.

Given that SCCIF is an **innovation fund** supporting **pilot projects**, this evaluation placed particular emphasis on the novelty of approaches and their potential for scalability. Assessing **innovation** involved examining whether projects challenged existing models or introduced new solutions to meet the needs of displaced populations and host communities. This included analysing how beneficiaries, local communities, and other stakeholders perceived these innovations, as well as identifying barriers or constraints that hindered full implementation and how they were addressed. In this regard, **Rogers' Diffusion of Innovation Model** provided a framework for understanding how new ideas, technologies, or approaches are adopted and spread within a

[I] Initially, the evaluation team intended to implement a cost-effectiveness analysis. Due to the financial data available, the evaluation team decided to implement a cost-efficiency analysis instead.

population. This model was particularly appropriate for evaluating the SCCIF-funded pilot projects, as it helped assess the uptake of innovative solutions among beneficiaries and stakeholders. The model consists of five key elements:

1. Innovation: The new idea, product, or practice being introduced, must for example offer a perceived advantage over existing solutions.
2. Communication channels: The means through which information about the innovation spreads among individuals and groups.
3. Time: The rate at which an innovation is adopted, influenced by individual decision-making and social dynamics.
4. Social system: The community or group within which the innovation is introduced, shaping adoption through norms, networks, and structures.
5. Adopters: The different categories of individuals who adopt the innovation at varying rates, including innovators, early adopters, early majority, late majority, and laggards.

The **scalability** dimension examined whether the approaches tested in the pilot projects are adaptable to other regions or populations facing similar challenges. This involved assessing the resources and partnerships required to expand or replicate these innovative solutions. Key factors influencing scalability included financial sustainability and market demand. Understanding these elements helped determine whether the SCCIF-funded pilot projects have the potential to be replicated at a larger scale or serve as models for future interventions in humanitarian and development settings.

3.2 Methods of data collection and data analysis

The implementation of the assignment consisted of three phases. We started with a **virtual kick-off meeting** with the GIZ SCCIF project team at Headquarter level to discuss the details of the assignment, refine key elements of the approach and processes, agree on upcoming steps, and update the operational plan accordingly. This meeting was also used to discuss communication principles and expectations for the assignment.

Phase 1 – Inception Phase (until February 2025): The Inception Phase was critical for establishing a thorough understanding of the SCCIF fund and setting a solid methodological and operational foundation for the evaluation. The Inception phase started with a **desk review** of all available documentation, including proposals, quarterly awardee updates, and publications (see annex 1). This desk review did enhance our understanding of the fund's operational context and strategic objectives. These findings were further explored and validated through an **exploratory interview** with the GIZ team in Kenya and a **Theory of Change workshop** with the GIZ teams in Kenya and Uganda. There, we validated the Theory of Change for the SCCIF at the program level. This Theory of Change articulates the fund's intended pathways to impact, from immediate outputs to long-term outcomes and impacts on displaced populations and host communities. The Theory of Change workshop was then conducted to validate this framework, allowing the GIZ teams to collaboratively review and refine the underlying assumptions, impact pathways, and causal mechanisms. This participative approach ensures that the Theory of Change reflects the realities and complexities of implementing innovative solutions in humanitarian settings, providing a shared reference point for the evaluation.

Building on the desk review and stakeholder inputs, we **refined our evaluation design and developed an analytical grid** (see annex 2). The evaluation design incorporates a combined approach using Mayne's contribution analysis model and Rogers' innovation diffusion model to assess the effectiveness, impact and scalability of the funded projects. By embedding these models, we aim to make the projects more comparable in terms of their innovative approaches and to understand how and why these innovations are adopted—or not—by beneficiaries and other stakeholders. This analytical framework was formalized into an analytical grid that operationalizes the OECD-DAC criteria and aligns with additional evaluation questions related to

innovation and scalability. Based on this analytical framework, we also developed the **interview guides** (see annex 5) for our evaluation mission, addressing the GIZ teams in Kenya and Uganda as well as Awardees, beneficiaries and other relevant stakeholders (such as local authorities). Meanwhile, based on the insights of the evaluation team, the GIZ teams in Kenya and Uganda coordinated the **logistics for the evaluation mission**, including scheduling interviews and focus groups. The culmination of this phase was the drafting of an **Inception note**, which documented the refined evaluation approach, analytical grid, Theory of Change, and detailed operational plan.

Phase 2 – Data Collection Phase (until mid-March 2025): The Data Collection Phase aimed to gather all necessary qualitative data to address the research questions outlined in the ToR, as well as any additional questions refined during the Inception Phase. To begin, we conducted an in-depth continuation of the **desk review**. This extended desk review provided deeper insights into each project, enhancing our understanding of their specific interventions, expected impacts, and potential challenges. The core of this phase involved the on-site implementation of the **evaluation mission**, during which our team conducted **21 interviews and focus groups with +60 people** to collect data directly from stakeholders and beneficiaries (see annex 4). At the end of the evaluation mission, we conducted a **hybrid debriefing workshop** in Uganda to present and validate the preliminary findings with the GIZ teams and awardees.

Upon completion of the data collection, we conducted immediate **data cleaning and a qualitative analysis** of the gathered information. This process involved synthesizing insights from the focus groups and interviews to ensure data quality and prepare a coherent basis for evaluating the impact, innovation diffusion, and scalability of SCCIF-supported projects.

Phase 3 – Synthesis and Reporting Phase (until end of May 2025): The Synthesis and Reporting Phase focused on consolidating the findings from the data collection and analysis to produce a comprehensive evaluation of the SCCIF-funded pilot projects. This phase began with an internal synthesis workshop to review and integrate insights from the qualitative data analysis, ensuring consistency and coherence across the findings related to the OECD-DAC criteria and specific evaluation questions such as innovation and scalability. Following the synthesis, we drafted the **final report**, structured according to the framework established in the Inception Phase. This draft report encapsulated the evaluation findings, conclusions, and possible actionable recommendations. The draft was then shared with GIZ for a review. After receiving feedback, **revised and finalised the report**, ensuring that all input has been systematically addressed. Lastly, by the end of this phase, we delivered a validated, stakeholder-informed final report and ensure a clear communication of key insights and recommendations for the program's ongoing improvement.

The following **milestones/deliverables** were to be achieved/elaborated within the assignment:

1) Inception note (.doc)
2) Presentation preliminary findings (.ppt)
3) Evaluation report (.doc)

3.3 Data quality

To ensure the quality and reliability of the collected data, the evaluation adhered to rigorous **data, method and researcher triangulation**. The combination of exploratory interviews, desk studies, a Theory of Change (ToC) workshop, evaluation mission interviews, and focus group discussions allowed for cross-validation of findings and minimized biases. Data collection ensured that information was gathered from a diverse range of stakeholders, including GIZ country teams, awardees, and project beneficiaries. The evaluation also emphasized consistency by applying structured interview guides and by analysing protocols and documents by

following the evaluation matrix. Additionally, efforts were made to address potential limitations, such as recall bias in interviews or gaps in documentation, by incorporating multiple perspectives.

Regarding the data quality of the **document analysis**, the evaluation was only able to consider the information depicted in the documents. The evaluation team addressed information gaps in the interviews and focus groups, such as with the Awardees. In this regard, an important restriction to data quality arose from the **absence of systematically defined and monitored target values** for the pilot projects. This restricted the ability of the evaluation team to rigorously assess the effectiveness and impact of the pilot projects.

Regarding the **feasibility** of the **interviews**, several limitations were identified: Some limitations to accessing relevant information arose from **personnel turnover** within the GIZ team and Mastercard, as well as **lack of availability** of USAID due to their funding freeze and severe personnel reduction under the Trump administration. The evaluation team was therefore not able to realise conversations with all relevant persons. It addressed this gap through triangulation with all interview partners as well as document analysis of reports and further documents available. Another limitation that had been identified during the inception phase was related to the language barriers of the **beneficiaries** of the Awardees. During the evaluation mission, several interviews and/or focus group discussions were therefore either accompanied by translators or facilitated by English-speaking beneficiaries.

In addition, in this occasion, the interviews with the beneficiaries were **conducted together with the GIZ teams** of Kenya and/or Uganda. This was to support the evaluation team language-wise and to further support the learning of the GIZ teams as well as continuity of the results, as concerns and recommendations could be directly addressed. As the beneficiaries were not familiar with the GIZ teams, there were no privacy concerns nor concerns regarding biased answers.

4 Assessment according to OECD/DAC criteria

This chapter presents the findings of the evaluation in accordance with the OECD/DAC evaluation criteria, namely relevance, effectiveness, impact, efficiency, and sustainability.

4.1 Relevance

The **relevance** criterion assessed the extent to which the concepts of the SCCIF and its funded pilot projects – particularly their objectives –aligned with the needs, priorities, and contextual realities of displaced populations and host communities. This included examining how well the SCCIF and its funded pilot projects responded to the specific socio-economic and political conditions in the target areas, addressing urgent challenges and contributing to sustainable solutions. In addition, the analysis considered the relevance of the SCCIF to the strategic priorities and operational needs of the awardees. This included an exploration of the incentives and motivations that led awardees to deliver services in refugee settlements and host communities.

Overall, the SCCIF and its funded pilot projects demonstrated strong relevance to the priorities of national governments and contextual needs of refugee settlements and host communities in Kenya and Uganda. The innovative solutions introduced were closely aligned with the strategic priorities of the national governments, particularly around sustainable energy access and economic inclusion, as well as with the strategic priorities and operational needs of the awardees seeking to expand into underserved markets. The SCCIF-funded pilot projects were perceived as useful by the residents of the refugee settlements and host communities, who confirmed that the solutions addressed pressing day-to-day challenges.

Smart Communities Coalition Innovation Fund (SCCIF)

The evaluation showed that the objectives of the SCCIF were aligned with the national priorities and policies of the Kenyan and Ugandan governments. The desk study and interviews demonstrated that the SCCIF aimed to bring private sector-led innovative solutions for basic service delivery to refugee settlements and host communities in East Africa, thus also enhancing their economic opportunities and future prospects (see chapter 2). Based on the strategic pillars and EnDev's approach, the SCCIF was to support access to renewable energy solutions. The secondary data analysis of Kenyan and Ugandan national policies and strategies showcased that this was in line with Kenyan and Ugandan priorities. In **Kenya**, policy frameworks such as **Kenya Vision 2030** and the **National Climate Change Action Plans** (NCCAP) 2018-2022 and 2023-2027 promote clean energy adoption for sustainable development. The NCCAP 2023-2027 specifically emphasizes the need for targeted interventions in remote areas with high vulnerability, such as the refugee camp and host community of Kakuma-Kalobeyei (Ministry of Environment, Climate Change and Forestry of the Republic of Kenya 2023: 26). In **Uganda**, policy frameworks such as the **Energy Policy for Uganda 2023** emphasize renewable energy sources, such as solar, to improve energy access in remote areas. The **Sustainable Energy Response Plan for Refugees and Host Communities (SERP) 2022–2025** specifically aims to strengthen modern energy solutions in refugee settlements and host communities, including solar-powered lighting, off-grid solar home systems, and the development of local energy markets.

Furthermore, the evaluation showed that the objectives of the SCCIF were aligned with the needs and priorities of the residents of the refugee settlements and host communities. The evaluation team visited the pilot project sites in the Kakuma-Kalobeyei settlement (Kenya), the Kiryandongo settlement, the Nakivale Refugee Settlement and the Rhino Camp (Uganda). During interviews and focus groups discussions, residents of the refugee settlements and host communities consistently confirmed and emphasized that the five SCCIF-funded pilot projects responded to their local priorities in meaningful ways: By focusing on **solar-powered basic services delivery**, such as connectivity (I4SD) and/or clean water (Akvo); and by facilitating access to **solar systems and/or solar-powered equipment** which the residents could use for **income generation** (TryKE, I4SD, ENGIE, PHB-led, Akvo). This confirmed the relevance of the SCCIF's objectives and the SCCIF-funded pilot projects' design.

Finally, it became clear that the SCCIF funding was also highly relevant to the strategic priorities and operational needs of the awardees. The desk study and interviews demonstrated that the SCCIF enabled the awardees to **pilot business models** and adapt products to complex and challenging market conditions while **mitigating the financial and operational risks** associated with entering such contexts. Interviewees confirmed that the SCCIF addressed concrete constraints that had previously hindered their engagement in refugee and host community settings. This was particularly evident among awardees with limited prior experience operating in remote and vulnerable contexts. For instance, for TryKE, starting a business in refugee and host community settings involved significant technical and financial uncertainty. At the same time, the SCCIF strengthened more experienced awardees such as ENGIE and I4SD, by supporting them in lowering entry barriers for residents and offering more affordable access to basic services and technologies.

TryKE: Sustainable mobility solution

The evaluation showed that the objectives of TryKE were aligned with the national priorities and policies of the Kenyan government. The SCCIF-funded pilot project implemented by TryKE focused on using solar power to enhance the income generation within the Kakuma-Kalobeyei settlement and host community as well as for the strengthening of e-mobility. It was evident that the TryKE pilot project was aligned with the national priorities depicted in the frameworks Kenya Vision 2030 and the National Climate Change Action

Plans (NCCAP) 2018-2022 and 2023-2027, in terms of the focus on income generation, e-mobility as well as the Kakuma-Kalobeyei settlement and host community (see above).

It was also evident that the objectives of the TryKE pilot project were mostly aligned with the needs and priorities of the residents of the Kakuma-Kalobeyei settlement and host community. During the interviews and focus group discussions conducted in the field visit, the GIZ project team as well as the riders and local business owners involved in the project confirmed the relevance of the innovative solution offered by the TryKE pilot project. The motorbike riders highlighted their need for further income possibilities and for independence from fuel shortages, while the local business owner interviewed, representing a farmers' association, focused on their need for being able to transport their products to markets that are farer away. Alignment with the priorities of the local business owner was limited by the leasing model as the representative of the farmer's association would have preferred owning to leasing (see chapter 4.2).

The evaluation also assessed the incentives of TryKE to supply their services in a challenging setting such as the Kakuma-Kalobeyei settlement and host community. It found that TryKE was primarily driven by personal and intrinsic motivations. During the interview with the TryKE representative it became evident that their decision to participate within the SCCIF and provide their services was less commercially motivated and stemmed from a desire to support marginalised areas, shaped strongly by the founder's own background and personal history.

I4SD: Digital Hub and E-Mobility

The evaluation showed that the objectives of I4SD were aligned with the national priorities and policies of the Ugandan government. As depicted above, in Uganda, policy frameworks highlighted the use of renewable energy sources to improve energy access in remote areas such as refugee settlements and host communities. The SCCIF-funded pilot project implemented by I4SD focused on using solar power to support energy access for a Youth Centre and other institutions, as well as connectivity of the Youth Centre, capacity-building for youth, income generation for youth and motorbike riders, and e-mobility in the Rubondo area of the Nakivale Refugee Settlement. In this vein, the evaluation concluded that the I4SD pilot project was aligned with the Ugandan national frameworks and priorities.

It was also evident that the objectives of the I4SD pilot project were aligned with the needs and priorities of the residents of the Rubondo area of the Nakivale Refugee Settlement. During the interviews and focus group discussions conducted in the field visit, the GIZ project team as well as the representative of the Youth Centre, the other institutions involved and the motorbike riders involved in the project confirmed the relevance of the innovative solution offered by the I4SD pilot project. The representative of the Youth Centre highlighted the Centre's need for energy access and connectivity, to be able to offer and implement vocational training courses for young people in the area. The representatives of other institutions of the settlement such as the Health Centre also confirmed their need for energy access and connectivity, on an organisational level (for the Health Centre and their patients) as well as on an individual level (for the employees staying at the Health Centre). Finally, the motorbike riders interviewed highlighted their need for further income possibilities and for independence from fuel shortages.

The evaluation identified an institutional incentive for I4SD to expand their services to vulnerable contexts such as the Rubondo area of the Nakivale Refugee Settlement. While no specific motivations were explicitly stated during the interviews, a review of the organisation's public communications indicates that this engagement is closely aligned with I4SD's mission and business model. As a social enterprise, I4SD positions itself as working to expand access to infrastructure and generate social, economic, and environmental returns (I4SD, 2025). Their stated goal of connecting unconnected communities in a sustainable and inclusive manner

reflects a strategic and institutional commitment to operating in underdeveloped areas, which aligns with the SCCIF.

ENGIE: Educational Access Through Solar Solutions

The evaluation showed that the objectives of ENGIE were aligned with the national priorities and policies of the Ugandan government. As depicted above, in Uganda, policy frameworks highlighted the use of renewable energy sources to improve energy access in remote areas such as refugee settlements and host communities. The SCCIF-funded pilot project implemented by ENGIE was aligned with Ugandan priorities and policies as it focused on improving access to solar power equipment in the Adjumani, Kamwenge, and Kiryandongo refugee settlements and host communities, by offering special payment conditions. In addition, the ENGIE project was to facilitate access to school loans for customers with a reliable payment record, thus contributing to access to education.

It was also evident that the objectives of the ENGIE pilot project were aligned with the needs and priorities of the residents of the Adjumani, Kamwenge, and Kiryandongo refugee settlements and host communities. During the interviews and focus group discussions conducted in the field visit, the GIZ project team, the ENGIE teams at HQ and the local level as well as customers that had previously bought an ENGIE solar kit confirmed the relevance of the innovative solution offered by the ENGIE pilot project. The ENGIE local team and the customers especially highlighted the need for solar power equipment and for special payment conditions. As depicted in Chapter 4.2, the customers consulted were not aware of the school fee loans, but emphasized their interest in and therefore the relevance of such offers.

The evaluation also examined ENGIE's incentives to expand their services within refugee settlements and host communities. ENGIE primarily saw the SCCIF as an opportunity to enter and grow in a new market, reflecting a strong commercial incentive. A key innovative element under the SCCIF was the trial of an adapted financing model. While no additional motivations were explicitly stated at the corporate level, the local teams demonstrated **intrinsic motivation** to improve living conditions, which supported the implementation of the adapted financing approach. However, economic considerations ultimately prevailed at headquarters, leading to the adjustment of the financing terms (see Chapters 4.2 and 4.4). Regarding the education component, motivation to offer the educational fund was limited and largely driven by the need to secure SCCIF funding, which became apparent in the delayed and less targeted implementation of the education component (see Chapters 4.2 and 4.4).

PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming

The evaluation showed that the objectives of PHB, Bright Life and the Yelekeni SACCO were aligned with the national priorities and policies of the Ugandan government. As depicted above, in Uganda, policy frameworks highlighted the use of renewable energy sources to improve energy access in remote areas such as refugee settlements and host communities. The SCCIF-funded pilot project implemented by PHB, Bright Life and the Yelekeni SACCO was aligned with Ugandan priorities and policies as it focused on improving access to solar power equipment in the Kiryandongo refugee settlement and host community for poultry farming, thus also supporting improved income generation of farmers.

It was also evident that the objectives of the PHB, Bright Life and the Yelekeni SACCO pilot project were aligned with the needs and priorities of the residents of the Kiryandongo refugee settlement and host community. During the interview and focus group discussion conducted in the field visit, the GIZ project team, PHB, the Yelekeni SACCO as well as member farmers confirmed the relevance of the innovative solution offered by PHB, Bright Life and the Yelekeni SACCO. Among others, the Yelekeni SACCO itself and the member

farmers confirmed their need for improved equipment (such as hatcheries) and knowledge (such as on egg management), and how this need was addressed within the context of the pilot project.

The evaluation also assessed the incentives of PHB to provide their services in the Kiryandongo refugee settlement and host community. It found that PHB was primarily driven by institutional incentives. Although no data on incentives or motivation to supply services in the refugee settlement and host community was shared during the interviews, the document analysis and review of PHB's public communications revealed that their incentive is primarily institutional. There, PHB highlights their vision to contribute to people having better access, as well as their priority of bringing sustainable energy and support climate adaptation for vulnerable population (PHB Development SRL, 2025b). This institutional incentive drives PHB's engagement in vulnerable and challenging contexts, reflecting a strategic commitment rather than purely commercial or individual motivations.

Akvo International SMC Limited: Solar-Powered Water Kiosk

The evaluation showed that the objectives of Akvo were aligned with the national priorities and policies of the Ugandan government. As depicted above, in Uganda, policy frameworks highlighted the use of renewable energy sources to improve energy access in remote areas such as refugee settlements and host communities. The SCCIF-funded pilot project implemented by Akvo was aligned with Ugandan priorities and policies as it focused on improving access to a solar-powered basic service – namely clean water – for the habitants of the Rhino Camp. In the same vein, within the concept of the solar-powered water kiosk, Akvo also aimed to provide a local SACCO with the opportunity of managing the water kiosk, thus strengthening their income generation.

It was also evident that the objectives of the Akvo pilot project were aligned with the needs and priorities of the residents of the Rhino Camp. During the interview and focus group discussion conducted in the field visit, the GIZ project team, the Akvo local team representative and the representatives of the residents of the Rhino Camp confirmed the relevance of the innovative solution offered by Akvo. While the water kiosk is not yet inaugurated, the habitants highlighted their need for clean water at accessible prices, as well as their interest in reselling the clean water and therefore improve their own income generation. The concept of the Akvo pilot project is therefore in line with the needs and priorities of the residents.

The evaluation assessed Akvo's incentives to provide services in refugee settlements and host communities. Akvo's primary motivation fell within the category of financial incentives, driven by the opportunity to **pilot a new product** (see Chapter 4.6) in a new market using the funding provided through the SCCIF. The interview with the local Akvo team showed that the project was generally regarded as a contractual engagement with GIZ rather than a long-term strategic commitment. There were no indications of intrinsic or institutional motivations to remain involved beyond the project's completion, with plans focused on transferring the innovative solution to a local partner (see Chapter 4.4).

Assessment of the Relevance Criterion

To conclude, the final evaluation showed that the SCCIF and the SCCIF-funded pilot projects were highly relevant. The SCCIF addressed national priorities of the Kenyan and Ugandan governments, particularly in the areas of sustainable energy access and support for refugee and host communities. The use of solar-powered innovative solutions for basic service delivery and income generation aligned well with their policy frameworks and development goals. Residents of the refugee settlements and host communities confirmed the relevance of the interventions to their daily needs, especially in connectivity, sustainable mobility, clean water access, and livelihoods. At the same time, the SCCIF enabled the private sector actors selected as

awardees of the fund to engage in challenging markets. The evaluation found that awardees were motivated by a range of incentives – including commercial, institutional, and intrinsic ones – depending on their organisational profile and strategic interests, which overall aligned with the objectives of the SCCIF. Therefore, the SCCIF provided a relevant mechanism that responded to the needs of governments, refugee settlements and host communities, and private sector participants alike.

4.2 Effectiveness

The following analysis of **effectiveness** focuses on the extent to which the SCCIF-funded pilot projects have achieved their intended objectives and delivered tangible results for displaced populations and host communities. This evaluation considered quantifiable progress, the effect on beneficiaries, and influencing factors.

Overall, the SCCIF successfully facilitated the temporary introduction of private sector-led, innovative solutions aimed at improving basic service delivery and enhancing economic opportunities for displaced populations and crisis-affected host communities – aligning with the fund's core objective. However, several awardees encountered significant implementation challenges that affected the continuity or timely establishment of their services. As detailed in Chapters 2, 4.1, and 4.6, all pilot projects focused on deploying solar-powered innovations within refugee settlements and/or host communities. These included e-mobility services implemented by TryKE and I4SD; solar-powered poultry farming promoted by the consortium led by PHB; solar-powered water provision by Akvo; and solar home systems with adapted financing schemes provided by ENGIE. Furthermore, ENGIE and I4SD also integrated components targeting improved access to education. Evidence from project documentation, stakeholder interviews, and focus group discussions conducted during the field visits in Kenya and Uganda indicates **mixed results**: while all awardees succeeded in temporarily establishing their services and creating economic opportunities for the target groups, outcomes varied across projects. In particular, only the consortium led by PHB fully achieved the objectives as originally outlined in their grant agreement, including the planned scale and functionality of their intervention. Other pilot projects showed innovative potential but did not achieve their outcomes as intended due to contextual, operational, or institutional limitations. Those constraints are discussed in detail throughout the final report.

In assessing the effectiveness of the SCCIF, it is essential to consider that the fund was designed to support the pilot testing of innovative solutions, with less emphasis placed on achieving predefined quantitative targets. While the broader Smart Communities Coalition (SCC) developed a Monitoring, Evaluation, and Learning (MEL) strategy that included Key Performance Indicators, such as the number of beneficiaries gaining new or improved access to energy, no such framework was established specifically for the SCCIF. That is, at the level of the fund itself, there was no specific MEL strategy with clearly defined indicators, targets, and data collection procedures and responsibilities. According to interviews conducted with the GIZ project team and awardees it became clear that although target values were initially set out in the grant agreements, these were not systematically tracked or consistently reported. Instead, the indicators reported often shifted throughout the implementation of the SCCIF-funded pilot projects, reflecting their adaptive strategies. The GIZ project team and the awardees emphasized that this flexible approach was beneficial in allowing for responsiveness to the challenging contexts of refugee settlements and host communities. However, this flexibility came at the cost of structured reporting, which would have supported more robust knowledge management, particularly considering staff turnover within both the GIZ team and awardees.

TryKE: Sustainable mobility solution

The Sustainable E mobility solution pilot project conducted by TryKE aimed to implement a sustainable mobility solution in the Kakuma-Kalobeyei settlement and host community in Kenya. TryKE temporarily contributed to strengthening sustainable mobility in Kakuma-Kalobeyei through the introduction of a leasing model for solar-powered electric motorbikes and tricycles and the training of local technicians. Initially, according to the grant agreement, TryKE had proposed the deployment of 20 electric tricycles. However, following field assessments in the Kakuma-Kalobeyei area, the implementation approach was revised to include electric motorbikes, which were identified as the predominant mode of transport in the area. During the pilot phase, TryKE undertook several **key activities**: (1) it collaborated with a motorbike riders' association from the host community to test the leasing model for eleven electric motorbikes, along with a solar-powered charging system; (2) it partnered with two local businesses (a farmer association and a local water supplier) to pilot the leasing model using two electric tricycles and corresponding solar systems; and (3) it provided technical training for local technicians, including members of the riders' association, in the maintenance and repair of the electric vehicles. Both riders and local business owners expressed strong interest in the sustainable mobility solutions offered, citing their practical benefits and potential to support income generation. In this regard, participants confirmed that during their involvement in the TryKE pilot project, they had reduced fuel expenditures (motorbike rider, local business owners) and increased income through their improved access to more distant markets (local vendors). However, feedback on the leasing model was mixed. While it was positively received by the motorbike riders – partly due to the familiarity of leasing arrangements within the sector – only one of the two participating local business owners adopted the model. This was the owner of a local water distribution enterprise who supplied water to gold miners within the Kakuma host community. He made frequent use of the electric tricycle service, whereas a representative of the farmers' association explicitly preferred direct ownership of the equipment over leasing. Despite general acceptance of the model among riders, many faced financial difficulties in meeting the daily lease payments, resulting in accumulated debt due to limited daily income (see Table 3). According to the GIZ project team, this was due to a lack of business, as at times, fewer passengers needed the services offered. In response, TryKE developed the "**tuma.today**" application, intended to facilitate connections between riders and potential customers, thereby enhancing income opportunities. Although designed for the Kakuma-Kalobeyei context, the application was only pilot tested and implemented in Nairobi.

TryKE had planned to conduct its activities mainly within the Kakuma-Kalobeyei refugee settlement and host community. However, due to significant operational challenges encountered on the ground, TryKE subsequently expanded its activities to Nairobi. As evidenced in project documentation and confirmed during the field visit, the establishment of a local business unit in Kakuma-Kalobeyei proved difficult, with additional constraints related to the delivery of basic services (see below). In response, TryKE chose to base its operations in Nairobi, where it also broadened its research and development activities such as the tuma.today application (see below). In this regard, for these technical and commercial pilot activities, TryKE had four out of the 15 motorbikes in Nairobi. This strategic shift aimed to facilitate more efficient pilot testing and to partially offset the limited revenue generation experienced in Kakuma-Kalobeyei (see Table 3).

Only a portion of the electric vehicles deployed were operational during the implementation of the TryKE pilot project. This is depicted in Table 3. A key issue was the limited durability of the motorbikes and the difficulty in sourcing essential spare parts (see below). As a result, several vehicles were either rendered inoperable and stored awaiting repairs or used for parts to maintain other units. One electric motorbike was involved in a traffic accident and was subsequently impounded by local authorities. A similar situation applied to the electric tricycles. **At the time of the evaluation, only one out of eleven electric motorbikes and one out of five electric tricycles remained functional in Kakuma-Kalobeyei. While the "tuma.today" application was operational in Nairobi, it had not yet been deployed in the Kakuma-Kalobeyei context.**

Table 3: Figures reported by TryKE in the Awardee update (April 2024)

Indicator		FY 2023 Q1 Jan - Mar	FY 2023 Q2 Apr - Jun	FY 2023 Q3 Jul - Sep	FY 2023 Q4 Oct - Dec	FY 2024 Q1 Jan - Mar
Revenue (KES)	Nairobi	53,360	428,260	344,420	350,750	369,770
	Kakuma	-	-	18,300	20,100	42,750
Debt (KES)	Nairobi	-	-	-	-	-
	Kakuma	-	-	13,100	11,600	7,850
Business engaged / Commercial contracts	Nairobi	6	9	10	12	13
	Kakuma	-	-	1	2	1
Riders engaged / contracted	Nairobi	3	3	3	4	5
	Kakuma	-	-	2	3	5

A major limiting factor for TryKE in implementing its envisioned sustainable mobility solution within the Kakuma-Kalobeyei settlement and host community was the difficulty encountered in establishing a TryKE presence on the ground. The original implementation plan envisioned the creation of a local business unit responsible for overseeing operations, maintaining close collaboration with partners in the settlement and host community, facilitating repairs, and serving as a showroom for electric motorbikes and tricycles. However, according to Awardee progress updates and interviews with the TryKE representative, multiple challenges impeded the establishment of a local office. These included the absence of formal contracting mechanisms from those offering space in Kakuma (a prerequisite for the allocation of SCCIF funding), insufficient visibility of available premises (critical for commercial engagement), inadequate space (required for storing equipment such as vehicles and solar systems), limited security (necessary for safeguarding high-value technology), and inflated rental prices often applied to entities affiliated with international development actors. In response to these constraints, TryKE opted to expand its operational base in Nairobi as a mitigation measure.

A second major limiting factor for TryKE in implementing its envisioned sustainable mobility solution within the Kakuma-Kalobeyei settlement and host community was the quality of the electric motorbikes and the limited availability of spare parts, particularly tires. Progress reports from the Awardee, along with findings from interviews and focus group discussions conducted during the field visit in Kenya, emphasized the frequency with which spare parts were required. According to insights from the TryKE team and motorbike riders, the high rate of wear and tear – especially of tires and batteries – was largely attributable to the challenging rural context of Kakuma-Kalobeyei, characterized by long travel distances and unpaved roads. Additionally, delays in spare part deliveries from the supplier further exacerbated maintenance challenges. Over time, these difficulties were compounded by the supplier's product development: the original model and corresponding components, such as tires, were phased out and became unavailable, thereby limiting the feasibility of maintaining the deployed fleet.

A third limiting factor was the absence of a confirmed budget for key planned activities during the pilot project's design phase. In its proposal, TryKE had envisaged a partnership with Strathmore University in Nairobi to deliver training sessions. However, as indicated during interviews with the TryKE representative conducted during the field visit to Kenya, it became apparent shortly after the grant agreement was signed that formal collaboration with the university would not be feasible due to the high associated costs. While the university expressed willingness to engage in informal exchanges, the originally planned training activities targeting the local beneficiary group could not be implemented.

Concurrently, a key enabling factor was the motivation and adaptive, agile approach demonstrated by the TryKE team. The final evaluation highlighted that, despite encountering multiple challenges during the implementation of the pilot project, the TryKE team consistently adopted a proactive and flexible stance to address emerging limitations. This adaptive capacity was underpinned by the team's strong motivation to deliver mobility solutions to displaced communities, as well as their sector-specific expertise in sustainable transportation. For example, in response to the issue of non-payment by motorbike riders – who reported that their earnings were insufficient to cover the leasing fees – TryKE initiated the development of a mobile application ("tuma.today") designed to connect riders with individuals or businesses in need of mobility services (e.g., local entrepreneurs and farmers). According to the TryKE representative, the aim of the application was to expand income-generating opportunities for riders, thereby increasing their ability to meet leasing obligations. However, although the application was able to support income-generation in Nairobi during its testing phase, it was not expanded to Kakuma-Kalobeyei.

Photos 1a and 1b: Solar system, electric motorbikes and electric tricycles at the Association of Riders in Kakuma (Source/©: Alexandra Hoppe 2025)

I4SD: Digital Hub and E-Mobility

The pilot project conducted by I4SD aimed to establish a Digital Hub and E-Mobility services in the Rubondo area of the Nakivale Refugee Settlement in Uganda. I4SD temporarily achieved its intended objective. At the time of the final evaluation, however, the solar system of the pilot project had become overloaded due to the growing demand and other influencing factors, leading to its temporary shutdown. Initially, I4SD's objective was to establish a Digital Hub and introduce two electric motorbikes, with the Digital Hub and the electric motorbike batteries being powered by a solar system. The Digital Hub was located within a Youth Centre supported by the Finnish Development Cooperation and other donors, and I4SD's aim was to provide electricity and internet connectivity to support the vocational training courses conducted at the Youth Centre. During the implementation of the pilot project, I4SD successfully connected the solar system, providing electricity and internet access to the Youth Centre, while also facilitating engagement with motorbike riders for the leasing of two solar-powered electric motorbikes (see tables 4a and 4b). Additionally, I4SD observed an increase in demand for their services, leading them to extend electricity provision to the Health Centre, the Refugee Desk Office (responsible for refugee coordination) within the Office of the Prime Minister, and local businesses from the local market close by. However, by the time of the final evaluation, the solar system had become overloaded, resulting in its temporary shutdown. According to the I4SD project team, efforts were underway to secure additional funding from other donors to install an upgraded solar system.

Tables 4a and 4b: Figures reported by I4SD in the Awardee update (April 2024)

Indicator		FY 2023 Q1 Jan - Mar	FY 2023 Q2 Apr – Jun	FY 2023 Q3 Jul - Sep	FY 2023 Q4 Oct - Dec	FY 2024 Q1 Jan - Mar
Training and Capacity Building: Number of people trained in technical energy fields supported by United States government (USG) assistance[4]	female	-	2	2	2	2
	male	-	-	2	2	2
Number of productive-use off-grid devices or systems sold as a result of USG/Power Africa assistance	Host communities	-	-	-	-	-
	Refugees	-	2	-	-	2
Electricity Access: Number of new grid and off-grid actual direct connections	Host communities	-	-	-	-	-
	Refugees	-	-	-	-	-

[4] These indicators are standard indicators from USAID and not specific to the awardee.

Project Items/indicators	Achieved	Target
E-Motorcycles procured	4 (2 replaced)	6
Total days in operation	300	365
Average mileage per day (Km)	110	120
Average revenue per day (UGX)	30,000	40,000
Average energy consumption (kWh)	5	5
CO2 reduced per day (Kg)	54	162
Tons of CO2 reduced so far this year	15.3	60
Permanent direct jobs created so far	4	8
Mechanics trained	2	2
Riders trained	6	12
Students graduated from vocational courses	56	240
Broadband connectivity for ICT Center	1	1
Expansion of the solar hub	0	1

A major limiting factor faced by I4SD in establishing their planned Digital Hub and E-Mobility services in the Rubondo area of the Nakivale Refugee Settlement was their rapid expansion of service provision, which was not supported by adequate financial compensation. Both the Awardee updates and interviews conducted during the field visit in Uganda revealed that I4SD experienced a surge in demand for their solar energy services. In response, I4SD aimed to meet this demand by providing energy access to key stakeholders, including the Health Centre, the Office of the Prime Minister, and several local business owners within the Nakivale Refugee Settlement. However, it became apparent that the increase in service provision was not matched by necessary updates to their energy production capacity. This challenge was exacerbated by the lack of financial contributions from key actors, such as the Health Centre and the Office of the Prime Minister, who did not pay for the energy consumed. During the field visit, it was noted that no formal or informal agreements had been established between I4SD and these institutions regarding financial responsibility. Representatives from the Health Centre clarified that energy access was managed by UNHCR, not by the Health Centre itself, and emphasized that I4SD would need to engage with UNHCR regarding the issue of financial contributions. The same situation applied to the Office of the Prime Minister, which also received support from UNHCR.

Another significant limiting factor for I4SD in implementing the E-mobility service was the quality of the electric motorbikes and their batteries, as well as the limited knowledge of the motorbike riders regarding e-mobility. According to motorbike riders interviewed in the Nakivale Refugee Settlement, the two electric motorbikes provided were not fully suited to the local context. Initially, the batteries had sufficient durability; however, over time, the battery capacity diminished rapidly within a few months. Concurrently, the I4SD project team noted the challenges arising from the riders' limited understanding of e-mobility. Despite I4SD's efforts to provide training on the specifications of electric motorbikes, the riders, accustomed to traditional motorbikes, sometimes engaged in practices that were detrimental to the electric motorbikes, such as riding through deep puddles. As a result, the electric motorbikes required frequent repairs.

On a positive note, I4SD's decision to refurbish and adapt regular motorbikes into electric motorbikes proved to be a supportive factor. This approach ensured that spare parts for the electric motorbikes were readily available, mitigating one of the significant challenges encountered by other similar projects, such as TryKE in Kenya. While TryKE faced difficulties in sourcing spare parts from their supplier, I4SD was not hindered by such limitations. By converting standard motorbikes into electric versions with batteries charged via their solar system, I4SD maintained greater flexibility and accessibility to essential spare parts.

Photos 2a and 2b: Solar system at the Youth Centre (Source/©: Alexandra Hoppe 2025)

ENGIE: Educational Access Through Solar Solutions

The Educational Access Through Solar Solutions project aimed to expand education access in the Adjumani, Kamwenge, and Kiryandongo refugee settlements and host communities in Uganda by offering school fee loans that used solar home systems as collateral. However, ENGIE only obtained limited results in improving educational access through their services. Only **20 school fee loans** were issued by ENGIE until the moment of the final evaluation. It was evident during the desk study and interviews, that there was not a shared understanding on the role of the school fee loans in the pilot project: While the school fee loans were highlighted as the innovative part of ENGIE's proposal in the Terms of Reference of the final evaluation and in some interviews with the GIZ team in Uganda, they were not mentioned in the proposal and/or grant agreement of the pilot project. During the field visit, the representative of ENGIE HQ confirmed that the school fee loans had not been part of their original proposal: The school fee loans had been a service offered by ENGIE prior to the SCCIF, and ENGIE had already taken the decision to discontinue this service before their SCCIF proposal. Due to the feedback and emphasis of the SCC, that the school fee loans needed to be included as the innovative aspect of the pilot project, ENGIE agreed to reestablish the school fee loan for the pilot project. **Therefore, it became evident that the educational access had not been at the centre of the pilot project and received restricted attention** (see below in the description of major limiting factors).

The evaluation showed that the objective of ENGIE had been to strengthen energy access in the refugee settlements and host communities by offering solar systems at reduced prices and at special payment conditions. ENGIE was very successful in selling ultra-affordable solar kits, although less successful in establishing those special payment conditions. According to the figures reported in the Awardee update of April 2024, **over 1,000 customers** had obtained solar home systems at a discounted price and special payment conditions (see table 5). The focus group discussion with customers of the refugee settlement confirmed the usefulness of the solar kits for their private and their business use. However, according to the interviews conducted with the local ENGIE team and the ENGIE HQ representative, the special payment conditions tested in the pilot project were later modified and became less flexible. Those interviews revealed a divergence in perspectives regarding payment terms. At HQ level, the ENGIE representative highlighted the

difficulties experienced. According to their perspective, the payment conditions needed to be adapted to ensure payment of the customers. For instance, according to ENGIE HQ, a longer duration for rates to be paid led to a higher risk of customers not paying; in this vein, ENGIE HQ also reported in their Awardee Updates that in their perspective, short-term financing at not more than six months repayment was the financially safest way forward for settlements. At the same time, the local ENGIE team emphasized that longer terms were necessary to accommodate customers' financial realities and expressed a preference to retain these special conditions, which were ultimately modified to become less flexible.

Table 5: Figures reported by ENGIE in the Awardee update (April 2024)

Indicator		FY 2023 Q1 Jan - Mar	FY 2023 Q2 Apr - Jun	FY 2023 Q3 Jul - Sep	FY 2023 Q4 Oct - Dec	FY 2024 Q1 Jan - Mar
Training and Capacity Building: Number of people trained in technical energy fields supported by USG assistance	female	-	1	1	-	1
	male	-	2	-	-	2
Number of productive-use off-grid devices or systems sold as a result of USG/Power Africa assistance	Host communities	-	-	-	4	4
	Refugees	-	-	-	-	-
Electricity Access: Number of new grid and off-grid actual direct connections	Host communities	-	-	-	568	720
	Refugees	-	-	-	119	272

A major limiting factor for ENGIE in providing educational access through solar solutions in the Adjumani, Kamwenge, and Kiryandongo refugee settlements and surrounding host communities was the restricted prioritisation by ENGIE, which was represented in the internal process used to promote these loans. As depicted above, for ENGIE, the educational access had not been at the centre of the pilot project. This lack of attention and emphasis was reflected in the process used to promote the school fee loans. According to the ENGIE HQ representative, the call center in Kampala was responsible for reaching out to selected customers (those with a good payment history) in the refugee settlements and host communities to offer them school fee loans. However, contacting eligible customers per phone call proved difficult as many customers had multiple phone numbers, some of which were no longer in use. Instead of involving the local ENGIE team to contact eligible customers and promote the school fee loans, this process was adhered to. During the focus group discussions with customers who had purchased solar home systems, it became evident that many were unaware of the school fee loan option. When asked about it, customers expressed interest in and recognized the importance of this educational opportunity. Furthermore, local ENGIE staff noted **issues**

with the payment structure for the school fee loan. Instead of extending the repayment period and adding the loan quota to the amount owed for the solar system after its full payment, the school fee loan quota was added to the regular solar home system payment. This approach increased financial pressure on eligible customers rather than easing it.

Another limiting factor for ENGIE in providing educational access through solar solutions was the irregular payment behaviour of customers for their solar home system payment, which affected their eligibility for the school fee loans negatively. According to the quarterly Awardee updates and interviews with ENGIE staff, many customers failed to pay their portion of the cost for their solar home systems. As the company only offered school fee loans to customers with a solid payment history, this practice limited the pool of potential candidates for these loans. This had been the main reasons for the discontinuation of the school fee loans at ENGIE before the SCCIF, and ENGIE's initial unwillingness to include school fee loans into the concept of the pilot project. Furthermore, interviews with the local ENGIE team and focus group discussions with customers revealed that many **lacked a clear understanding of company policies**, particularly regarding payment, usage, and maintenance. When solar systems were deactivated due to missed payments, participants in the focus group highlighted technical issues, especially difficulties in receiving text messages containing customer-specific codes required for payment. Regarding maintenance, it became apparent that several customers were unaware that they needed to visit the ENGIE service centre for repairs. The focus group also raised concerns about the warranty conditions. This limited understanding of company policies negatively affected the functionality of the solar home systems and undermined customer trust in ENGIE as a service provider.

A key strength observed in the final evaluation was the positive reputation of ENGIE's products and services, as well as the strong rapport between the local ENGIE team and their customers in the refugee settlements and host communities. During the field visit to the Kiryandongo refugee settlement and focus group discussions with customers, it was clear that the local ENGIE team had established a solid reputation for its services and products. The customers interviewed reported that they chose ENGIE solar home systems because they had seen similar systems from ENGIE at the homes or local businesses of their neighbours, friends, or family members. Additionally, the local ENGIE team was recognized for maintaining good relationships with customers, who felt supported throughout the purchasing process, with the limitation of the aspect of the warranty depicted earlier.

PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming

The pilot project conducted by the consortium composed of PHB, Bright Life, and the Yelekeni SACCO aimed to combine solar energy and poultry farming to increase incomes and provide electricity. The consortium successfully introduced solar-powered solutions to enhance poultry farming practices within the Kiryandongo refugee settlement in Uganda. Based on Awardee updates and insights gathered through focus group discussions with consortium members and participating farmers, the final evaluation confirmed that the pilot project facilitated the distribution of **43 solar energy systems** and **9 incubators** to individual members of the Yelekeni SACCO, alongside the provision of **2 hatcheries** directly to the SACCO itself. Complementing this technological support, the Yelekeni SACCO, with support and capacity-building **trainings** from PHB, also organized and delivered a series of capacity-building trainings for their members, including modules focused on egg management and poultry care. In addition, the SACCO played an important role in facilitating access to poultry **vaccines**, further contributing to improved poultry health and productivity. The field visit confirmed that this integrated approach—combining access to renewable energy, appropriate farming equipment, vaccines and technical knowledge—contributed to a noticeable improvement in both the productivity and income levels of participating SACCO members.

During the field visit, participating farmers identified several positive unintended outcomes resulting from their involvement in the pilot project. One key benefit frequently mentioned was the enhanced **sense of security** afforded by the installation of lighting systems powered by the solar infrastructure introduced through the project. The presence of solar-powered lights in and around their premises not only improved visibility at night but also contributed to a reduction in theft and an increased sense of safety within the community. Another significant unintended outcome was related to their economic empowerment. Farmers reported that the income generated through their engagement in the pilot activities enabled them to allocate financial resources toward essential household needs—most notably, **education**. Those participants stated that they were now able to pay school fees for their children or other family members, which had previously posed a financial challenge.

However, members of the Yelekeni SACCO identified several areas for improvement related to equipment and marketing, which they viewed as essential for enhancing their operational effectiveness and sustainability. Concerning equipment, the SACCO members pointed to the need for improved ventilation within the incubators, noting that inadequate airflow prevented some chicks from drying properly, subsequently increasing their vulnerability to disease. Furthermore, while recognizing the value of the current incubators and hatcheries, they emphasized the need to expand the scale of their equipment by acquiring larger units. Such an expansion would not only increase their production capacity but also provide opportunities to generate additional income—for example, by offering more hatchery space for rent to other community members. In addition to equipment-related improvements, the SACCO expressed a desire for support in strengthening their branding and visibility. Specific suggestions included the provision of signage to enhance public recognition of their activities, as well as the opportunity to publicly acknowledge the support received from GIZ, thereby reinforcing their legitimacy and attracting further interest from potential partners or customers.

Table 6: Figures reported by the PHB-led consortium in the Awardee update (April 2024)

Indicator		FY 2023 Q1 Jan - Mar	FY 2023 Q2 Apr - Jun	FY 2023 Q3 Jul - Sep	FY 2023 Q4 Oct - Dec	FY 2024 Q1 Jan - Mar
Training and Capacity Building: Number of people trained in technical energy fields supported by USG assistance	female	-	-	-	-	-
	male	-	-	-	-	-
Number of productive-use off-grid devices or systems sold as a result of USG/Power Africa assistance	Host communities	13	20	25	25	26
	Refugees	3	4	6	9	9
Electricity Access: Number of new grid and off-grid actual direct connections	Host communities	13	20	25	25	26

Refugees	3	4	6	9	9

A major supporting factor in the successful implementation of the pilot project was the inclusion of a committed and well-established local partner, the Yelekeni Farmer SACCO. As a trusted community-based organisation, the Yelekeni SACCO played a pivotal role in mobilizing participants, facilitating access to solar energy systems and poultry equipment, and ensuring the sustainability of project interventions. The involvement of the Yelekeni SACCO and their members enhanced community buy-in and enabled more effective coordination and follow-up with beneficiary farmers.

Photos 3a and 3b: Solar system and solar-powered hatchery at the Yelekeni SACCO (Source/©: Alexandra Hoppe 2025)

Akvo International SMC Limited: Solar-Powered Water Kiosk

The SCCIF-funded pilot project conducted by Akvo aimed to establish a solar-powered water kiosk to provide clean drinking water to refugees in the Rhino Camp in Uganda. Akvo successfully constructed the water kiosk and provided training in operation and maintenance. By the time of the final evaluation, the organisation had installed water dispensers equipped with pre-charged smart taps, and the water treatment plant was being powered by a solar system that Akvo had set up. In addition to the construction of the solar-powered water kiosk, Akvo had also trained 15 people of the Rhino Camp in the operation and maintenance of the water kiosk (see table 7). During the field visit in Uganda, the evaluation team confirmed that the infrastructure was in place and fully functional.

However, for the kiosk to operate, Akvo and GIZ need to appoint a local entity to manage it. Interviews with both the GIZ team and the local Akvo team revealed that the selection of a local SACCO to manage the water kiosk had not yet been finalised. Although Akvo had previously engaged with a local SACCO during the planning phase of the pilot project, the relocation of the water kiosk to a different part of the Rhino Camp than initially planned required adjustments in their partnership structure and the selection of a new local SACCO. At the time of the evaluation, there was a lack of alignment between the local Akvo team and GIZ Uganda regarding the responsibility for selecting the managing local SACCO. This misunderstanding was largely due to internal turnover within the local Akvo team, which resulted in a gap in knowledge about earlier agreements. During the hybrid debriefing meeting in Uganda at the end of the field visit, the Akvo HQ

representative and the GIZ team clarified that Akvo would be responsible for selecting and commissioning the local SACCO as part of their pilot project obligations. GIZ retains formal ownership of the water kiosk infrastructure and reserves the right to decide whether and under what conditions ownership will be transferred to the selected SACCO. Consequently, once the local SACCO is selected and trained, the solar-powered water kiosk is expected to become fully operational.

Table 7: Figures reported by Akvo in the Awardee update (April 2024)

Indicator		FY 2023 Q1 Jan - Mar	FY 2023 Q2 Apr - Jun	FY 2023 Q3 Jul - Sep	FY 2023 Q4 Oct - Dec	FY 2024 Q1 Jan - Mar
Training and Capacity Building: Number of people trained in technical energy fields supported by USG assistance	female	-	4	5	7	7
	male	-	5	6	8	8
Number of productive-use off-grid devices or systems sold as a result of USG/Power Africa assistance	Host communities	-	-	-	-	-
	Refugees	-	-	-	-	-
Electricity Access: Number of new grid and off-grid actual direct connections	Host communities	-	-	-	-	-
	Refugees	-	-	-	-	-

A main limiting factor for Akvo in establishing the solar-powered water kiosk in the Rhino Camp was related to the procurement process for the necessary equipment. As indicated in the quarterly Awardee updates and confirmed through interviews and focus group discussions conducted during the field visit, the construction of the water kiosk was delayed for a prolonged period. The reason for the delay were logistical challenges, including issues with the timely delivery of equipment and coordination with suppliers. Furthermore, during the procurement of the equipment, the originally planned site for the water kiosk within the Rhino Camp was modified. This change in location within the Rhino Camp delayed installation further and affected the community engagement with the pilot project, as it was not possible to continue with the local SACCO originally envisioned for managing the water kiosk.

In addition, another limiting factor was Akvo's lack of awareness regarding the specific request processes within the Rhino Camp. As discussed by both Akvo and GIZ team members during the field visit, this gap in knowledge referred to formal and informal procedures. For instance, Akvo was not fully aware of the formal process for engaging with local authorities of the Rhino Camp, including obtaining the necessary permissions and ensuring the involvement of relevant stakeholders from the refugee settlement community. This

led to delays in securing the necessary approvals and coordinating effectively with the local authorities. Additionally, Akvo was not familiar with the informal processes at Rhino Camp, such as consultation and engagement with local leaders, which hindered Akvo's ability to navigate the local context efficiently.

Photos 4a, 4b and 4c: Clean water supply at the Rhino Camp (Source/©: Alexandra Hoppe 2025)

Assessment of the Effectiveness Criterion

To conclude, the SCCIF successfully facilitated the temporary introduction of private sector-led, innovative solutions aimed at improving basic service delivery and enhancing economic opportunities for displaced populations and crisis-affected host communities – aligning with the fund's core objective (effectiveness). However, while all awardees succeeded in temporarily establishing their services and creating economic opportunities for the target groups, **outcomes varied across projects**. Only the consortium led by PHB fully achieved the intended objectives, including the planned scale and functionality of their intervention. The other pilot projects implemented by TryKE, I4SD, ENGIE and Akvo demonstrated innovative potential but fell short of their intended outcomes due to contextual, operational, or institutional constraints.

4.3 Impact

The **impact** analysis of SCCIF-funded pilot projects assesses the (potential) long-term effects of the SCCIF on refugee settlements and host communities, beyond immediate outputs and short-term outcomes. This evaluation examines whether the SCCIF has contributed and/or could contribute to sustainable improvements in (1) health, education, poverty alleviation, (2) economic development and/or resource mobilisation (especially for women of the refugee and host communities) as well as (3) low carbon development paths. The evaluation also focused on identifying any unintended consequences that may have emerged and/or could emerge.

Overall, the SCCIF has shown, to some extent, contribution to improved economic opportunities and low-carbon development paths in refugee settlements and host communities in Kenya and Uganda. The SCCIF has also aimed to improve the **health** of the residents and has contributed, to some extent, to improved nutrition in a refugee settlement and host community in Uganda. It is plausible that the SCCIF will contribute to further positive long-term effects on health if I4SD continues its activities and/or if Akvo inaugurates the water kiosk. Finally, the SCCIF has also aimed to improve the **education** of the residents of refugee settlements and host communities. However, only limited effects on education were identified.

In contrast to the other chapters, the impact chapter is **structured around the intended impacts** rather than individual pilot projects, reflecting the fact that the impact criterion is **assessed at the level of the SCCIF fund** and not at the project level.

The SCCIF aimed to contribute to long-term improvements in poverty alleviation, economic opportunities and resource mobilisation (especially for women) in refugee settlements and host communities in Kenya and Uganda. During the evaluation, several positive effects were identified, mostly in Uganda. But it was also clear that some innovative solutions were discontinued or paused and could not contribute to long-term effects. The desk study as well as the interviews and focus group discussions conducted in the field visit showcased that all five pilot projects implemented activities to support the income-generation of the population of the refugee settlements and host communities in Kenya and Uganda. In addition, the evaluation identified a high share of **women** in the pilot project activities, for instance in capacity-building activities (see tables in chapter 4.2). The end users interviewed in the field studies confirmed that contribution, highlighting how they had improved their economic activities due to the SCCIF-funded pilot projects. For instance, the farmers participating in the PHB-led pilot projects emphasized how the solar-powered equipment and capacity-building activities improved their productivity. However, although all pilot projects had positive effects on income-generation, some effects were not durable over time due to different limiting factors. As depicted in the effectiveness analysis in Chapter 4.2, TryKE discontinued its innovative solution in Kenya. At the moment of the evaluation, only one electric vehicle was still in place in Kakuma-Kalobeyei, supporting the economic activities of a local vendor. In addition, in the Nakivale Refugee Settlement in Uganda, income-generating activities of the I4SD pilot project are currently paused due to the overloaded solar system.

The SCCIF also aimed to contribute to low-carbon development paths in refugee settlements and host communities in Kenya and Uganda by promoting solar-powered innovative solutions. Through the pilot projects, the SCCIF was also able, to some extent, to achieve long-term effects in refugee settlements and host communities, mostly in Uganda. The desk study and the field visit showcased that all five pilot projects aimed at promoting solar energy and/or different solar-powered basic service delivery. The target groups interviewed confirmed their increased awareness of the benefits of solar energy and their utilisation of the solar systems and/or solar-powered innovative solutions of the pilot projects instead of traditional solutions. For instance, over 1,000 residents of the Adjumani, Kamwenge, and Kiryandongo refugee settlements and host communities in Uganda obtained their **own solar systems** through ENGIE. In the same vein, approximately 50 members of the Yelekeni SACCO in Kiryandongo benefited from solar systems and solar-powered incubators. In the field visit, local business owners and farmers confirmed that they were using that solar equipment regularly instead of other solutions. They also confirmed that they and other community members were exchanging information on the benefits of solar powered solutions, therefore spreading **awareness** for the benefits of solar powered solutions among their community. The raised awareness was also

confirmed by target groups involved in other pilot projects. For instance, motorbike riders and local venders involved in the e-mobility activities of TryKE and/or I4SD were highly aware of the benefits of solar-powered mobility and confirmed their preference for electric motorbikes, as it allowed them to be independent from fuel availability. As these activities were discontinued/paused, due to their increased awareness of the benefits of solar-powered equipment, the motorbike riders emphasized their hope for the activities to continue and a local vender expressed their strong interest in purchasing one of the electric tricycles.

The SCCIF also aimed at contributing to long-term improvements of the health of the residents of refugee settlements and host communities in Kenya and Uganda. At the moment of the evaluation, effects on nutrition in Uganda were identified. However, it is plausible that the SCCIF will contribute to further long-term effects on health if I4SD continues its activities and/or if Akvo inaugurates the water kiosk. The desk study and the field visit showcased that several pilot projects aim to improve the health of the residents of the refugee settlements and host communities they operate in. At the moment of the evaluation, the SCCIF is already contributing to improve food security and **reduce malnutrition** in the Kiryandongo settlement in Uganda: Through improved poultry production, the Yelekeni SACCO farmers are improving the access of the population to eggs and meats which are rich in high-quality proteins. Further long-term effects on the health of refugees and host community members are to be expected if the SCCIF-funded pilot project I4SD can again provide the **Health Centre** of the Rubondo area of Nakivale Refugee Settlement in Uganda with electricity. As depicted in the effectiveness analysis, if I4SD is able to upgrade their solar system, they can again provide the Health Centre with energy access. In the interviews conducted with representatives of the Health Centre, they confirmed that while they were able to obtain energy access by I4SD, their health care service improved notably as they could use digital tools and operate without interruptions. As the Health Centre was not part of the original project concept, the evaluation identified this contribution as a potential unintended positive long-term effect. Finally, it was evident that the strongest long-term contribution to the health of the end users is to be expected from the **clean water** provided by the water kiosk to the residents of the Rhino Camp in Uganda (Akvo). Once operating, it will provide residents with a long-term access to filtered water at low pricing instead of unfiltered water from the water holes close to the Rhino Camp. It is highly plausible that the long-term access to filtered water will contribute notably to the increased health of the residents of the Rhino Camp.

The evaluation also focused on potential long-term contributions of the SCCIF-funded pilot projects to the education of the residents in the refugee settlements and host communities in Kenya and Uganda. However, only limited effects were identified. The main innovative solution to contribute to an improved education had been the school fee loans of the ENGIE pilot project. As depicted in the effectiveness analysis in Chapter 4.2, however, for the Awardee, the school fee loan played a minor role during their pilot project implementation and only 20 school fee loans were issued. The analysis of the long-term effect of these 20 loans was restricted due to the lack of available data on their utilisation and results.

Assessment of the Impact Criterion

To conclude, the SCCIF has contributed, to some extent, to some of its intended impacts. The evaluation showed that the SCCIF has had positive long-term effects in **poverty alleviation, economic opportunities and resource mobilisation** (with a particular focus on **women**). But it was also clear that some innovative solutions were discontinued or paused and could not contribute to long-term effects. When looking at **low-carbon development paths**, it became evident that the SCCIF was also able, to some extent, to achieve long-term effects in refugee settlements and host communities, mostly in Uganda. All pilot projects had positive effects on the promotion of solar power, either through solar equipment, or through strengthening the awareness of their target groups. The SCCIF also aimed at contributing to long-term improvements of the **health** of the residents of refugee settlements and host communities. The evaluation identified positive effects on

nutrition in Uganda. It is plausible that the SCCIF will contribute to further long-term effects on health if I4SD continues its activities and/or if Akvo inaugurates the water kiosk. The evaluation also focused on potential long-term contributions of the SCCIF-funded pilot projects to the **education** of the residents in the refugee settlements and host communities in Kenya and Uganda. However, as for ENGIE, school fee loans played a minor role compared to the solar kits, only limited effects were identified.

4.4 Sustainability

The **sustainability** of SCCIF-funded pilot projects assesses the extent to which their benefits will continue beyond the project's duration. This criterion examines whether the interventions have been institutionalized within local systems, whether they have built sufficient local capacity to ensure long-term impact, and whether continuation plans are in place to maintain and expand project benefits after SCCIF funding ends. In this regard, the analysis of sustainability also refers to incentive structures as they determine whether stakeholders are motivated to maintain project outcomes after external support ends.

Overall, the sustainability of the SCCIF varies significantly across the pilot projects, reflecting differences in continuation strategies, local capacity-building efforts, and degrees of institutional integration. **Continuation Plans** were most robust in cases where implementing partners had a pre-existing presence and strong local networks. The consortium of PHB, BrightLife, and the Yelekeni SACCO presents a particularly strong example. There, farmers have already begun expressing interest in scaling up their operations. **Local capacity building** was also a central component across most pilot projects, though its depth and integration varied. In this regard, TryKE, I4SD and Akvo trained technical operators and/or mechanics on how to operate, maintain and to some extent repair their equipment. This was especially the case for electronic motorbikes. Finally, **institutionalisation of project interventions within local systems** was strongest in contexts where local structures were effectively leveraged or embedded from the outset.

TryKE: Sustainable mobility solution

The continuation of project benefits in the Kakuma-Kalobeyei settlement and host community beyond the SCCIF funding period has been limited, primarily due to a range of external and internal challenges faced during implementation. While the sustainable mobility solution introduced by TryKE was well-received by many of the intended beneficiaries and demonstrated a high degree of relevance, the continuation of core services in Kakuma-Kalobeyei had not been achieved at the time of the final evaluation. TryKE's original exit strategy was based on the assumption that users – particularly motorbike riders and local business owners – would generate sufficient income from operating the electric motorbikes and electric tricycles to cover the leasing costs. In this way, the business model was expected to become self-sustaining over time. The motorbike riders interviewed confirmed that they would have been motivated to continue to operate the e-motorbikes within the leasing model particularly due to **financial incentives**, such as cost savings and income generation. These financial incentives were also confirmed by the representative of the farmers' association, who did not want to participate in the leasing model because they preferred investing in ownership but were very interested in e-mobility due to the perceived profitability. However, TryKE's operations in the Kakuma-Kalobeyei settlement and host community were interrupted before the end of the pilot project duration, by the external and internal limiting factors depicted in the effectiveness analysis (see chapter 4.2).

In response, TryKE and GIZ revised the continuation strategy and planned to donate most of the remaining equipment in Kakuma-Kalobeyei to the Don Bosco school, with the intention of supporting vocational training for youth. While the donation was still pending confirmation at the time of the final

evaluation, this plan aligns moderately with local capacity-building needs but is not integrated into formal local policy or development strategies. Additionally, the GIZ team considered donating two electric tricycles to the local businesses that had participated in the pilot. The local business owner interviewed during the field study had repeatedly expressed strong interest in receiving an electric tricycle to support ongoing commercial activities.

In addition, the pilot project only made a modest contribution to local capacity development. Most notably, **two local mechanics** from the association of motorbike riders were trained in the maintenance and repair of electric motorbikes and tricycles. During the focus group discussions, both individuals confirmed their ability and intention to continue applying these technical skills beyond the project period, which represents a positive result in terms of human capacity development.

As a result, there is limited evidence that the TryKE pilot has been integrated into local systems, structures, or policies in the Kakuma-Kalobeyei settlement and host community in a way that would ensure long-term impact or institutionalization. Acknowledging these challenges, TryKE has decided to focus its operations in Nairobi for the time being, aiming to refine its approach in a less complex environment. While the team remains committed to bringing sustainable mobility solutions to refugee settlements, future engagements in such settings will be based on an adapted implementation strategy. TryKE has also expressed a strong interest in learning from the experiences of other awardees, such as I4SD (see chapter 4.7).

I4SD: Digital Hub and E-Mobility

In the case of the pilot project implemented by I4SD in the Rubondo area of the Nakivale Refugee Settlement, the continuation of project benefits is currently on hold due to technical and financial constraints. While I4SD remains present on the ground and has indicated its intention to continue operations, the immediate sustainability of key components – namely the Digital Hub and the E-Mobility service – depends on resolving the current overload and subsequent shutdown of the solar energy system.

The original continuation plan focused on strengthening the institutional and financial capacity of the local Youth Centre, which hosted the Digital Hub, with the aim of enabling it to independently manage the cost of electricity and internet connectivity through revenue-generating activities. Furthermore, I4SD had intended to replicate its model in three additional locations within the settlement, thereby scaling the innovation. However, at the time of the final evaluation, this expansion was contingent upon the acquisition of new external funding, which had not yet been secured. Regarding the Youth Centre's motivation to pursue this plan, its representative confirmed that access to energy and connectivity was seen as offering both **financial and capacity-building incentives**, particularly for supporting vocational training courses. The temporary suspension of service delivery weakened the incentives of the Youth Centre, as it was no longer accessing the energy and connectivity benefits for its activities. Still, the Youth Centre expressed a continued interest in cooperating with the I4SD project to regain access to those benefits once the solar energy system was back in place.

Furthermore, the alignment of the continuation plan with local capacities and governance frameworks appears mixed. On one hand, the strategy of partnering with an existing local structure – the Youth Centre – demonstrates contextual relevance and an intention to embed the intervention within existing community frameworks. On the other hand, the lack of formalized payment agreements with key stakeholders such as the Health Centre and the Office of the Prime Minister – both supported by UNHCR – raises questions about the financial feasibility of sustaining the energy system and the degree to which broader institutional support had been secured. The absence of these agreements undermines the alignment between the continuation strategy and the practical realities of policy and funding arrangements in the refugee settlement.

Moreover, the SCCIF-funded pilot project contributed to capacity development in several areas, albeit to a limited extent. The **Youth Centre** – although not yet financially self-sustaining – gained exposure to digital services and benefited from temporary access to electricity and internet, which supported the delivery of vocational training. These experiences have likely increased the Centre's understanding of managing ICT-based services, although their long-term application is restricted by the current interruption in power supply. In addition, another achievement was the training provided to local **motorbike riders** on the use of electric motorbikes. These skills remain with the riders and represent a lasting benefit of the intervention, potentially contributing to future engagement in e-mobility initiatives.

ENGIE: Educational Access Through Solar Solutions

It was evident that the customers want to keep using their obtained solar kits as they perceive the benefit, among others, for their income generation (financial incentive). This perception of financial benefits is strengthened by their observation that their neighbours and family members are also obtaining ENGIE solar kits, which creates a sense of community buy-in into the technology and constitutes a **social/cultural incentive**. In addition, customers perceive their access to support from ENGIE (**capacity-based incentive**).

In this regard, the sustainability of ENGIE's pilot project in the Adjumani, Kamwenge, and Kiryandongo refugee settlements and host communities is supported by the awardee's ongoing presence as a service provider. As ENGIE continues its commercial operations in these areas, the solar kits distributed during the pilot project phase are expected to **remain functional**, assuming that appropriate maintenance practices are followed as part of their warranty policies. This reflects a continuation plan that is embedded within ENGIE's broader commercial operations. The durability of the solar kits does, however, also depend upon a strengthened awareness and knowledge of the customers regarding the warranty policies and repairing processes of their solar kits (see above).

However, not all components of the initial pilot project concept are being maintained post-funding. The **special payment schemes** designed to lower the entry points and increase affordability for residents of the refugee settlements and host communities have already been scaled back, and **school fee loans** – initially included to promote educational access – were discontinued before and again during the implementation of the pilot project. As such, these components are not part of the long-term continuation plan and will not be sustained.

The original exit strategy of the pilot project aimed to establish sustainable market distribution networks supported by strengthened local operational capacity. The approach depicted in the grant agreement aligns with broader market-based energy access frameworks and reflects an effort to institutionalize solar energy provision within their existing private sector structures. Nonetheless, the phasing out of special payment schemes as financial incentives may limit access for the residents of the refugee settlement and host communities, calling into question the inclusivity of the long-term continuation plan.

In addition, the pilot project contributed to capacity-building through the development of ENGIE's local teams. By expanding their reach within the refugee settlements and host communities, ENGIE has made progress in embedding service provision within these challenging local contexts. However, **further capacity development is required**, particularly in the area of customer support and awareness-raising on aspects such as warranties and repairment processes. Interviews and focus group discussions indicated that customers often lacked critical knowledge about repair procedures, guarantees, and general usage conditions. Misconceptions in these areas risk undermining the durability of the results of the pilot project, such as the longevity of the solar kits, as customers may not seek timely repairs. Therefore, while institutional capacities within ENGIE have been strengthened, building capacities and strengthening the awareness of ENGIE's customers remains a key area for improvement.

PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming

The consortium led by PHB has developed a robust continuation plan grounded in the integration of project outcomes into the ongoing operations of the Yelekeni SACCO. As the SACCO continues to operate within the Kiryandongo refugee settlement and host community, the benefits of the pilot – particularly the use of solar energy for poultry farming – are expected to be **sustained** beyond the duration of SCCIF funding. A key component of the exit strategy involves leveraging income from the hatchery to finance routine maintenance, re-investments, and the operational costs of the solar system.

PHB and Bright Life have furthermore provided ongoing support to Yelekeni SACCO, thereby strengthening its institutional capacities. Farmers are already applying their knowledge and proactively requesting further investments in equipment, particularly in the expansion of hatcheries and incubators. These demands reflect a high degree of ownership and ambition among beneficiaries to increase productivity and further scale their income-generating activities. However, questions around the long-term strategy for equipment maintenance and repair remain and will need to be clearly addressed to avoid service disruptions.

The integration of the pilot project into the structure and operations of the Yelekeni SACCO represents thereby a strong example of institutionalization. By anchoring the interventions within an existing and community-based institution, the project has been embedded into local systems in a way that promotes ownership and long-term sustainability. The SACCO model itself provides a well-suited platform for scaling up economic activities, managing collective investments, and ensuring local governance over resources and services. Moreover, the consortium's approach to maintaining a continuous presence in the settlement, further supports institutionalization. This ongoing engagement allows for continued monitoring, reinforcement of practices, and responsive support, which are critical to ensuring that outcomes are not only sustained but also scaled where possible.

Akvo International SMC Limited: Solar-Powered Water Kiosk

The long-term sustainability of the pilot project conducted by Akvo in the Rhino Camp refugee settlement depends upon the successful operationalisation of the solar-powered water kiosk. At the time of the final evaluation, while the water kiosk was fully installed and functional, its operationalisation and therefore the potential continuation of the results and benefits of the pilot project remained contingent upon the selection and commissioning of a local SACCO to manage daily operations. According to the Akvo team and GIZ project team, relevant **incentives** for that local SACCO to participate will include the financial incentives of generating income for the SACCO members, capacity-based incentives as they are to be trained, as well as social incentives as they will be perceived as responsible for managing the water kiosk within the community. Once the local SACCO is commissioned and properly trained, the pilot project has the potential to ensure durable access to clean and filtered water for the local community of the Rhino Camp. However, the sustainability of the results will depend on how effectively the management and financial model is implemented. This includes the pricing strategy, revenue collection, and maintenance. In this regard, during the field visit, it became clear that an important **risk** to the pilot project's success and sustainability is the potential for resale of water at higher prices, which could create inequities in access and restrict the intended benefits of the pilot project.

Moreover, the pilot project contributed positively to local capacity building. Akvo successfully trained technical operators in the operation and maintenance of the water kiosk. According to the interview with the local Akvo team member, the residents trained possess the necessary skills to oversee day-to-day technical functions and address minor maintenance issues, which supports the sustainability of the technical operations. However, for this capacity to be fully leveraged, it must be accompanied by an operational management structure that allows these trained individuals to work within a functional institutional framework.

At the time of the final evaluation, the institutionalisation of the solar-powered water kiosk remained incomplete. While the infrastructure is in place and selected residents have been trained in the operation and maintenance, the pilot project has not yet been anchored to a local organisational structure, such as a local SACCO, responsible for long-term operation and management. Nevertheless, there is a clear pathway toward such institutionalisation if the selection, commissioning and training of a local SACCO are finalised in a timely manner and aligned with community structures and the broader water governance framework in the Rhino Camp. Once this is achieved, and provided the local SACCO, the pilot project has the potential to be durable over time.

Assessment of the Sustainability Criterion

To conclude, due to contextual, operational or institutional constraints, the sustainability of the SCCIF-funded pilot projects varies significantly. The evaluation showed that the innovative solutions presented by the pilot projects are most durable where local structures were effectively leveraged or embedded from the outset, for instance, in the partner structure. Importantly, sustainability challenges were not primarily linked to a lack of incentives (as target groups generally demonstrated a strong willingness to continue engaging with the services, especially where clear financial benefits were perceived) nor to an absence of ownership, with the notable exception of the ENGIE school fee loans and the Akvo pilot which was to select the local SACCO. Rather, it was the combination of internal and external challenges that interrupted or prevented service delivery (see Chapter 4.2), ultimately undermining the continuity of results.

4.5 Efficiency

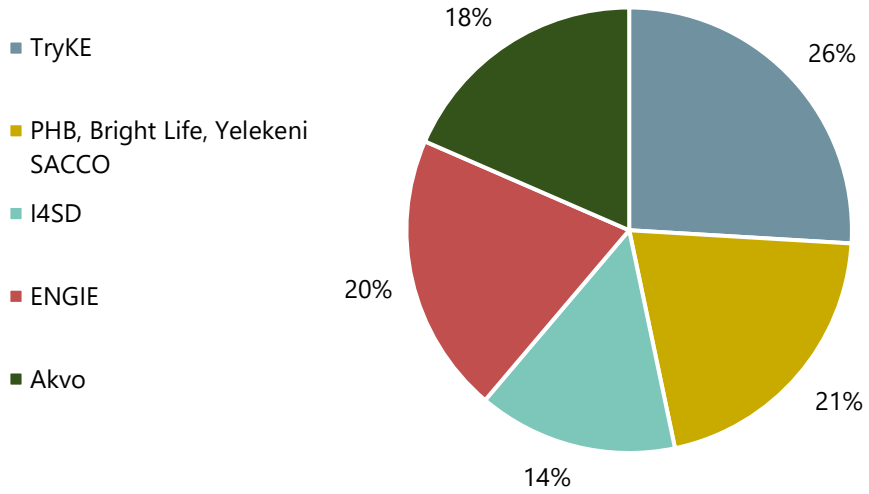
The **efficiency** of SCCIF-funded pilot projects assesses how well resources – financial, human, and operational – were utilized to achieve intended results. This criterion examines whether pilot project activities were executed in a timely and cost-efficient manner, whether outputs were maximised in comparison to inputs, and analysed whether management processes were well-structured and responsive.

Overall, the SCCIF piloted a variety of innovative solutions to improve basic services in refugee and host communities in Kenya and Uganda, with varied outcomes in terms of cost-efficiency. The distribution of funds did not directly align with outcomes as some lower-budget projects were more cost-efficient than some higher-budget projects. The distribution of funds is depicted in Table 8 and Figure 3, while **cost-efficiency is described in the subsequent sections**. While ENGIE (20 %) showed high cost-efficiency in terms of the solar systems, they did not focus on the key component of school fee loans which posed an important limitation to their cost-efficiency. The pilot projects of TryKE (26 %) and I4SD (14 %) were assessed as cost-efficient with positive results but facing important operational challenges that led to the discontinuation/pause of their activities. The pilot projects of the PHB-led consortium (21 %) and Akvo (18 %) showed limited cost-efficiency (due to high unit costs and/or implementation results (not yet operational).

Table 8: Distribution of funds

#	Awardee	Project	Grant (EUR)	Grant (%)
Kenya				
1	TryKE	Sustainable mobility solution	EUR 106,551.25	26 %
Uganda				
2	PHB, Bright Life and Yelekeni SACCO	Solar-Powered Poultry Farming	EUR 85,253.50	21 %
3	I4SD	Digital Hub and E-Mobility	EUR 59,505.00	14 %
4	ENGIE	Educational Access Through Solar Solutions	EUR 83,538.00	20 %
5	Akvo	Solar-Powered Water Kiosk	EUR 75,852.40	18 %

Figure 3: Distribution of funds



TryKE: Sustainable mobility solution

According to the grant agreement, TryKE was the recipient of the grant of **up to EUR 106,551.25** which represented **26 %** of the budget allocated to the pilot projects part of this evaluation. The grant was made available for the period **from April 2022 to July 2023**.

Key infrastructure procured for the Kakuma-Kalobeyei settlement and host community included eleven electric motorbikes and five electric tricycles, the batteries and the respective solar systems for the participants. In addition, in Nairobi, TryKE had procured four electric motorbikes and developed the application tuma.today. Together, they represented EUR 56,000.00 (52 %) of the allocated budget of the grant agreement. Within two budget changes, part of this budget was reallocated, for instance to the development of the tuma.today application. This equipment enabled several meaningful outcomes in the Kakuma-Kalobeyei settlement and host community: (1) Reduced fuel expenditures for motorbike riders and local businesses, and (2) increased income for vendors through improved access to more distant markets. By April 2024, 5 riders were involved in Kakuma-Kalobeyei leasing motorbikes. From two local venders in Kakuma-Kalobeyei, in April 2024, one vendor was still involved in leasing a tricycle (see chapter 4.2).

During the focus group discussion with motorbike riders in Kakuma-Kalobeyei, they emphasized that the daily leasing fees (KES 400 for electric motorbikes and KES 600 for electric tricycles) were more affordable compared to conventional fuel expenses. In June 2023, the average price of petrol in Kenya stood at KES 184.4 per litre (Statista, 2023). Considering that most motorcycles consume between two and three litres per 100 kilometres (ADAC, 2024), fuel costs would be roughly equivalent to the leasing fee at that distance. When driving more than 100 kilometres per day, a common occurrence for delivery services and mobile vendors in rural areas, the leasing fee becomes significantly more cost-efficient than fuel. Importantly, motorbike riders and local vendors were no longer dependent on the availability or fluctuating price of petrol, enabling them to operate their businesses independently of fuel shortages or supply disruptions. This reliability provided more predictable income and operational stability, particularly valuable in remote areas such as Kakuma-Kalobeyei. However, motorbike riders still faced challenges in meeting leasing fees due to inconsistent customer demand. The desk study and the interview with the TryKE representative reported accumulated debt to TryKE because ride orders were low. To address this and further support motorbike riders in generating income, TryKE developed the tuma.today application which was piloted in Nairobi and intended for Kakuma-Kalobeyei. This application integrated popular mobile money applications and could potentially improve utilisation and revenue generation over time.

Comparing the **revenue generated** for Kakuma-Kalobeyei and for Nairobi, the revenue per electric motorbike in Kakuma-Kalobeyei is KES 2,671.88 and in Nairobi KES 92,442.50. This large gap suggests that, while the project had more electric motorbike in Kakuma, the vehicles there were less productive or less utilized than those in Nairobi. This implies that the return on investment per electric motorbike in Kakuma-Kalobeyei was much lower, and that **Kakuma-Kalobeyei was less cost-efficient** for electric motorbike services compared to Nairobi. This is also in line with implementing projects in more challenging context such as a rural refugee settlement and host community. **Finally, the external and internal challenges faced led to an early end of the activities in Kakuma-Kalobeyei** (see chapter 4.2).

Looking at the timeliness of the implementation, TryKE faced notable delays, primarily concerning the acquisition and timely delivery of electric motorbikes and tricycles. While the motorbikes and tricycles were successfully secured, delays in production and shipping, driven by external factors, were main bottlenecks and significantly impacted the project timeline. For instance, according to the Awardee update from September 2022, the manufacturer in China experienced substantial disruptions, including COVID-19 lockdowns, extended holidays, and electricity rationing, all of which contributed to delays in fulfilling the order.

In addition to these supply chain challenges, TryKE encountered significant budgeting issues. External factors, such as fluctuations in exchange rates, resulted in increased commodity prices, as noted in the April 2022 Awardee update. Furthermore, internal challenges in financial planning, particularly regarding product research and resource allocation, compounded the issue and led to further inefficiencies in the implementation of the pilot project. The lack of adequate financial expertise, exacerbated by staff turnover, made it difficult for TryKE to manage project resources effectively. As a result, the organisation identified the need for additional funding in 2023 to cover budget shortfalls and support ongoing project activities.

Despite these challenges, TryKE demonstrated adaptability in managing its resources. The organisation effectively reallocated funds to ensure critical project components continued despite financial constraints. Additionally, the decision to relocate operations to Nairobi, coupled with an increase in revenue, allowed TryKE to shift to operating from its own income streams starting in July 2023, as detailed in the Awardee update for the period October-December 2023. This shift represented a strategic adaptation to financial limitations, ensuring the sustainability of key activities within the humanitarian context of the Kakuma-Kalobeyei settlement while mitigating the impact of the earlier resource challenges.

I4SD: Digital Hub and E-Mobility

According to the grant agreement, I4SD was the recipient of the **grant of up to EUR 59,505.00** which represented **14 %** of the budget allocated to the pilot projects part of this evaluation. The grant was made available for I4SD for the period **from February 2023 to December 2023**.

Key infrastructure procured included a solar power system (EUR 8,245), e-mobility equipment – two electric motorcycles and batteries (EUR 23,500) – and an internet modem. Together, they represented 53 % of the allocated budget. This equipment enabled three core outcomes: (1) continuous electricity access for the Youth Centre and other stakeholders such as the Health Centre, (2) improved internet connectivity supporting the vocational training of the Youth Centre, and (3) access to e-mobility for motorbike riders. By April 2024, 56 students had graduated from the vocational training courses facilitated through the Youth Centre during the duration of the pilot project, highlighting direct educational impacts. Additionally, six motorbike riders were trained in the operation and maintenance of the electric motorbikes, contributing to sustainable local mobility and capacity building. Uganda's average **electricity cost** is considered among the highest in Sub-Saharan Africa. In 2023, electricity in Uganda was priced at USD 163.58/MWh (Climatescope by Bloomberg NEF, 2024). The solar system avoided ongoing power costs; for example, powering ten laptops (30-70 watts, according to Marsh, 2024) for vocational training five days a week would cost roughly USD 170 per year using grid power. **Internet access**, likewise, remained costly in Uganda in 2023 at an average of USD 1.32/GB (Statista, 2025), reinforcing the value of subsidised internet connectivity for rural communities. Using the cost of the solar system and internet connectivity (EUR 8,245), estimates the **cost per graduate** of the vocational training of the Youth Centre at around EUR 147. Therefore, the I4SD intervention was more cost-efficient. From an **equity perspective**, the I4SD pilot project directly benefited the residents of the Rubondo area of Nakivale Refugee Settlement by providing them with basic services and supporting capacity-building opportunities.

Regarding the timeliness of the I4SD activities, despite initial challenges in international procurement that caused some delays, the project successfully implemented the service within the planned timeline. Furthermore, the team effectively adapted to increased demand by upgrading the solar systems multiple times, ensuring the continued operation and scalability of the service. However, at present, the system is once again maxed out due to ongoing high demand.

Additionally, I4SD faced higher-than-expected costs in the case of their equipment but could save costs regarding spare parts. The higher costs for the **electric motorbikes** were due to their prototype status and because they were locally converted by I4SD team members. Unexpected costs were increased as both electric motorbikes had to be replaced due to accidents or misuse by the motorbike riders. However, the local conversion also offered the benefit of reducing dependency from specific suppliers for spare parts, which had been a limiting factor for the efficiency in the TryKE pilot project in Kenya. Over time, the I4SD team learned that procuring batteries and spare parts at scale would be essential for managing costs effectively. Additionally, the **solar systems** had to be upgraded several times due to being overwhelmed by high demand. Despite these adjustments, the I4SD team faced ongoing issues with **non-payment** from customers such as the Health Centre and the Office of the Prime Minister, further complicating the financial sustainability and efficiency of the project.

ENGIE: Educational Access Through Solar Solutions

According to the grant agreement, ENGIE was the recipient of the **grant of up to EUR 83,538.00** which represented **20 %** of the budget allocated to the pilot projects part of this evaluation. The grant was made available for ENGIE for the period **from May 2023 to November 2023**.

Key infrastructure procured for the Adjumani, Kamwenge, and Kiryandongo refugee settlements included 1,170 ultra-affordable solar kits, for EUR 68 each (EUR 79,560.00). The solar kits were solar home systems with reduced end-user prices with extended repayment periods for refugee households. Together, the solar kits procured represented 95 % of the allocated budget. In addition, the pilot project also was to offer school fee loans in the refugee settlements. This equipment enabled two core outcomes: (1) support for households and/or small businesses via energy access (for instance, refrigeration, lighting) and (2) improved education access. By April 2024, 992 customers had bought the ultra-affordable **solar kits**: 720 customers from host communities and 272 customers from refugee settlements. At the same time, by April 2024, only 20 customers with good repayment records had also benefitted from **school fee loans**.

By the time of the final evaluation, ENGIE had achieved its intended target value for the sold solar kits. However, it had reduced the special payment conditions that had initially made the kits more accessible to low-income customers. While ENGIE met its distribution targets for solar kits, the distribution skewed significantly toward host community members (73%) rather than residents from the refugee settlements (27%). According to the International Renewable Energy Agency (IRENA), in 2022, the average market price of a basic solar power system in Uganda was approximately 350,000 Ugandan Shillings (about USD 100) (International Renewable Energy Agency, 2022). ENGIE's unit cost of EUR 68 (around USD 75) per kit was thus competitive, demonstrating **cost-efficiency in procurement**. From an **equity perspective**, this may **reduce the relative cost-efficiency** of the intervention, as resources were not predominantly channelled toward those with potentially greater needs or fewer alternatives for energy access. The reduction of special payment conditions for the Adjumani, Kamwenge, and Kiryandongo refugee settlements further limits the long-term accessibility of energy solutions for vulnerable groups, which may ultimately lower the cost-efficiency of the pilot project when measured against its intended objectives.

By the time of the final evaluation, ENGIE had also discontinued the school fee loans. The discontinuation of the school fee loans reduced the scope of impact originally envisioned, limiting the outcomes to energy access.

Looking at the timeliness of the pilot project implementation, overall, ENGIE was able to execute pilot project activities in a timely manner, achieving their intended results regarding the sale of solar home systems. However, there were some disruptions in 2023 due to heavy rains, which affected field operations, and stock shortages caused by delays at customs. These delays were related to unresolved tax exemption issues with URA officials, which impacted the delivery of stock to the field. Despite these challenges, ENGIE was able to maintain progress and continue operations.

ENGIE's operations largely followed their usual internal processes, which were efficient in the context of solar home system sales. However, the resources allocated to the school fee loan component were insufficient, which contributed to the lack of progress in this area. Additionally, the promotion of the school fee loan scheme through the call centre required more resources than anticipated, particularly due to the complications arising from customers having multiple phone numbers. Nonetheless, ENGIE efficiently managed their activities aimed at the distribution of solar kits, ensuring the timely sale, despite resource constraints in other areas.

PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming

According to the grant agreement, the consortium of PHB, Bright Life and the Yelekeni SACCO was the recipient of the **grant of up to EUR 85,253.50** which represented **21 %** of the budget allocated to the pilot projects part of this evaluation. As the pilot project was cofinanced by the members of the consortium, PHB was the recipient of the grant of up to EUR 20,000.00, the Yelekeni SACCO was the recipient of a grant of up to EUR 8,000.00, and BrightLife was the recipient of the grant of up to EUR 3,000.00.

Key infrastructure procured included solar home systems, incubators and hatcheries. Together, they represent up to EUR 31,200.00 (36 %) of the allocated budget. According to the grant agreement, the PHB-led consortium initially planned to purchase 30 decentralised solar incubators (EUR 630.00 each) and 50 50W solar home systems with LED for poultry rearing (EUR 246.00 each). Additional expenditures included an estimated EUR 6,000 (7 %) for training, for instance in hatchery management. At the time of final evaluation in March 2025, the consortium had successfully delivered 43 solar home systems, 10 incubators (9 incubators were distributed to farmers, and 1 incubator was at the Yelekeni SACCO for spare parts), and 2 hatcheries. While the prices are on the higher end of the price range, this reflects the higher-quality component, additional LED lighting and the warranty coverage.

The Yelekeni SACCO consists of 513 members from both Ugandan host and refugee communities in Kiryandongo (PHB Development SRL, 2025a)**. During the evaluation, SACCO members confirmed that they had improved their income as a result of the poultry-related activities.** This indicates early signs of effectiveness and a direct economic benefit to a significant number of local participants. From a **cost-efficiency perspective**, the provision of productive assets (e.g., solar-powered incubators and home systems) alongside targeted training appears to have contributed to improved livelihoods. While unit costs were relatively high (see above), this may be justified by the income gains reported by SACCO members. **Equity considerations** are a strength in this case: The intervention explicitly targeted mixed host-refugee communities through an inclusive SACCO structure. If income improvements were broadly distributed among SACCO members, the intervention likely enhanced its value for money in terms of social inclusion and equity.

Furthermore, PHB, BrightLife, and the Yelekeni SACCO successfully achieved their intended results within the planned timeframe, despite encountering several delays. These included initial logistical challenges in shipping solar systems due to the global economic slowdown following the COVID-19 pandemic, as well as importation and bureaucratic delays in 2023 that created some project uncertainty. Nonetheless, the consortium remained agile and secured additional funding from GIZ to ensure project continuity.

Moreover, resources were used efficiently, with the project partners managing to meet their objectives despite facing cost pressures. Higher-than-anticipated monitoring costs arose because the solar systems were not PAYG-locked, requiring more hands-on oversight. Even so, the consortium adapted well to these constraints, demonstrating strong coordination and financial responsiveness to maintain momentum and deliver results.

Akvo International SMC Limited: Solar-Powered Water Kiosk

According to the grant agreement, Akvo was the recipient of the **grant of up to EUR 75,852.40** which represented **18 %** of the budget allocated to the pilot projects part of this evaluation. The grant was made available for Akvo for the period **from February 2023 to December 2023**.

Key infrastructure procured included the various elements of the solar-powered water kiosk in the Rhino Camp. Together, they represent up to EUR 54,580 (72 %). According to the grant agreement, planned purchases included: 1,000 water containers (EUR 1.50 each), two SmartTaps dispensers (EUR 5,500 each), two Water Treatment Plans (EUR 7,350 each), two Central Control Hub (EUR 3,000 each), and two solar energy units for power systems and charging (EUR 3,600.00 each). The estimated budget also included supporting services, such as plumbing and electrical works (EUR 3,800), civil works (EUR 4,260), and installation of two signages (EUR 620). The main outcome of the Akvo pilot project was to increase access to clean and affordable water for residents of Rhino Camp, a refugee settlement. According to the grant agreement, safe drinking water was to be stored in 1,000 litre's tanks and transferred through pipes to the smart tap to be dispensed out to the community. Customers were to have access to the safe drinking water through a smart app using

a uniquely identified digital tag, pre-charged with water credits through their usual mobile money applications.

According to the grant agreement, 1,000 beneficiaries were to benefit from the solar-powered water kiosk, translating to an estimated cost of EUR 54.58 per person. This hypothetical per-user cost is higher than comparable interventions. For example, a 2009 GIZ case study from Zambia cited water kiosk costs at approximately EUR 10 per resident (Deutsche Gesellschaft für Technische Zusammenarbeit, 2009). While the Akvo water kiosk incorporates more advanced features, this comparison underscores the importance of demonstrating commensurate long-term impact to justify higher upfront costs. Over time, if Akvo's water kiosk serves a broader population at the Rhino Camp, the cost per customer may decrease, improving the pilot project's cost-efficiency. As the Rhino Camp is a refugee settlement, the project aligns with **equity goals** by targeting populations with limited access to clean water. However, equity will ultimately depend on the kiosk's pricing model and the accessibility of the smart tap system for the residents.

At the moment of the field visit in March 2025, the water kiosk had been successfully constructed, and 15 residents of the Rhino Camp had been trained to maintain and operate it. For the water kiosk to be operating, the local SACCO that was to manage operations was yet to be selected. Sustained cost-efficiency will also depend on the long-term functionality of the water kiosk and the local SACCO's capacity to manage, price, and maintain operations.

However, delays in implementation affected overall efficiency. As depicted in the quarterly Awardee updates and the interviews with Akvo and the GIZ team, main bottlenecks included delayed procurement of key equipment until spring 2024, and a change in the kiosk's location within Rhino Camp that necessitated identifying a new SACCO partner. Compounding this was staff turnover within Akvo's local team and a misunderstanding about responsibilities for local SACCO selection, with Akvo's local team assuming that the GIZ team would handle the local SACCO selection. This was clarified during the debriefing of the final evaluation.

Due to the delays and lack of kiosk operations at the time of evaluation, it is difficult to fully assess the efficiency of resource utilisation. However, the delays related to procurement and local coordination challenges suggest inefficiencies that limited timely delivery and delayed the realisation of intended outcomes. Until operations begin, the project's investment has yet to yield health or economic, thereby weakening its current cost-efficiency.

Implementation Efficiency on Fund-Level

The RACI matrix in Figure 3 outlines the roles and responsibilities of different actors in managing and implementing pilot projects under the SCCIF. Based on the desk study and interviews in the inception and evaluation phase, six main tasks were identified within the SCCIF: (1) Selection of Awardees, (2) Contract management, (3) Decision-making regarding minor pilot project concept changes, (4) Decision-making regarding major pilot project concept changes, (5) Pilot project activities, and (6) Reporting. The actors involved in those steps were the GIZ EnDev project teams, the donors (especially USAID and Mastercard), the Awardees, the beneficiaries, and other GIZ units.

Figure 4: RACI matrix (SCCIF)

	Actor				
Process/Task	EnDev Project Team	Donors	Awardees	Beneficiaries	Other GIZ units
Task 1: Selection of Awardees	I	R	I		
Task 2: Contract management	R	C	I		I
Task 3: Minor pilot project concept changes	A	I	R		
Task 4: Major pilot project concept changes	A	C	R		
Task 5: Pilot project activities	I	I	R	I	
Task 6: Reporting	A	C	R		

R Responsible C Consulted

A Accountable I Informed

Source: Syspons GmbH, 2025

The roles and responsibilities were clearly defined between the GIZ team, the donors and the Awardees. The GIZ EnDev project team, being tasked as the SCCIF Fund manager, was informed of the selected awardees (task 1) and then responsible for contract management (task 2), where the team cooperated with the GIZ contract department. As it oversaw the pilot projects on behalf of the donors, the GIZ EnDev team was also accountable for minor and major changes in the concepts of the pilot project (tasks 3, 4) as well as reporting (task 6). The **donor organisations** that comprised the SCC, specifically USAID and Mastercard, were responsible for selecting the Awardees of the SCCIF. Afterwards, due to the GIZ team acting as fund manager, the donors were mainly consulted on critical aspects such as contract management, major project changes, and reporting, while being informed about minor changes. The **Awardees** were responsible for executing the pilot projects, for minor and major pilot project concept changes and for reporting. The Awardees were mostly responsible and not accountable as they were responsible for performing the tasks, but did not have the final decision-making power over the pilot project; they reported to the GIZ EnDev project team, which ensured that SCCIF objectives were met.

Overall, Awardees and GIZ project team members confirmed their satisfaction with the structure of roles and responsibilities as well as processes/tasks. In the interviews of the evaluation mission, Awardees and GIZ project team members highlighted that the roles were clear and that the processes allowed for flexible decision-making. This was particularly relevant while implementing innovative pilot projects in challenging contexts such as the refugee settlements and host communities, where pilot project teams needed to be able to re-steer and adapt their activities in an agile manner. Some Awardees, however, also highlighted that they would have benefited from a closer cooperation with GIZ in the implementation, such as within joint brain-storming sessions on how to address context limitations, as they were not well-versed in the contexts of refugee settlements and host communities (see chapter 4.7).

Assessment of the Efficiency Criterion

To conclude, the evaluation demonstrated that the SCCIF piloted different innovative solutions for basic services in refugee and host communities in Kenya and Uganda, with varying degrees of efficiency. The pilot projects showed different levels of cost-efficiency that did not directly align with the budget distribution as some lower-budget projects were more cost-efficient than some higher-budget projects. The evaluation also showed that all SCCIF-funded pilot projects experienced delays in their implementation, and identified the procurement of equipment as main bottleneck. Finally, the evaluation team assessed the implementation efficiency at fund level. The implementation efficiency analysis highlighted that roles and responsibilities were clearly defined. Both Awardees and members of the GIZ project team expressed satisfaction with the overall structure, division of tasks, and procedural clarity throughout the implementation process.

4.6 Innovation and Scalability

Given that SCCIF is an innovation fund supporting pilot projects, this evaluation places particular emphasis on the novelty of approaches and their potential for scalability. Assessing **innovation** involved examining whether projects challenged existing models or introduced new solutions to meet the needs of displaced populations and host communities. In this regard, Rogers' Diffusion of Innovation Model provided a framework for understanding how new ideas, technologies, or approaches are adopted and spread within a population. The **scalability** dimension examines whether the approaches tested in the pilot projects are adaptable to other regions or populations facing similar challenges.

Overall, the SCCIF piloted a variety of innovative solutions that addressed specific challenges faced by refugee settlements and host communities in Kenya and Uganda, with varying levels of scalability. All pilot projects used solar energy as a core enabler for delivering basic services, such as connectivity, sustainable mobility and clean water access. In their innovative solutions, they focused on introducing or adapting new technologies to the context of refugee settlements and host communities as well as on innovative financing and/or community-based models to improve accessibility. The evaluation showed that the innovative solutions piloted by the SCCIF were well-received by the target groups and successfully began to engage a group of (potential) early adopters. However, when assessing scalability, it became clear that several SCCIF-funded pilot projects faced various critical challenges that need to be addressed for long-term viability and wider adoption, such as the quality of their equipment and/or a limited financial responsibility from stakeholders. In this vein, some of the innovative solutions were either discontinued, scaled back or paused during the implementation due to these challenges, further highlighting the need for adjustments before they can be scaled successfully.

TryKE: Sustainable mobility solution

The TryKE pilot project introduced several innovative elements aimed at addressing the mobility needs of displaced populations and host communities in the Kakuma-Kalobeyei area. The innovative elements were generally well-received by residents of the Kakuma-Kalobeyei refugee settlement and host community. These innovations included the integration of **solar-powered e-mobility solutions** (electric motorbikes and tricycles), a **leasing model**, and the potential of a **mobile application** ("tuma.today") designed to connect riders with businesses in need of transportation services. These approaches represented a significant departure from traditional transportation models in the region, which primarily rely on fuel-powered vehicles. According to the focus group discussion with the motorbike riders and the interview with the local business

owner, the e-mobility solution was particularly appealing due to its cost-efficiency and its independence from fuel availability. In addition, it was aligned with broader sustainability goals. Riders expressed strong interest in the leasing model, as it provided a feasible entry point for those unable to afford outright vehicle ownership. The application developed by TryKE – but not yet implemented in the refugee settlement and host community – was also well-received by the riders, as it had the potential to facilitate income-generating opportunities by connecting riders with customers (*innovation*, see chapter 3.1).

To spread the information about the innovative solution and foster adoption in the Kakuma-Kalobeyei area, TryKE directly contacted potential participants from the refugee settlement and the host community. That way, TryKE collaborated with the association of motorbike riders of Kakuma, as well as local business owners, to pilot the leasing model with electric motorbikes as well as with electric tricycles (*communication channels, social system*, see chapter 3.1). TryKE therefore successfully engaged a group of **early adopters** – particularly motivated motorbike riders who appreciated the affordability and earning potential of the model (*time dimension, adopters*, see chapter 3.1). Yet due to various challenges such as the technical quality of the motobikes and tricycles (see chapter 4.2), the innovation did not reach the early majority, which limited broader community uptake and restricted the project's scalability at this stage. While TryKE attempted to address these issues through adaptive strategies, such as shifting to a more flexible operational base in Nairobi, these constraints still impacted the scalability and sustainability of the innovations in the Kakuma-Kalobeyei refugee settlement and host community.

As a result, the adaptability and scalability of the TryKE approach to other regions or populations facing similar challenges depend on several key factors. The e-mobility solutions and the leasing model proved attractive to motorbike riders in the Kakuma-Kalobeyei area and were rapidly adopted. In the field studies, the motorbike riders also responded positively to the mobile application developed by TryKE, although it was piloted in Nairobi and not rolled out in their location. But the broader community uptake of the TryKE innovative solution was limited. This was primarily due to the technical shortcomings of the electric vehicles which frequently required repairs and/or new tires. In addition, spare parts were difficult to obtain because of production constraints from the supplier. Therefore, to enable successful scaling of the TryKE model, it will be essential to procure electric vehicles that are suitable for the local environmental conditions and to ensure the availability of spare parts.

I4SD: Digital Hub and E-Mobility

I4SD introduced a multi-layered innovation by integrating solar energy with a Digital Hub offering vocational training and a battery charging station to support e-mobility in the Rubondo area of Nakivale Refugee Settlement. This approach addressed multiple development needs – energy access, digital education, and e-mobility – in an interconnected system. The innovative solution presented by I4SD represented an improvement over existing services by facilitating more sustainable and income-generating opportunities for youth and riders (*innovation*).

I4SD disseminated their innovative solution by involving early engagement with established local actors, particularly the Youth Centre, which had a history of cooperation with development initiatives. The Awardee also liaised with other stakeholders in the Rubondo area of Nakivale Refugee Settlement, such as the Health Centre and the Office of the Prime Minister, through coordination with UNHCR. These communication channels enabled effective diffusion of information about the activities of I4SD and played a key role in the acceptance of the community of the new services (*communication channels, social system, adopters*). In terms of time, the adoption process was unusually rapid, and the quick uptake led to premature scaling, where **demand outpaced infrastructure readiness** (*time*) as well as financial capacities for upgrading of I4SD. Their financial capacities were further limited due to stakeholders such as the Health Centre and the Office of the

Prime Minister not contributing financially for the energy access provided. During the field visit, representatives of the Health Centre highlighted that financial contribution needed to be discussed with UNHCR. It was evident that during the pilot project implementation, no formal or informal agreements had been made on potential financial contribution. As a result, the solar energy system became overloaded and eventually shut down, interrupting the functionality of both the Digital Hub and battery charging services.

Hence, this model can be upscaled, but growth needs to be regulated, and payment needs to be discussed beforehand. Ensuring future success and scale-up will therefore require reinforcing system capacity, securing sustainable funding, and formalizing partnerships with key institutional users where financial contribution is confirmed.

ENGIE: Educational Access Through Solar Solutions

The ENGIE pilot project introduced an innovation in the form of special payment conditions, including a discounted price for solar home systems and a school fee loan model for customers with a strong payment history. But several aspects of the proposed innovation were either called back or discontinued during implementation, which restricted the pilot project's innovative character. The approach of ENGIE sought to improve affordability and accessibility of solar energy in refugee settlements and host communities, as well as strengthen their access to education. As depicted in Chapter 4.2, there was a lack of share understanding among stakeholders regarding what constituted the innovation in this pilot project. ENGIE had already discontinued their school fee loan service before the SCCIF and did not include it in their original proposal. For ENGIE, the flexible payment options themselves represented the core innovation. In contrast, for USAID and the GIZ team, the school fee loans were considered the key innovation of the pilot project, as it directly linked energy access to improved education opportunities (*innovation*). In response to this expectation, ENGIE reestablished the school fee loan for the SCCIF-funded pilot project. While the flexible payment options initially provided a relative advantage by lowering financial barriers to entry, ENGIE eventually determined that some aspects were not viable and **discontinued** them. In the same vein, ENGIE also removed the school fee loan model again, citing financial unsustainability.

Despite these setbacks, ENGIE leveraged its established presence in Uganda and strengthened its local team as part of the pilot project. They recruited staff from host communities to market and sell **solar systems** within both host and refugee populations, which built trust within the communities. Additionally, ENGIE conducted promotional campaigns to increase awareness of their products and services. This approach facilitated strong adoption of the solar technology itself, and the population in both the refugee settlements and host communities quickly adopted the solar home systems under the discounted pricing and special payment conditions. But the communication regarding the **school fee loans** was weaker, as it was only promoted through ENGIE's call centre in Kampala and not actively marketed by the local teams on the ground. Consequently, many potential beneficiaries remained unaware of this aspect of the offering (*communication channels, time, social system, adopters*).

The diverging understanding of the pilot project's innovation and the unclear role of the school fee loans impacted the innovation's scalability negatively. Interviews with ENGIE representatives revealed that, while the local ENGIE team is interested in continuing the flexible payment conditions and school fee loans, the ENGIE HQ team remains sceptical due to financial concerns. Therefore, while initial adoption was strong, scaling this innovative solution seems difficult and will likely depend on its economic viability and customers fulfilling their financial responsibilities.

PHB Development SRL, Bright Life and Yelekeni Farmer SACCO: Solar-Powered Poultry Farming

PHB, Bright Life and the Yelekeni SACCO introduced an innovative approach by integrating solar energy into poultry farming, thereby professionalizing their activities. This innovation provided a clear advantage over traditional poultry farming methods by improving hatching rates (*innovation*). PHB partnered with the Yelekeni SACCO, a well-established farmers' cooperative with a large and engaged membership base. The pilot project was embedded within the existing cooperative structure of the Yelekeni SACCO, which provided an effective framework. The SACCO played a crucial role in disseminating information about the new solar-powered hatchery services among its members, ensuring that the innovation reached a broad audience quickly. Farmers not only became aware of the innovation but also actively participated. This community-driven communication model facilitated rapid adoption and buy-in from local farmers. The rapid adoption has also led to proactive demands for scaling up, demonstrating that the innovation has already reached the early majority of adopters and is moving toward wider implementation (*communication channels, time, social system, adopters*).

Thus, the success of this approach has generated strong demand for upscaling. The fact that Yelekeni SACCO members are now demanding larger and better-equipped facilities such as larger incubators and hatcheries demonstrates the innovation's effectiveness and scalability. Moving forward, the project's sustainability and further expansion will depend on securing investments in larger incubators and enhanced marketing strategies, ensuring that the innovation continues to drive economic benefits for the community.

Akvo International SMC Limited: Solar-Powered Water Kiosk

The Akvo pilot project introduced an innovative approach to the Rhino Camp by combining water kiosk technology with a digital tag system for customers. This system aims to improve water access and management by allowing registered users to purchase water more efficiently. Customers were to register in a mobile application ("smartTAP App") and make payments to their account via their usual mobile money applications. This credit was to be sent to the water dispenser and added to the tag during the customer's visit to the water dispenser. This way, the customer was to be able to pay for the water using their tag. Although the system is not yet operational, there is strong demand from potential users. The focus group participants emphasized the perceived potential benefits and comparative advantage of the water kiosk, as by using that service, they can obtain clean water to an accessible price (*innovation*).

In this regard, the population at the Rhino Camp is aware of the water kiosk and waiting for the service to initiate. Akvo constructed the water kiosk in a highly visible location and installed signage to promote awareness. Additionally, community members have been trained in the system's use, ensuring that local knowledge is already in place. However, uncertainty surrounding the launch date of the water kiosk has led to frustration and tension within the community. Community members have already demonstrated interest and an urgent need for clean and accessible water, indicating that the innovation is likely to be quickly adopted once it is launched. However, the interest of the community expressed in the focus group discussion of buying water to resell at inflated prices suggests that a portion of users may not adopt the system as originally intended, potentially leading to unintended market distortions (*communication channels, time, adopters*).

As the system is not yet operational, the scalability and long-term viability of this approach remain uncertain. The water kiosk is currently awaiting a management structure through a local SACCO. The selection and commissioning of the SACCO will be key to ensuring sustainable operations, as the SACCO will be responsible for maintaining the kiosk, managing payments, and overseeing fair distribution (*social system*). Despite the service not yet being in place, community members already expressed a strong interest during the field visit in expanding the system to other areas of Rhino Camp.

Assessment of Innovation and Scalability

To conclude, the SCCIF piloted a range of innovative solutions aimed at addressing specific challenges faced by refugee settlements and host communities in Kenya and Uganda. All the pilot projects leveraged solar energy as a central enabler for providing essential services, such as connectivity, sustainable mobility, and access to clean water. These innovative solutions were well-received by the target groups and succeeded in engaging a group of early adopters. However, several of the SCCIF-funded projects encountered significant challenges during implementation, such as: Issues with equipment quality, rapid growth that outpaced their capacity, diverging understanding among the Awardee and the SCC of the pilot project's innovation solution, and/or limited financial commitment from stakeholders. As a result, some of the innovations were discontinued, scaled back, or paused during the implementation. These experiences underscore the need for adjustments before they can be scaled to other regions or populations facing similar challenges. This reflects the nature of the SCCIF itself, which supports high-risk, innovative pilot projects in challenging contexts, where uncertainties and obstacles are inherent, but also offer valuable insights for future efforts.

4.7 Other lessons learned

Beyond the OECD-DAC criteria, the final evaluation of the SCCIF-funded pilot projects also revealed **important insights into how reporting, knowledge management, and learning processes** were approached in the SCCIF.

The reporting in the SCCIF was based on quarterly Awardee updates. The short and concise template for updates provided a structured approach to capture relevant information such as updates, indicators, challenges, lessons learned, and pictures. However, reporting across the SCCIF-funded pilot projects was inconsistent, with limited quantitative data provided by the Awardees. While the template focused on key aspects, it was not always fully completed or completed correctly, leading to gaps in information. This lack of consistent reporting posed challenges during internal staff turnover, as new team members (or team members new to the SCCIF) had less access to complete documentation and therefore limited the ability to ensure continuity and transfer of knowledge.

Furthermore, some Awardees expressed a strong interest in increased collaboration and exchange within the SCCIF, for further learning and improvement in the implementation of their pilot projects in refugee settlements. Private sector actors, who may not be accustomed to the unique complexities and processes within refugee settlements, indicated that they would have benefited from more extensive support and guidance from **GIZ** on how to navigate these challenging environments when implementing their pilot projects. They further indicated that regular meetings and joint brainstorming sessions would have provided opportunities to obtain insights from GIZ, address challenges in real-time, and ensure that pilot projects were more effectively adapted to the realities of refugee settings. Furthermore, private sector actors expressed interest in greater collaboration with **other Awardees**, as sharing experiences and solutions across projects could have facilitated the exchange of practical approaches for overcoming common challenges, such as resource limitations, logistical constraints, and engagement with local communities.

5 Conclusions

The Smart Communities Coalition Innovation Fund (SCCIF) was designed to support private sector-led innovative solutions at addressing critical challenges faced by the residents of refugee settlements and host communities in Kenya and Uganda. The final evaluation demonstrated that the SCCIF proved to be a **relevant funding mechanism** for piloting ideas, aligning well with the priorities of the governments of Kenya and Uganda in promoting sustainable energy access and economic inclusion. The fund clearly addressed

needs of both the communities within refugee settlements and host areas, as well the private sector actors eager to expand their services in these regions. The SCCIF selected the innovative solutions proposed by TryKE Group Limited, Infrastructure for Sustainable Development (I4SD), ENGIE Energy Access Uganda, Akvo International SMC Limited, and the consortium of PHB Development SRL, Bright Life, and Yelekeni Farmer SACCO. Each pilot project focused on enhancing access to solar energy, either for income generation in sectors such as poultry farming or electric mobility, or for the delivery of basic services like clean water and internet connectivity. **Awardees were motivated by a range of incentives** to expand their services to the refugee settlements and host communities, including commercial interests, institutional missions, and personal motivations.

The final evaluation found that most SCCIF-funded pilot projects were able to temporarily launch their services. However, only a few of the awardees were able to successfully establish their innovative solutions, reflecting the inherent risks of piloting innovative solutions in challenging settings. In this regard, the idea of using solar energy for poultry farming proved to be particularly successful. But many awardees encountered significant barriers during the implementation of their pilot projects that hindered their long-term viability. Importantly, those barriers were **not linked to a lack of incentives of the target groups** as target groups generally demonstrated a strong willingness to continue engaging with the innovative solutions, because they perceived clear financial benefits. The limiting factors identified included difficulties in procuring necessary equipment, limited suitability of their equipment for the rural context of refugee settlements and host communities, limited availability of essential spare sparts, as well as rapid expansion in service delivery due to increased demand without corresponding growth in capacity. In the case of the school fee loans, an important limiting factor was the **restricted ownership** of the awardee with the education access provided. In addition, the evaluation revealed that several awardees had limited prior experience working in such complex humanitarian and development settings, which further constrained their ability to adapt effectively to unforeseen contextual and operational challenges. With exception of the restricted ownership of the awardee with the solution suggested, these findings are common in innovative pilot projects and highlight the complexities of translating innovative ideas into sustainable operations.

Despite the challenges in establishing sustainable solutions for basic service delivery, the final evaluation highlights that all SCCIF-funded innovations were positively received by the target communities. The residents at the refugee settlements and host communities in Kenya and Uganda quickly recognised the value of the innovative solutions proposed and showed interest in participating in the pilot projects and utilising the services offered. This was also evident in the pilot projects that were to discontinue or pause their activities, or that did not yet inaugurate their service. The early adoption and positive feedback suggest that the solutions piloted within the fund hold promise for **potential scalability**, provided that the necessary adjustments, such as the adjustment in their equipment, are made. **The temporary initial success of the SCCIF-funded pilot projects, combined with the community interest and engagement, suggest that with further refinement and adjustments, these innovations could offer scalable solutions in the future.**

6 Recommendations

Based on the findings of the final evaluation, several recommendations are put forward:

#	Keyword	Recommendation
1	Innovation fund	**The Smart Communities Coalition Innovation Fund (SCCIF) has proven to be a relevant funding mechanism, and it is recommended that the fund be continued, either in its current form or in a similar format.**

		The final evaluation underscored the value of the SCCIF in enabling private sector actors to extend their services into underserved areas such as refugee settlements and host communities, thereby directly addressing local needs through innovative solutions. While the high-risk nature of piloting initiatives in challenging environments leads to a higher failure rate, this is an inherent characteristic of innovation-driven funds such as the SCCIF. Such high-risk funds are important for identifying and strengthening new approaches that have the potential to effectively address the complex needs and settings of vulnerable populations. In light of the findings of this final evaluation, the continuation of the fund as such or in a similar format is recommended. It is important for the SCCIF (or similar formats) to ensure that future donors remain fully aware of the experimental nature of such initiatives, and of the need to maintain sufficient flexibility to accommodate necessary adjustments of the innovative approaches in response to unforeseen challenges.
2	**Proposal – Time**	**Future pilot projects should consider enough time for procurement of their necessary equipment.** During the final evaluation, a major bottleneck identified for the implementation of the pilot projects was the extended procurement process to obtain relevant equipment. In several pilot projects, as equipment needed to be imported, procurement took longer than initially anticipated in the work plans. This extended procurement processes led to setbacks in the timely delivery of the services and limited the overall efficiency of the pilot projects. In light of these challenges observed, it is recommended to the SCCIF that future pilot projects allocate sufficient time for procurement activities (including supplier selection, customs clearance and any unforeseen logistical hurdles) in their proposals.
3	**Proposal – Budget**	**Future pilot projects should confirm the budgets for their planned activities when drafting their proposal.** The final evaluation showed that in the case of one pilot project, the lack of clear budget confirmation of the awardee with its partner organisation at the outset resulted in the inability to implement planned training activities. Although this did not affect key components of the innovative solution, it is recommended to the SCCIF that such challenges are mitigated in future pilot projects. Therefore, the evaluation team recommends ensuring that the budgets for the proposed activities of the awardees are confirmed and aligned with anticipated costs.
4	**E-mobility**	**Future pilot projects on e-mobility should carefully select electric vehicles that are well-suited to the context and conditions in which they will operate. Furthermore, these projects should ensure the availability of the necessary spare parts.** The final evaluation showed that both pilot projects focusing on e-mobility faced challenges regarding the suitability of their motorbikes and tricycles for the rural and remote contexts they were operating in. In this regard, motorbike riders signalled that due to the distances and the conditions of the roads, tires needed to be replaced frequently, and the durability of batteries was not sufficient. Future pilot projects should therefore prioritise vehicles that can withstand those local environmental conditions, ensuring durability and minimising reparation needs. Additionally, it is crucial that pilot projects choose electric vehicles for which spare parts are readily available and easy to obtain to minimise downtime of the vehicles. Based on the experiences of one the pilot projects evaluated, future pilot project teams should assess to what

		extent the approach of converting conventional motorbikes into electric motorbikes is suitable for them, to reduce their dependence on specific suppliers.
5	Partner structure	**Future pilot projects should establish partnerships with local organisations from the outset of the pilot project design and implementation phase.** The evaluation showed that collaborating with local stakeholders ensures that the pilot project is better aligned with local needs and context, which is critical for success in refugee and host community settings. Furthermore, local organisations often have established trust within the community, which can facilitate their adoption of the innovative solutions introduced by the awardee. Finally, local organisations play a crucial role in ensuring the sustainability of the project, by facilitating the transfer of knowledge, capacity and ownership. Importantly, their involvement can help balance or mitigate the limited contextual experience of some awardees, particularly those unfamiliar with the complexities of operating in displacement-affected settings. As depicted in the final evaluation, the involvement of local organisations can also play a major role for enhancing the pilot project's ability to scale, as they are more likely to be equipped and motivated to continue operations after the pilot phase has concluded.
6	Upscaling	**Future pilot projects should carefully manage the scaling of their services facing growing demand, to ensure that technological capacity and financial resources are scaled in parallel.** The final evaluation showed that while expanding the number of customers is a key indicator of a pilot project's success, it needs to be done in a measured and strategic manner to avoid overextending resources or overloading systems. Otherwise, as evidenced in the final evaluation, rapid growth can lead to a decrease in the service quality and long-term sustainability. Future pilot projects should therefore carefully balance demand with technological and operational capacity. In addition, when expanding to new customers, future pilot projects should ensure addressing and agreeing upon potential financial contribution. This is also to ensure that future pilot projects have the necessary financial resources to increase their capacities.
7	Reporting	**With future pilot projects, the SCCIF should make sure that awardees submit complete and accurate reports of their pilot project activities and results.** Comprehensive reporting is important for knowledge management and learning, as well as for ensuring accountability to stakeholders. Moreover, complete and detailed reporting is especially important to ensure complete handovers in the context of potential personnel turnover. The final evaluation revealed that while the current template for quarterly awardee updates is concise and includes all key information, the awardees sometimes did not complete the template in a coherent and comprehensive manner. In this regard, there is a potential for reporting more quantifiable results. It is therefore recommended that the SCCIF ensures that reporting templates are completed in an adequate manner.
8	Exchange	**With future pilot projects, the SCCIF should further support awardees, for instance, through joint brainstorming. The SCCIF should also further facilitate exchange among pilot projects.**

		During the final evaluation, it became clear that some awardees were not experienced with the challenging contexts of refugee settlements and host communities. Some awardees highlighted that they would have been interested in further exchange with the SCCIF, for instance the GIZ team, to gain a better understanding of these settings and to be able to better adapt their approaches. While the successful implementation of pilot activities remains the responsibility of the awardees, it is recommended that SCCIF offers more structured and ongoing support during implementation, for instance as joint brainstorming session. This would help address emerging challenges more effectively and further enable private sector actors to expand into complex contexts, such as refugee settlements and host communities, where GIZ and its partners often have more experience and contextual knowledge. In the same vein, the SCCIF should also offer more opportunities for peer learning among the pilot projects. This could be done through workshops, roundtables or more regular virtual meetings where awardees can present updates on their progress, share successes and failures, and offer advice to the fellow awardees. These activities can then also be accompanied by the creation of informal connections and networks.

7 Annex

7.1 List of references

Documents from SCCIF and Awardees

Table 9: List of documents from SCCIF

Category	Document name
1. Proposals	TryKE Grant Agreement, TryKE Project Brief, TryKE Proposal
	I4SD Grant Agreement
	AKVO Grant Agreement
	ENGIE Grant Agreement
	PHB Supplement to the Grant Agreement
	Moban SACCO Supplement to the Grant Agreement, Moban SACCO Proposal
2. Awardee updates (quarterly)	2022/05 Updates from TryKE, Moban SACCO, EleQtra, PHB
	2022/06-09 Updates from TryKE, Moban SACCO
	2022/10-12 Updates from TryKE
	2023/04-06 Updates from AKVO, ENGIE, I4SD, PHB, TryKE
	2023/07-10 Updates combined
	2023/10-12 Updates combined
	2024/01-03 Updates from AKVO, ENGIE, PHB, TryKE
	2024/04-08 Updates combined
3. Publications	Launch of the SCCIF
	Call for Proposals SCCIF
	Creating a Brighter Future for Refugee Hosting Communities
	Call for Proposals (2)
	Congratulations to the second set of SCCIF winners
	SCCIF Winning Solutions for Energy in Refugee Settings
4. Other documents	USAID SCCIF Concept Note
	SCC MEL Strategy

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7.2 Analysis grid

Evaluation questions		
Evaluation dimension	**Evaluation questions**	**Indicators / Descriptors**
Relevance	1.1 How does the socio-economic and political context influence the relevance of SCCIF interventions (contextual analysis)?	1. Qualitative description of socio-economic and political context factors. a. Socio-economic context factors, such as poverty levels, skills and qualifications of refugees and host communities, etc. b. Political context factors, such as policy and regulatory frameworks, capacities of local authorities, etc. 2. Qualitative assessment to what extent these socio-economic and political context factors influenced the relevance of the SCCIF-funded pilot projects.
	1.2 To what extent do SCCIF's objectives align with the needs and priorities of displaced populations and host communities (assessment of relevance)?	1. Qualitative description of SCCIF's objectives. 2. Qualitative description of needs and priorities of displaced populations and host communities. 3. Qualitative comparison of the alignment of SCCIF's objectives and needs and priorities of displaced populations and host communities.
	1.3 How do beneficiaries, local communities, and other stakeholders perceive the relevance and usefulness of SCCIF-funded pilot projects in addressing their needs (stakeholder feedback)?	1. Qualitative description of SCCIF's pilot project activities and objectives. 2. Qualitative description of needs and priorities of displaced populations and host communities. 3. Qualitative comparison of the alignment of SCCIF's pilot project activities and objectives, and needs and priorities of displaced populations and host communities.
Effectiveness	2.1 How do SCCIF performance data compare against set targets and objectives (performance metrics)?	1. Analysis of indicator achievement. 2. Qualitative description of indicator achievement.
	2.2 To what extent have SCCIF-funded pilot projects achieved their intended outcomes in terms of service delivery, economic empowerment, and social integration (achievement of objectives)?	1. Qualitative description of intended outcomes in terms of service delivery, economic empowerment and social integration. 2. Qualitative assessment of the achievement of the intended outcomes in terms of service delivery, economic empowerment and social integration.
	2.3 To what extent have SCCIF interventions contributed to improvements in beneficiaries' living conditions and economic opportunities (beneficiary impact)?	1. Qualitative description of improvements in beneficiaries' living conditions and economic opportunities. 2. Qualitative assessment of the contribution of the SCCIF-funded pilot projects to those improvements.

	2.4 How does the socio-economic and political context influence the effectiveness of SCCIF interventions (contextual analysis)?	1. Qualitative description of socio-economic and political context factors. a. Socio-economic context factors, such as poverty levels, skills and qualifications of refugees and host communities, etc. b. Political context factors, such as policy and regulatory frameworks, capacities of local authorities, etc. 2. Qualitative assessment to what extent these socio-economic and political context factors influenced the effectiveness of the SCCIF-funded pilot projects.
Impact	3.1 What are the long-term effects of SCCIF-funded pilot projects on target populations (long-term effects)?	1. Qualitative descriptions of the intended long-term effects of SCCIF-funded pilot projects on target populations (such as intended impacts of EnDev regarding energy access, jobs created and CO2 emission savings). 2. Qualitative description of improvements regarding the intended long-term effects. 3. Qualitative assessment of the contribution of the SCCIF-funded pilot projects to those improvements.
	3.2 To what extent have there been any unintended positive or negative consequences of SCCIF interventions (unintended consequences)?	1. Qualitative description of unintended negative and/or positive long-term effects. 2. Qualitative assessment of the contribution of the SCCIF-funded pilot projects to those unintended long-term effects. 3. Qualitative description of the responses of the SCCIF-funded pilot projects towards those unintended long-term effects. 4. Qualitative assessment of the responses of the SCCIF-funded pilot projects towards those unintended long-term effects.
Sustainability	4.1 What plans are in place to ensure the continuation of project benefits after SCCIF funding ends (continuation plans)? How well do continuation plans align with aspects such as local capacities, policies, strategies, and frameworks?	1. Qualitative description of the continuation plans of the SCCIF-funded pilot projects. 2. Qualitative assessment of the alignment of the continuation plans of the SCCIF-funded pilot projects with aspects such as local capacities, policies, strategies, and frameworks.
	4.2 To what extent have SCCIF-funded pilot projects built local capacities to sustain outcomes and drive future initiatives (capacity building)?	1. Qualitative description of capacity-building activities implemented by the SCCIF-funded pilot projects. 2. Qualitative description of the capacities built by the SCCIF-funded pilot projects activities. 3. Qualitative assessment of the extent to which the capacities built can sustain outcomes and drive future initiatives.

	4.3 To what extent have SCCIF-funded pilot projects been integrated into local systems and practices to ensure long-term impact (institutionalization)?	1. Qualitative description of local systems and practices. 2. Qualitative assessment of the extent to which the SCCIF-funded pilot project results have been integrated into local systems and practices. 3. Qualitative assessment of the extent to which the integration of the SCCIF-funded pilot project results into local systems and practices can ensure the durability of the results.
	4.4 To what extent are the benefits achieved through SCCIF-funded projects sustainable beyond the project's duration (sustainability of benefits)?	1. Qualitative assessment of the durability of the SCCIF-funded pilot project results after the end of the SCCIF-funded pilot project duration.
Efficiency	5.1 Were project activities executed in a timely manner, and if not, what were the main bottlenecks or delays?	1. Qualitative assessment of the extent to which activities were implemented as planned (time). 2. Qualitative description of the influencing factors. a. Positive influencing factors b. Negative influencing factors
	5.2 How efficiently were resources used in the implementation of SCCIF-funded pilot projects (resource utilization)?	1. Qualitative assessment of the extent to which activities were implemented as planned (resources). 2. Qualitative description of the influencing factors. a. Positive influencing factors b. Negative influencing factors 3. Qualitative assessment whether a different resource allocation could have led to more project results (yield maximisation principle).
	5.3 What are the financial costs and benefits of SCCIF-funded pilot projects, and how do they compare in terms of cost-efficiency (Cost-Efficiency Analysis)?	1. Description of financial costs and benefits of SCCIF-funded pilot projects, such as: a. Total financial cost of SCCIF-funded pilot projects b. Cost per beneficiary reached c. Cost per unit of impact d. Cost-efficiency ratio e. Data from similar EnDev activities 2. Comparison of cost-efficiency across SCCIF-funded pilot projects. 3. Comparison with data from similar EnDev activities.
	5.4 How effectively were SCCIF's management processes and procedures designed and implemented (process evaluation)? Were roles and responsibilities clearly defined and efficiently executed? How adaptable and responsive were project management processes to changing circumstances or challenges?	1. Qualitative description of SCCIF management processes and procedures, including assigned roles and tasks, based on a RACI matrix. 2. Qualitative assessment of definition of assigned roles and tasks based on a RACI matrix. 3. Qualitative description of changing circumstances or challenges that required management responses. 4. Qualitative description of management responses.

		5. Qualitative assessment of adaptability and responsiveness (management responses).
Other questions	6.1 How did the pilot projects challenge existing models or introduce new solutions to address the needs of displaced populations and host communities (innovation)? How well were the innovative aspects of the pilot projects received by beneficiaries, local communities, and other stakeholders? What were the barriers or constraints that limited the ability to fully implement the innovative approaches, and how were they addressed?	1. Qualitative description of approaches of the SCCIF pilot projects. 2. Qualitative assessment of innovative elements introduced by the SCCIF pilot projects. 3. Qualitative description of perception of beneficiaries and stakeholders regarding these innovative elements. 4. Qualitative assessment of appropriateness of innovative elements. 5. Qualitative assessment of barriers or constraints limiting the implementation of innovative approaches. 6. Qualitative assessment of adaptive strategies used to support innovation implementation.
	6.2 To what extent are the approaches used in the pilot projects adaptable or scalable to other regions or populations with similar challenges (scalability)? What resources, partnerships, or systems would be needed to scale or replicate the pilot projects in other areas? What are the key factors that will influence the success of scaling or replicating these innovative approaches?	1. Qualitative description of the adaptability and scalability of pilot project approaches. 2. Qualitative assessment of required resources for scaling or replication. 3. Qualitative assessment of required partnerships and institutional support for scaling or replication. 4. Qualitative assessment of systemic and contextual factors influencing scalability, such as policy and regulatory environments.

7.3 List of Interviews and Focus group discussions during the Evaluation Mission

Table 10: Interviews and Focus group discussions during the Evaluation Mission

#	Organisation	Type of interview
GIZ Project team		
1	GIZ EnDev country team Kenya	1 Group interview
2-4	GIZ EnDev country team Uganda	3 Interviews
Awardees		
5	TryKE Group Limited	1 Interview
6	PHB, Yelekeni SACCO	1 Focus group discussion
7-8	I4SD	2 Group interviews
9-10	ENGIE	1 Group interview, 1 Interview
11	Akvo	1 Interview
Direct and/or indirect Beneficiaries		
12-13	Beneficiaries of TryKE Group Limited: Drivers association, Local vendor	1 Focus group discussion, 1 Interview
6	Beneficiaries of PHB, Bright Life and the Yelekeni SACCO: Yelekeni SACCO members (farmers)	1 Focus group discussion (see #4)
14-16	Beneficiaries of I4SD: Youth Centre, motorbike riders, Health Centre	2 Group interviews, 1 Interview
17-18	Beneficiaries of ENGIE: Local business owners	1 Focus group discussion, 1 Interview
19	Beneficiaries of Akvo: Potential customers of the Water kiosk (residents of Rhino Camp) incl. residents trained	1 Focus group discussion

7.4 Interview guides

7.4.1 GIZ Project team

ABOUT THE PROJECT

Relevance

6. First, we would like to understand **why** these projects were chosen.
    a. *Uganda:* For context, please also tell us about the other two projects that are not part of this evaluation.
7. We would now like to look at the **appropriateness** of the choice of projects: To what extent were the project concepts appropriate and/or realistic from today's perspective?
8. Please describe to what extent there were **changes to the project concepts** during implementation.

Results and effectiveness

We would like to ask you to describe to what extent the intended objectives of the project have been achieved.

9. What were the **intended results** of the project?
    a. Please also refer to the **indicators** and their modifications over time.
10. Please describe to what extent the project has achieved **these results.**
11. What do you consider to be the most important **results** that the project has achieved?
12. To what extent were **unintended (positive or negative) results** observed or foreseeable?
13. What were **supporting and/or hindering factors** for the successful implementation of the project?

Impact and sustainability

14. Please tell us to what extent the following **impacts** have occurred or are foreseeable and to what extent the project has contributed to them:
    a. Energy access
    b. Jobs created
    c. CO2 reduction
    d. Social cohesion
15. Which **factors** were decisive for the achievement or non-achievement of the intended goals?
16. Are there any **unintended (positive or negative) long-term effects** of the project?
    a. If yes, how did the project address them?
17. In your opinion, to what extent will the achieved results or impacts **remain** after the project has ended?
18. How were **local capacities** developed to ensure the sustainability of the project outcomes?
19. To what extent is the project **integrated** into the local system?
20. How **scalable** is the project outside of the target population and region?

Efficiency

21. In your opinion, to what extent did the project **use its resources efficiently**?
22. To what extent were the intended results achieved within the **planned timeframe and with the planned resources**? Please give concrete examples.
23. Please describe the **collaboration with the awardees**.
24. Please describe the **management processes** within the SCCIF (team + awardees).
    a. Were roles and responsibilities clearly defined?
    b. Please describe the decision-making processes and communication towards changing circumstances.
25. To what extent was there **exchange / coordination**
    a. between the different projects?
    b. with projects from GIZ or other donors?

FINAL QUESTIONS

26. Are there any **other aspects** that you deem important which were not addressed in this interview?

7.4.2 Awardees

ABOUT YOU

1. Please briefly tell us about your **organisation** and your **position** and how you are connected to the SCCIF-funded projects. *E.g., since when have you been involved with the SCCIF-funded project?*

ABOUT THE PROJECT

(If no exploratory interview) Project context

2. Please describe the **relevant context** for the basic service you deliver.
    a. Which main basic services are needed in your area?
    b. What are main challenges for service delivery in your area?
    c. Who are the main (national, local) stakeholders for service delivery in your area?
3. Who were the main target groups of your project?
    a. Which of their needs were adressed by your project?
4. What was your **motivation** to apply for the funding by SCCIF?

Project concept

5. We would now like to look at the **appropriateness** of the project's conception. To what extent is the project appropriate and/or realistic in its conception from today's perspective?
6. Please describe to what extent there were **changes to the project concept** during implementation. If there were changes, please describe the reasons behind them, the changes themselves, and the decision-making process involved.
7. How does the project fit into the rest of **your activities**?

Project implementation

8. Please describe your **interaction** with the SCCIF team during the implementation of the project.
9. Which **results** did you agree on with the SCCIF at the beginning of the project?
   a. Please also refer to the indicators.
10. How did those results and/or indicators **change** during the project implementation?
11. Did the project **achieve** the intended results?
12. What was your **most important result**, and why?
13. To what extent were the intended results achieved within the **planned timeframe and with the planned resources**? Please give concrete examples.
14. From your point of view, what has been the **contribution** of the project regarding:
    a. Access to energy for the population
    b. Jobs created
    c. Social integration
    d. Reduction of CO_2 emissions
15. In your opinion, to what extent will the achieved results or impacts **remain** after the project has ended?
16. How were **local capacities** developed to ensure the continuation of services?
17. To what extent is the project **integrated** into the local system?
18. How **scalable** is the project outside of the target population and region?
    a. Have you plannend to **extend** the services (e.g. other regions, more service points, etc.)?
19. According to your perspective, what were **supporting and/or hindering factors** for
    a. the successful implementation of the project?
    b. the successful sustainability of the project?
20. Please describe the **management processes** within the SCCIF (team + awardees).
    a. Were roles and responsibilities clearly defined?
    b. Please describe the decision-making processes and communication towards changing circumstances.
21. To what extent was there **exchange / coordination**
    a. between the different projects?
    b. with projects from GIZ or other donors?

Lessons learned

22. What are your **main lessons learned**?
23. If you were to apply a **similar project**, what would you repeat and what would you do differently?
24. Do you have **recommendations** for the GIZ team and/or the SCCIF?

FINAL QUESTIONS

25. Are there any **other aspects** that you deem important which were not addressed in this interview?

7.4.3 Beneficiaries

ABOUT YOU

1. Please briefly **present yourself** and your institution, and your relationship with the project.

ABOUT THE PROJECT

2. Please describe **how** you heard about the project activity.
3. In your opinion, how does the project activity meet your **needs**?
4. Please describe **why** you decided to participate in the project activity.
   a. Your objectives
   b. Your expectations
5. To what extent were your objectives and/or expectations **achieved**?
6. How **satisfied** were you with the project activity?
7. What was the **greatest benefit / result** of having participated in the project activity?
8. To what extent are the project results being **used** / can you **apply** what you obtained and/or learned? *Please give examples*.
9. To what extent did you participate in **similar activities**?
10. What **recommendations** do you have for this or future similar activities?

FINAL QUESTIONS

11. Are there any **other aspects** that you deem important which were not addressed in this interview?

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