Final Project Report

Services to support the import and distribution of eCooking Appliances into Tanzania and develop a Sustainable Supply Chain

SMARTPIKA LIMITED

Produced by:

For: FCDO and Loughborough University

Date: February 2026

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MECS Modern Energy Cooking Services

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Document Control Sheet

Issue Status	Author(s)	Reviewed By	Loughborough University Approved By	Issue Date
Final version	Amne Mahuna			
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Picture 1: SmartPika Management Team

Executive Summary

This final report summarizes the outcomes of the project *"Services to support the import and distribution of eCooking Appliances into Tanzania and develop a Sustainable Supply Chain,"* implemented by SmartPika Limited with funding from UKAid through the Modern Energy Cooking Services (MECS) programme at Loughborough University.

The project successfully established a sustainable supply chain and market for Pay-As-You-Go (PAYG) electric cooking appliances in Dar es Salaam, Tanzania, targeting charcoal-dependent households. Key achievements include the import and deployment of over 900 appliances within one month, the development of a hybrid distribution network involving 30 local resellers, and the implementation of a digital token-based PAYG platform to enhance affordability and access.

Major findings confirm that **affordability remains the primary barrier to adoption**, with flexible financing models proving essential across all income segments. Live product demonstrations and community-integrated marketing—such as school promotions—were highly effective in driving engagement and sales. Women emerged as key decision-makers, valuing time savings and convenience over technical features. Additionally, customer repayment behavior exceeded expectations, with many opting for lump-sum payments, indicating strong product satisfaction and a desire for rapid ownership.

Challenges included supply chain delays, logistical constraints in field marketing, and the need for continuous customer education. A significant product quality issue was also identified upon arrival of the air fryer shipment, where the cooking baskets were found to be inadequately painted. This was addressed through rigorous quality assurance protocols: we halted all sales of the affected model and worked with the supplier to replace all faulty components before any units were released to customers. Other challenges were managed through tactical pivots, such as zero-deposit pilots, and the use of WhatsApp groups for ongoing customer support.

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The project validates the commercial viability and social impact of the PAYG eCooking model, directly supporting Tanzania's National Clean Cooking Strategy and contributing to reduced charcoal use, improved health outcomes, and decreased deforestation. SmartPika plans to scale operations, secure additional funding, expand geographically, formalize partnerships with SACCOs and retailers, and monetize carbon credits. With continued support, the initiative is on track to reach over 8,500 households by September 2026.

Table of Contents

1. Introduction

This final report is submitted by Smart Pika Limited in fulfilment of its obligations under the Grant Disbursement Agreement (GDA) with Loughborough University (LU) for the project titled **"The provision of Services to support the import and distribution of eCooking Appliances into Tanzania and develop a Sustainable Supply Chain"** (LU Reference: LU00945). The project was conducted within the broader framework of the Modern Energy Cooking Services (MECS) programme, supported by UKaid.

1.1 Project Aims and Objectives

Aligned with the original Invitation to Tender (ITT) and the GDA, the project was designed to achieve the following specific aims and objectives:

- **Supply Chain Development:** To establish and operationalise a sustainable import and distribution channel for modern, energy-efficient Pay-As-You-Go (PAYG) electric cooking appliances (eCookers)—specifically electric pressure cookers (EPCs) and air fryers—in Tanzania.
- **Market Creation & Consumer Access:** To overcome the critical barrier of high upfront costs by implementing and testing an accessible PAYG financing model, thereby enabling low- and middle-income households to acquire and use clean cooking technology.
- **Demonstration of Impact:** To demonstrate the commercial viability and social impact of a PAYG eCooking business model, contributing directly to the strategic goals of the MECS programme by displacing charcoal use, improving health outcomes, and reducing deforestation.
- **Data Generation & Learning:** To generate robust customer and market data through structured sales activities and a partnership with 60 Decibels for user surveys, providing evidence for scalable replication and sustainable growth within the sector.

· **Original Target:** To connect 1,000 households with modern electric cooking appliances through the PAYG model by the project end date of 30 January 2026.

1.2 Background and Sector Context

The project was launched in response to a severe and persistent public health and environmental crisis in Tanzania, where clean cooking access remains a critical development challenge.

- **The Charcoal Dependency Crisis:** Despite widespread grid connectivity, only 3% of Tanzanian households use electricity for cooking (NBS & REA 2020). The vast majority continue to rely on charcoal and other biomass fuels as their primary cooking energy source. This practice imposes a significant daily financial burden on low-income families and creates dangerous levels of indoor air pollution (HAP). HAP from biomass fuels like charcoal is responsible for approximately 33,000 premature deaths annually in Tanzania, with women and children disproportionately affected due to their exposure during cooking.
    - **National Clean Cooking Ambition:** Recognizing this urgent issue, the Government of Tanzania launched a 10-year National Clean Cooking Strategy in May 2024, with an ambitious target of 80% household adoption. This project directly supports this national priority by piloting a scalable market-based solution.
    - **The eCooking Opportunity:** A confluence of factors makes electric cooking a timely and potent solution:
- **Infrastructure Readiness:** Ongoing mass electrification and improving grid reliability provide the necessary foundation. Tanzania also benefits from a generation surplus, creating an opportunity to utilize existing power capacity for productive uses like cooking, even as transmission and distribution infrastructure continue to be developed and upgraded.
        - **Technology Availability:** The emergence of affordable, energy-efficient appliances like EPCs and air fryers makes electric cooking a practical alternative.
        - **Financing Innovation:** High mobile money penetration enables innovative PAYG and digital micropayment models, which are central to overcoming the affordability barrier that has historically impeded adoption.
    - **Strategic Fit with MECS:** This project operationalises the core MECS mandate of stimulating markets for modern energy cooking services. By focusing on a PAYG business model for efficient electric appliances, it addresses the critical "trilemma" of affordability, usability, and sustainability, generating valuable insights for the broader sector.

2. Methodology

This project employed a market-driven, action-research methodology to establish and test a sustainable supply chain for PAYG eCooking appliances in Dar es Salaam, Tanzania. The methodology was designed to achieve both commercial rollout and rigorous data collection for learning.

2.1 Research Design & Implementation Framework

The project was executed as a pilot market intervention, combining business operations with structured data collection. The core activities were:

- **Location & Duration:** The primary field of operation was Dar es Salaam, Tanzania, targeting grid-connected, charcoal-dependent households. The project activities, as per the Grant Disbursement Agreement (GDA), were conducted from January 2025 to January 2026.

- **Core Methodology Components:**

    1. **Supply Chain Setup:** Sourcing PAYG-enabled EPCs and air fryers from a Tier-1 manufacturer, managing logistics, import, and quality assurance (as detailed in Schedule 1 and the project workplan).
    2. **Hybrid Distribution Model:** Employing a B2B2C model by onboarding and training 30 local resellers (retailers, SACCOs) as primary sales channels, supplemented by a direct sales team for market activation and demonstrations.

- **Awareness Raising & Market Activation:** A multi-channel approach was deployed to build trust and generate demand. The most effective tactic was direct engagement with schools, where the team conducted live cooking demonstrations and prepared lunch for teachers using the appliances, allowing them to experience the product firsthand. This was complemented by a growing digital presence on Instagram (@smartpikatz), where educational content, user testimonials, and product features are shared to reach a broader audience and reinforce awareness.

- **PAYG Technology Platform:** A proprietary digital ecosystem was developed to manage customer onboarding, appliance unlocking, micropayments via mobile money, and usage data tracking.

- **Financing Model:** Customers acquire the appliance with a flexible deposit—initially TZS 80,000, later reduced to TZS 50,000, then TZS 30,000, and ultimately a zero-deposit pilot for school teachers to accelerate adoption. Ownership is achieved once full payment is completed within a 6-month period. If payments are not completed, the appliance remains

the property of SmartPika, as devices are configured with a lifetime tariff that requires continuous purchase of cooking minutes to operate.

- **Digital Platforms:** The ecosystem includes: (i) a **Customer App** for firmware updates, earning "Pika Points" rewards, viewing transaction history and cooking data, running device health checks, and accessing after-sales support; (ii) a **Technician App** for troubleshooting and servicing devices; and (iii) a **Web Platform** for real-time tracking of all assets, customers, and payments. This integrated system ensures all appliances are shipped in an inactive state and cannot operate until registered to a customer through the platform, providing robust asset control and preventing unauthorized use.

3. **Integrated Impact Measurement:** Partnering with **60 Decibels** (as mandated in Clause 5.1 of the GDA) to conduct lean-data phone surveys with 10% of customers, ensuring independent verification of user demographics, adoption, and impact.

2.2 Participant Selection & Recruitment

Participants in this project were defined as both **commercial partners (resellers)** and **end-user customers**.

- **Reseller Selection:** Resellers were selected based on location (within target Dar es Salaam wards), existing foot traffic (e.g., appliance shops, supermarkets), and willingness to participate in training. Advanced negotiations were held with five SACCOs to leverage their existing member bases.
- **Customer Recruitment:** End-users were not pre-selected but acquired through market-driven activities. They were recruited via:
    - **Reseller Networks:** Customers engaging with trained resellers at their shops.

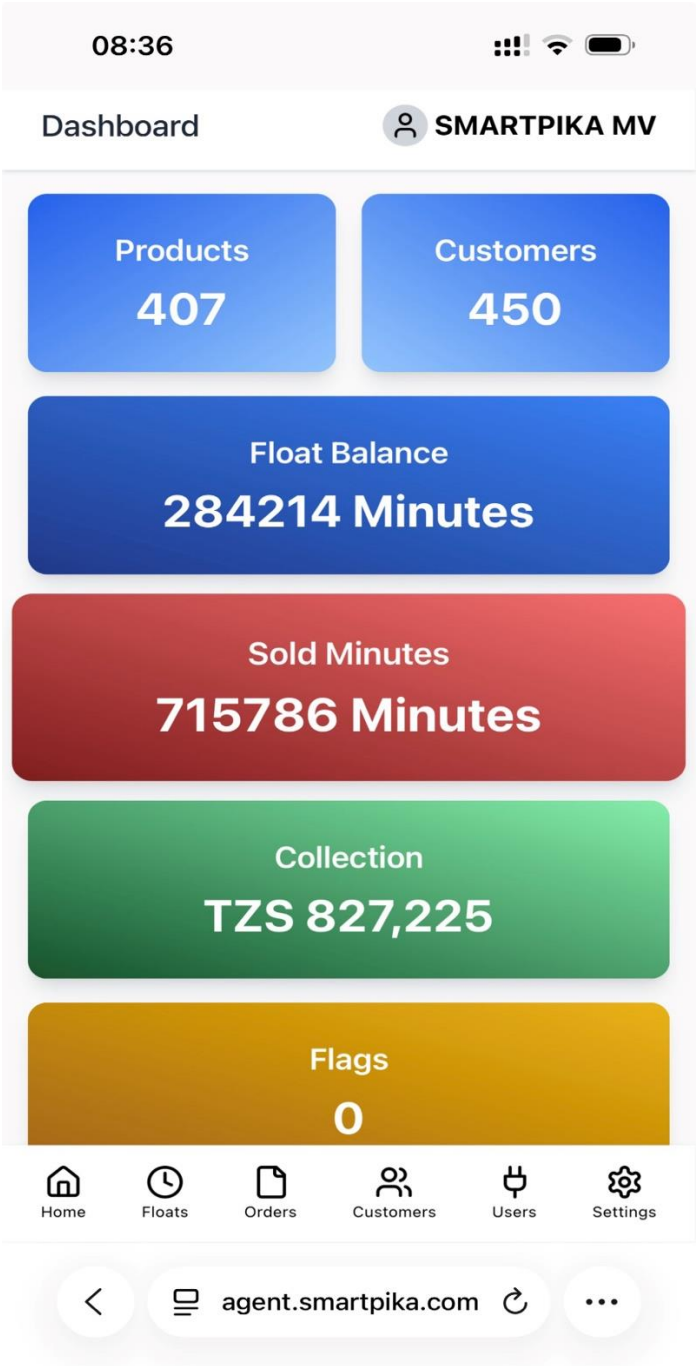
- **Direct Marketing:** Roadshows, community demonstrations, and digital/TV campaigns designed to generate leads. For the roadshows, we capitalized on the existing MECS-funded programme, **PIKA SMART**, which provided a platform for public engagement. Our team supplemented this by conducting our own extensive digital campaigns and community-based demonstrations (e.g., at schools, markets, and public gatherings). This hybrid approach had distinct pros and cons: leveraging the MECS programme gave us credibility and access to established networks, while our own grassroots efforts allowed for deeper, more localized engagement and greater control over messaging. However, self-organized demonstrations were more resource-intensive in terms of time and logistics.

- **Screening Criteria:** At point of sale, resellers applied indicators (via the SmartPika Agent Platform) to screen for target customers: ability to pay the initial deposit, family size (>4 persons), current charcoal expenditure, and smartphone ownership to ensure they could benefit from and sustain use of the PAYG system. The screening process proved partially effective. While it successfully identified customers with the basic prerequisites for adoption (particularly smartphone ownership, which is essential for the digital PAYG experience), the criteria were not always predictive of repayment performance. Some customers who met all screening indicators still defaulted, while others who fell outside the ideal profile (e.g., smaller families) became reliable payers. The most significant learning was that the **deposit amount itself** was a more powerful real-time indicator of commitment and capability than the predefined demographic criteria. Customers willing and able to pay a higher deposit—even if they didn't perfectly match the ideal profile—consistently demonstrated stronger repayment behavior. This insight has prompted us to refine our risk assessment approach, placing greater weight on initial payment behavior as a proxy for customer commitment.

2.3 Data Collection Methods

Multiple streams of data were collected to measure performance, impact, and learning:

- **Operational & Sales Data:** Automated collection through the SmartPika agent platform, tracking units sold, customer loan repayments, and appliance usage patterns. The platform's QR code-based inventory management proved highly effective, providing real-time visibility of stock levels across all 30 reseller locations and enabling rapid replenishment. The mandatory customer registration process before activation ensured that every appliance in the field was linked to a verifiable user, eliminating the risk of unauthorized sales or usage—a critical control mechanism for our asset-financing model. This end-to-end digital traceability gave us confidence in our data and our assets.



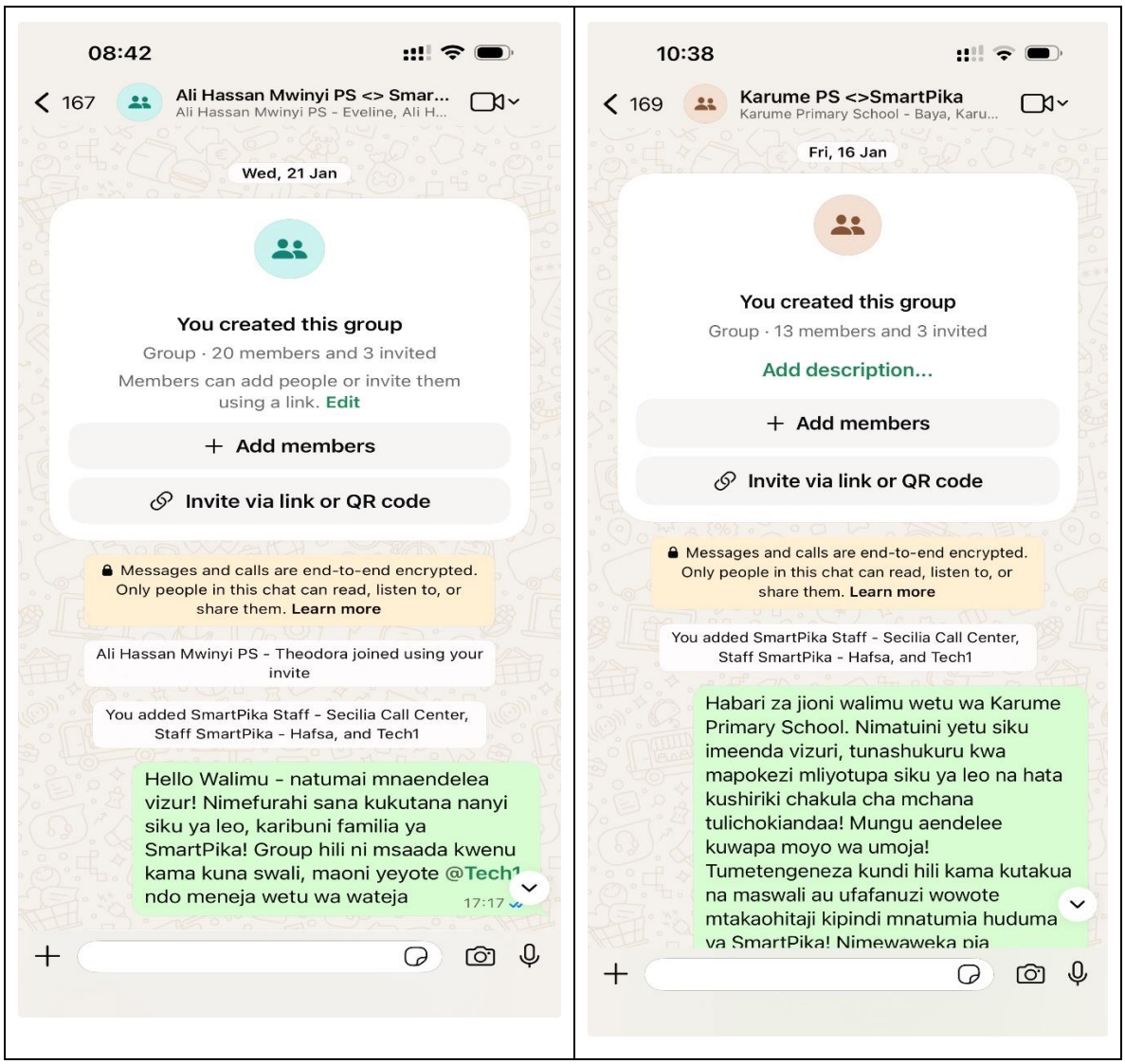
Picture 2: Agent Dashboard

- **Customer Feedback & Support Data:** Collected via the dedicated call centre, WhatsApp groups, technician visits, and in-app feedback mechanisms to monitor satisfaction and technical issues.

Customers have access to the **SmartPika Customer App**, available on the Google Play Store for Android users. Through the app, customers can:

- Update device firmware
- Earn and track "Pika Points" rewards
- View transaction history and cooking data
- Run device health checks
- Access after-sales support and service requests

This complements the **SmartPika Agent Portal** (used by resellers for registrations and inventory management) and the **Technician App** (used for device troubleshooting), creating a complete digital ecosystem that serves different user groups across the customer journey.



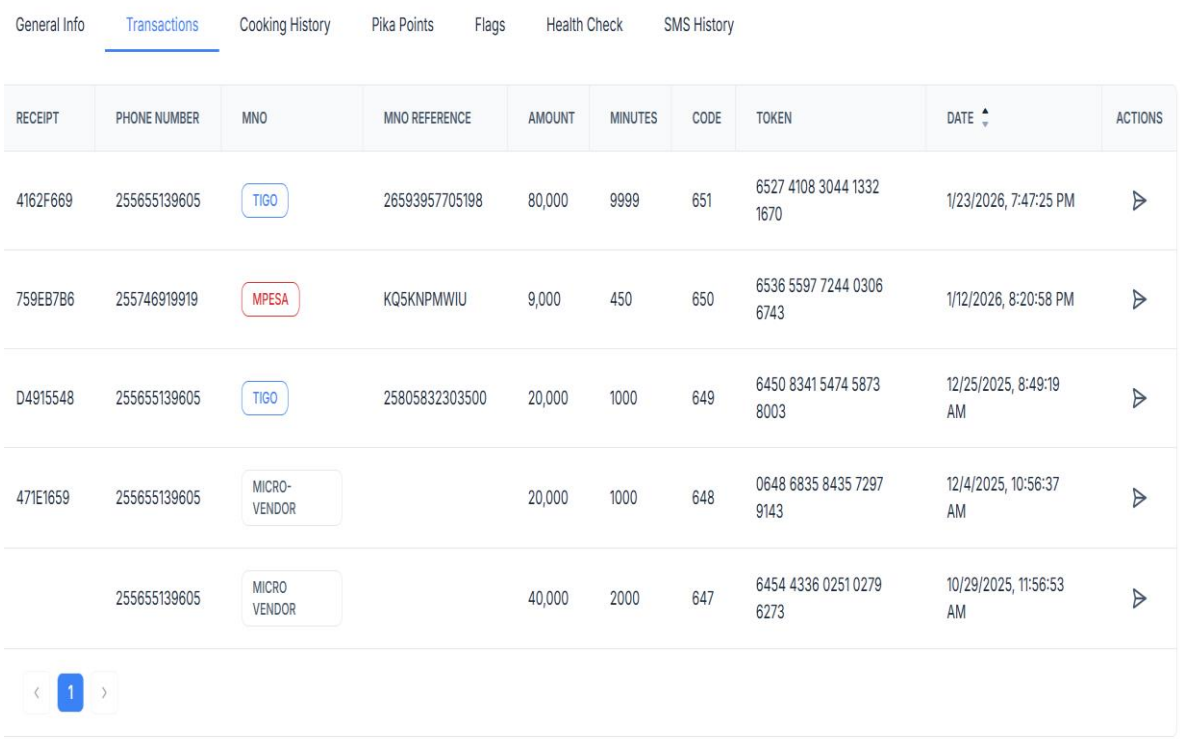
Picture 3: Dedicated Whatsapp Groups

1. **Independent Impact Survey:** The partnership with **60 Decibels** provided a crucial external data source. As per Schedule 3 of the GDA, SmartPika supplied batches of customer details (name, contact, purchase date, appliance type) to 60 Decibels, who then conducted standardized phone surveys. This ensured objective data on user experience, fuel stacking, and perceived benefits.

2.4 Evaluation of Methodology: Successes and Challenges

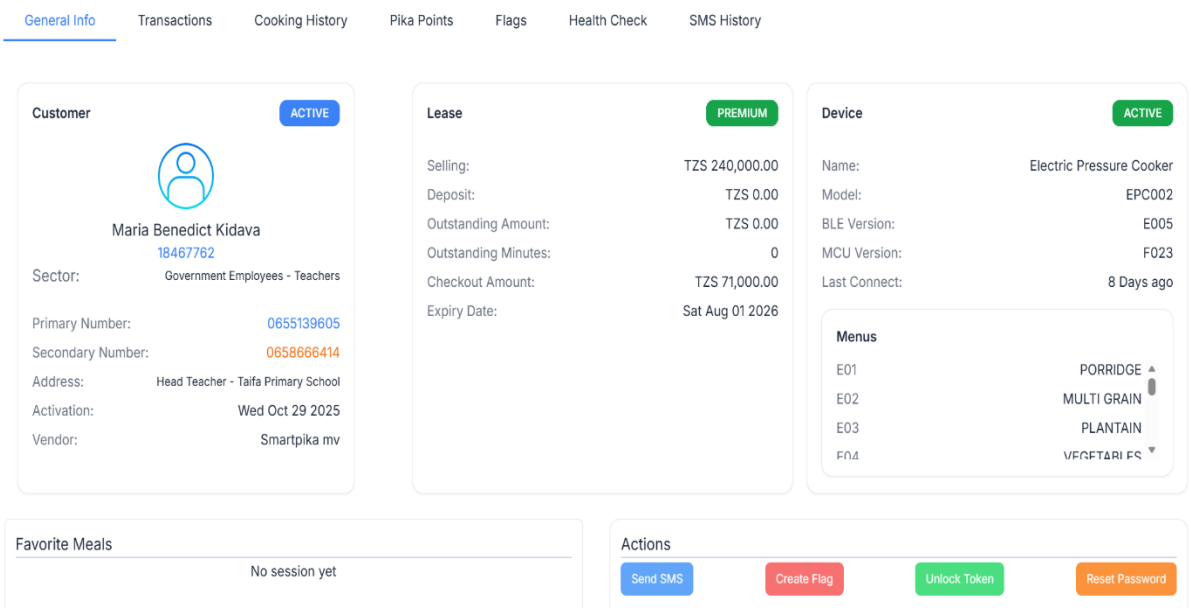
What Went Well:

- **Integrated Model:** The combination of asset-financing (PAYG) model with a localized reseller network proved effective for market penetration and building trust.



Picture 4: SmartPika PAYG eCooking Platform

- **Quality Assurance Process:** The multi-stage quality check—factory inspection, third-party certification (e.g., Intertek, SGS), and pre-sale testing—ensured product reliability, minimizing early-stage failures.
- **Data-Driven Adaptation:** The real-time data from the platform allowed for quick adjustments in marketing messaging and reseller support.



Picture 5: Customer Account in SmartPika dashboard

Challenges & Learnings:

- **Supply Chain & Product Quality:** Import logistics and lead times presented initial delays. Furthermore, a **critical product quality issue** was identified upon receipt of the air fryers: the cooking baskets were insufficiently painted, posing a potential safety and durability risk. In line with our commitment to quality and customer safety, we **halted all sales of this model** until the supplier rectified the issue and replaced the faulty components, causing a temporary setback in the rollout schedule.

· **Technology Platform Evolution:** A significant operational challenge was the migration from the initial app-dependent credit system to a more robust token-based PAYG model. This transition, while ultimately creating a more user-friendly and resilient system, was complex. It required simultaneous development and testing of new hardware (device controllers) and software systems, which consumed more time and technical resources than initially planned.

Initial System: In the previous method, customers were required to have the SmartPika App installed on a smartphone to update credit on their appliance. This created several constraints: customers needed both a smartphone and a reliable internet connection to add cooking minutes, and our business needed dedicated staff to ensure the app functioned correctly across different devices.

Trigger for Change: In the early stages of deployment, we observed that the app was not compatible with all smartphone models, particularly older or lower-spec devices common in our target market. This inconsistency created reliability issues and risked customer churn, as users who could not easily add credit became frustrated and disengaged. It became clear that this dependency on constant internet connectivity and app compatibility would limit our market size and create ongoing pain points for customers.

Development & Transition: The new token-based system was developed by **Afodabbo Products Limited** (our parent company), leveraging their technical expertise in hardware-software integration. The transition involved redesigning device controllers and developing a parallel software infrastructure to generate and validate tokens—a complex undertaking that required extensive testing before rollout.

Impact on Supply: The migration temporarily constrained supply, as we paused further imports until the new hardware controllers were fully developed and integrated with the token system. However, this short-term delay has proven worthwhile: the new approach has significantly increased our addressable market (by removing smartphone compatibility constraints) and reduced customer pain points, as tokens can now be delivered via SMS and do not require internet connectivity or app functionality to activate the appliance.

- **Field Marketing Logistics:** A major unforeseen challenge was the **lack of dedicated transport for our sales and demonstration teams.** The weight of the appliances (over 3kg each) made it extremely difficult for agents to move them conveniently between key locations like schools, hospitals, markets, and bars. This logistical constraint hampered our ability to quickly capitalize on leads and conduct impromptu demonstrations, highlighting a critical gap in our initial operational budget and planning for effective field marketing at scale.
- **Customer Data Provision for 60 Decibels:** Ensuring the timely and compliant transfer of customer contact details for the external survey required robust internal data management processes. Balancing customer privacy with the requirement to provide data for impact verification was an operational learning point.

· **Market Education:** The need for intensive, face-to-face customer training was greater than anticipated, requiring more resources for customer support and demonstrations to overcome ingrained cooking habits and charcoal dependence.

What Would Be Done Differently:

- **Pilot Stock Buffer:** In future phases, holding a larger buffer stock domestically would de-risk the supply chain and allow for more agile response to sales demand.

- **Earlier Reseller Engagement:** Engaging and training the reseller network *before* the first stock arrival could have accelerated the initial sales ramp-up.
- **Enhanced Baseline Data:** While the 60 Decibels survey provides excellent post-purchase data, incorporating a more structured pre-purchase baseline survey of customer cooking habits (through resellers) could have strengthened impact attribution.
- **Logistics for Field Teams:** Allocate budget for dedicated marketing vehicles or a reliable logistics partner to enable agile, wide-reaching demonstration campaigns and rapid response to sales leads.
- **Earlier and Phased Tech Development:** Core technology platforms, especially those involving hardware-software integration like the token system, would be developed and stress-tested in a pilot phase **before** full-scale commercial rollout.

3. Findings and Lessons Learned

This project yielded significant insights that validate the core PAYG eCooking model while highlighting critical challenges and opportunities for scaling. The findings are drawn from direct commercial operations, customer interactions, and partner engagements.

3.1 Supply Chain & Product Development

Finding 1: Sourcing compliant PAYG hardware is a major bottleneck. Of 12 appliance manufacturers in China approached, only one was willing and technically capable of integrating the custom PAYG hardware and software required for our business model. This highlights a significant gap in the supply chain for "smart", financeable appliances tailored for emerging markets.

Finding 2: Product quality and after-sales support are non-negotiable for trust. We encountered a high level of customer awareness—and frustration—regarding existing electric pressure cookers in the market. Many potential customers already owned a unit but could not use it due to a lack of accessible spare parts or repairs, making them skeptical of new purchases. This negative perception was widespread: we met numerous customers who had bought low-quality appliances that became unusable within a short period, leaving them disillusioned with electric cooking altogether. Our pitch directly addressed this skepticism. We emphasized that we sell **high-quality appliances**, and the proof of our confidence is our willingness to offer them on **6-month credit with a pay-per-use model**. The message was simple: we would not risk our own business by financing appliances that would fail. This, combined with our commitment to a **1-year warranty and a dedicated repair plan**, directly addressed the critical barrier of mistrust and helped convert skeptical customers into adopters.

Finding 3: Simplicity and reliability trump advanced features. User feedback strongly indicated a preference for a simple, reliable product that performs its core function well. While our initial hardware included advanced features (e.g., password protection), these saw low usage. The most valued features were the clear display of **electricity units used and real-time cost**, which provided transparency and built trust in the appliance's efficiency.

3.2 Market Engagement & Sales Conversion

Finding 4: "Seeing is believing" – Live demonstrations are irreplaceable. Direct, live cooking demonstrations were the single most effective tool for converting interest into sales. Pitching an air fryer or pressure cooker without a live demo was significantly less effective. This underscores the necessity of hands-on experience to overcome skepticism and demonstrate ease-of-use.

Picture 6: Live Cooking Demonstration

Operational Achievement & Pivot: A shipment of **952 appliances arrived in mid-December 2025**. Through focused deployment and live demonstrations, we successfully connected **900 households** with these units within one month, demonstrating strong market pull and effective execution. However, we learned that even a modest upfront fee could be a barrier. Initially charging a **TZS 30,000 deposit**, we observed that moving to a **zero-deposit model** for a pilot group (including the schoolteachers) dramatically increased uptake and conversion. This tactical pivot provided direct evidence that minimizing initial cash outlay is critical for accelerating adoption.

Based on this learning, we have now segmented our deposit strategy. For customers working in government—who demonstrate reliable income and repayment capacity—we continue to offer a **zero-deposit model** to drive adoption. For all other customers, we have standardized on a **TZS 50,000 deposit**, which balances accessibility with risk management and positive cash flow.

Finding 5: Affordability remains the paramount barrier, even among higher-income groups. This was powerfully demonstrated at multiple levels. Initial market testing with the general public showed that an upfront deposit of **TZS 80,000 resulted in fewer than 10 sales**.

Reducing this to **TZS 50,000** generated more interest, yet customers still overwhelmingly negotiated for a deposit of **TZS 30,000 or less**. The most conclusive evidence came from our engagement with a local school, where we successfully recruited **19 out of 22 teachers** only after offering NO deposit. While this elite segment showed high knowledge and ownership of standard pressure cookers, their adoption—like that of the broader market—hinged entirely on the availability of flexible financing. Customers across all segments consistently requested and relied upon accessible credit terms. This finding conclusively validates the core premise of the PAYG model: **without flexible financing, a vast portion of the market, across all income levels, is excluded.**

It is important to note that while we reduced the deposit, we never increased the total price of the appliance. Keeping the price consistent was a deliberate strategy, and customers noticed. Many compared our approach favorably against competitors—for example, several customers mentioned that Burn Manufacturing sold them induction cookers for TZS 440,000 two years ago and are now selling the same units for TZS 120,000. This dramatic price drop shocked many and eroded trust. By contrast, our consistent pricing reinforced that we were not overcharging them, which helped build credibility and differentiate SmartPika in the market.

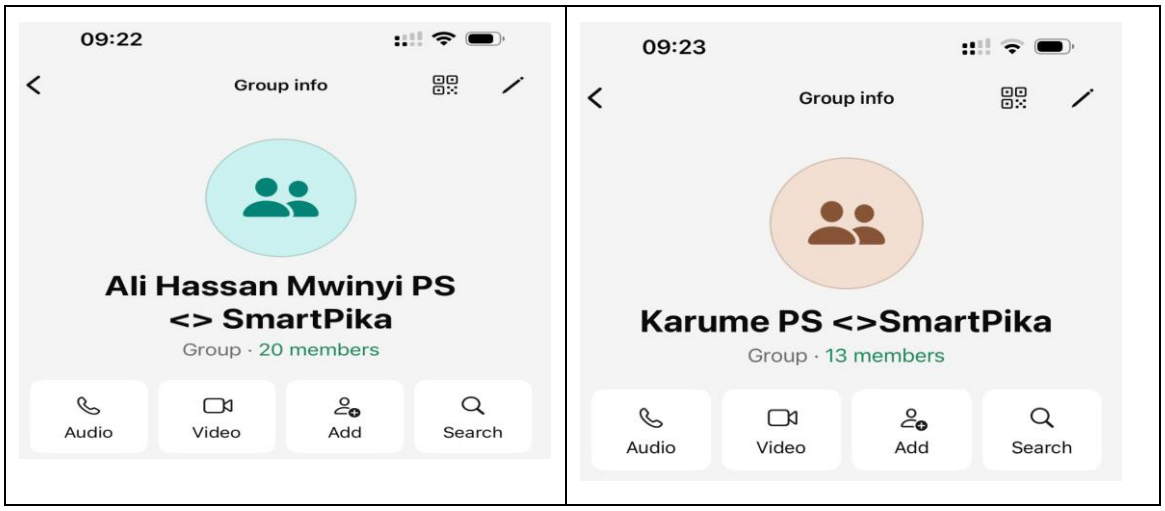
Finding 6: The token-based repayment model is well-understood and accepted. The transition to a token system for loan repayment received positive feedback. Customers readily understood the model, analogizing it to common practices like purchasing data bundles or acquiring smartphones on similar credit plans, indicating good market fit for the financial technology.

Picture 7: Customer transactions

3.3 User Behavior, Training & Product Design

Finding 7: Customer education is a continuous process, not a one-time event. We learned that users require substantial, ongoing support:

- Basic operations, such as correctly closing the pressure cooker lid, required repeated practice.
- Our **WhatsApp support groups** emerged as a highly effective channel for continuous training, troubleshooting, and community building, ensuring customers were not left isolated post-purchase.



Picture 8: Whatsapp groups for school teachers

Finding 8: Feature demand reveals aspirational usage. The frequent customer enquiries about a **"cake baking" feature** for the pressure cooker reveal an aspirational use case beyond staple cooking. This points to a desire for versatility and suggests that marketing could tap into lifestyle benefits, not just cost savings.

Cake baking is indeed possible in an Electric Pressure Cooker (EPC), and it is relatively easy when using a non-stick aluminum pot—which is what many customers are accustomed to seeing from other suppliers. However, we were selling our EPC with a **high-quality SUS304 stainless steel pot**, which required some adjustments. With the SUS304 pot, users need to use baking paper to prevent the cake from sticking and ensure easy removal. Additionally, the temperature settings needed fine-tuning to achieve the right baking results.

When customers expressed interest in cake baking but struggled with the SUS304 pot, we took this feedback seriously. Our technical team ran a series of tests and subsequently **adjusted the device software** to optimize the cooking cycle for cake preparation using the SUS304 pot.

A key advantage of our EPCs is that they are all capable of **Over The Air (OTA) updates**, allowing us to remotely push the latest software enhancements directly to customers' appliances. This ensured that every user could benefit from the improved cake-baking functionality without needing to visit a service center or replace their device. This

responsiveness not only solved a practical user problem but also demonstrated our commitment to continuous product improvement based on real customer needs.

Finding 9: Product design must align with local cooking habits and perceptions. We encountered a significant user experience challenge related to the **single stainless-steel (SUS304) cooking pot** included in our package. While high-quality and safe, the need to wash it thoroughly between cooking different meals was perceived as a constraint by customers accustomed to the convenience of multiple or non-stick pots. This feedback highlights a tension: while many users fear non-stick coatings (due to concerns about non-food-grade paints), the practical limitation of a single pot impacts perceived convenience and efficiency.

Finding 10: There is a content gap in the traditional retail sector. Existing retailers of electric cooking appliances have largely not invested in creating compelling, educational marketing content. This creates an opportunity for providers like SmartPika to differentiate through superior customer education and digital engagement.

Picture 9: SmartPika Vs Traditional SESCOM Marketing posters

Finding 11: Women are the primary change agents and decision-makers for pressure cooker adoption. Our direct field engagement revealed that women, who bear the primary responsibility and time burden for cooking, are the most decisive purchasers. They quickly recognize the value proposition of reduced cooking time and effort. We observed that women often make the purchase decision independently after a demonstration, sometimes without prior consultation with their partners. This underscores that **marketing and sales pitches should be primarily tailored to women**, emphasizing time savings, reduced smoke exposure, and ease of use, as these benefits resonate most strongly with them.

Picture 10: Distribution of PAYG EPC to teachers at Kibasila Primary School

Finding 12: Clear, localized communication of versatility is a major selling point. A key success factor was our cooker's interface, which features **16 buttons, each programmed for two food types (totaling 32 dishes), with labels written in Swahili.** We discovered that many customers were unaware a pressure cooker could prepare such a wide variety of foods. This direct, visual communication of capability—contrasting sharply with competitor models that list only 5-6 basic functions—generated significant excitement and helped customers immediately visualize the product's value in their daily lives. This demonstrates that **translating technical capability into tangible, culturally relevant benefits is critical for adoption.**

Finding 13: Customer repayment behavior defies initial micro-payment assumptions. Contrary to our expectation that users would purchase small, frequent token amounts (e.g., less than TZS 2,000), transaction data revealed that a **majority of customers are making lump-sum payments of up to TZS 30,000 at a time**. Furthermore, a significant number have paid the full appliance price within the first month of ownership. This indicates **high product satisfaction, strong perceived value, and a customer preference**

for faster ownership. This insight is crucial for cash flow forecasting and suggests that while the PAYG model is essential for initial access, many customers use it as short-term, flexible credit rather than long-term micro-financing.

These finding complements—rather than contradicts—our earlier insight about the importance of low deposits. The two reflect different stages of the customer journey: a **low deposit is critical for initial adoption**, lowering the barrier to entry and allowing customers to experience the product firsthand. Once they have the appliance in their home and begin using it, they quickly recognize the value—saving time, reducing hassle, and avoiding charcoal costs. This builds trust in both the product and the service. As a result, customers become comfortable spending more, often making larger lump-sum payments to accelerate ownership. In essence, a low deposit gets them in the door; product satisfaction and trust drive them to pay faster.

MNO	MNO REFERENCE	AMOUNT	MINUTES	CODE	TOKEN
TIGO	26650900879671	30,000	1500	605	6036 7334 3080 5697 1423
TIGO	26991155142352	10,000	500	604	6042 1312 4325 2942 4244

Picture 11: Customer Payments to SmartPika

Finding 14: Messaging on convenience outperforms other feature-based marketing. Analysis of our social media engagement revealed that content highlighting the **time-saving convenience and reduced effort** of pressure cooking generates significantly more inquiries and engagement than posts focusing on technical specifications, cost savings, or even health benefits. This indicates that for our target demographic—particularly busy women managing households—the immediate **value proposition of reclaiming time and simplifying daily chores is the most powerful motivator for consideration.**

Cost enters the equation at a different stage of the customer journey. Our initial marketing, particularly through online channels like Instagram, targets audiences who are already aware—through our branding and messaging—that we offer PAYG financing. They know affordability has been addressed. With the cost barrier removed from the outset, their attention shifts to other benefits: What else does this product offer? How will it make my life easier? This is why convenience-focused content generates more engagement. Cost becomes a deciding factor later, during the final purchase consideration, but it is not the primary hook that draws them in. By addressing affordability upfront through our PAYG model, we create space to market the lifestyle benefits that truly motivate adoption.

Picture 12: SmartPika convenience marketing posts

Finding 15: Community-integrated marketing generates high-quality leads. A highly successful tactic was our school promotion campaign, where we provided **free school bags to children**. These bags, printed with our contact information, acted as direct marketing channels into households. This initiative generated a significant number of follow-up calls from parents intrigued by the product, demonstrating that **adding tangible community value can effectively build trust and stimulate direct demand**, creating a warm lead pipeline.

Picture 13: SmartPika Community Integrated Marketing campaigns

3.4 Key Lessons Learned

1. **Quality and Trust are Foundational:** A robust supply chain with rigorous QA and a clear after-sales service promise is essential to overcome market skepticism.
2. **The PAYG Model is Essential, Not Optional:** The demand for credit terms across socioeconomic groups confirms that financing is the key to unlocking mass adoption.
3. **Human-Centric Design is Crucial:** Technology must serve simplicity and transparency (e.g., cost display). Sales strategies must be experiential (demos) and supportive (ongoing training via WhatsApp).
4. **Building a Market Requires Ecosystem Development:** Challenges range from upgrading traditional manufacturers to educating retailers and creating sustained support channels for end-users.

4. Next Steps

The findings from this pilot project provide a robust foundation for scaling the PAYG eCooking model in Tanzania and beyond. The next steps are designed to leverage our learnings, secure the necessary resources, and expand our impact.

4.1 Utilization of Project Results

The results will be used to:

1. **Refine Our Business Model:** Directly incorporate key learnings into our operations. This includes simplifying product features based on user feedback, doubling down on live demonstrations and WhatsApp-based training, and optimizing our supply chain based on the challenges encountered with manufacturers and quality control.
2. **Develop Investment-Ready Materials:** The data on customer acquisition cost, repayment rates, and the high conversion rate among groups like school teachers will be packaged into financial models and pitch decks to attract commercial investment and scale-up capital.
3. **Inform Product Roadmap:** Customer demand for specific features (e.g., cake function) and feedback on hardware reliability will guide the technical specifications for our next-generation appliances and the continued development of our token-based PAYG platform.

4.2 Target Audiences for Results

The results are highly valuable to:

- **Development Partners & Grant Funders (like FCDO/MECS):** To demonstrate proof-of-concept, validate market-based approaches to clean cooking, and guide future programming and funding priorities.
- **Impact Investors & Commercial Lenders:** To prove commercial viability, unit economics, and creditworthiness of the customer segment, de-risking larger debt or equity investments.
- **The Clean Cooking Sector Ecosystem:** Including other appliance manufacturers, distributors, and policymakers in Tanzania and the region, to share lessons on overcoming barriers to adoption.
- **How to Disseminate:** We will share results through:
    - Formal reports and presentations to MECS and FCDO.

- Participation in industry forums and conferences (e.g., Clean Cooking Forums).
- Publishing case studies and blog posts on our website and relevant sector platforms.
- Direct engagement with identified potential partners (see below).

4.3 Pursuit of Further Funding

Yes, securing additional funding is critical for the next phase. We will actively pursue:

1. **Scale-Up Grant Funding:** Applying for larger, outcome-based grants from development finance institutions (e.g., further FCDO mechanisms, The World Bank, African Development Bank) and climate funds that support clean energy access.
2. **Commercial Capital:** Seeking blended finance, working capital loans, and equity investment from impact investors and venture capital firms focused on climate tech and financial inclusion in Africa.
3. **Carbon Finance:** Accelerating efforts to monetize the verified carbon credits generated by displacing charcoal, using the usage data from our PAYG platform. This revenue will be reinvested to lower customer costs.

4.4 Seeking New Strategic Partners

Absolutely. To scale effectively, we are actively seeking and will continue to pursue partnerships with:

- **Manufacturers:** Partnering with more innovative appliance manufacturers (beyond the single current supplier) to co-design and produce next-generation, durable PAYG-specific hardware. Establishing local assembly remains a long-term aspiration. However, our immediate focus has evolved based on market learning. After recognizing the need for an appliance that can cook **100% of Tanzanian dishes**, our priority is now to bring the **Super Cooker** to market—a versatile unit designed to handle the full range of local cooking traditions. Once the Super Cooker is proven, we plan to open an **assembly facility in Tanzania**. This is critical for cost efficiency: currently, we can ship **1,748 units** in a 40ft container. By shipping parts and assembling locally, we can increase that to **3,450 units per container**, significantly reducing shipping costs and making our operations more sustainable and scalable.
- **Financial Institutions (FIs):** Partnering with banks, microfinance institutions (MFIs), and SACCOs (Building on our advanced negotiations) to offer bundled finance products or to use our platform for credit scoring and appliance financing.

- **Distribution Networks:** Forming alliances with large, established retail chains, telecom companies (for airtime bundle integrations), and energy utilities to drastically expand our route-to-market.

4.5 Identified Potential Partners

We have already identified and begun preliminary discussions with:

- **SACCOs:** Ten major Savings and Credit Cooperative Organizations (SACCOs) in Dar es Salaam, with a combined membership of ~15,000, for direct customer access and potential co-lending models.
- **Carbon Project Developers:** Firms specializing in Article 6 and voluntary carbon markets to structure and monetize our carbon asset.

4.6 Concrete Next Steps (6-18 Month Horizon)

1. **Secure Scale-Up Capital:** Close a £2 million equity/debt round within the next 9-12 months to finance inventory for 50,000 customers and expand our team.
2. **Geographic Expansion:** Replicate the proven Dar es Salaam model in 2-3 additional major Tanzanian cities (e.g., Mwanza, Arusha) within 18 months.
3. **Product & Tech Launch:** Finalize and launch Version 2.0 of our PAYG hardware and platform, incorporating lessons on simplicity and reliability, within the next 12 months.
4. **Formalize Strategic Partnerships:** Sign definitive agreements with at least one major SACCO and one national retail chain for distribution within the next 6 months.
5. **Carbon Credit Monetization:** Achieve first issuance and sale of verified carbon credits from our customer base within 18 months, creating a new revenue stream to subsidize growth.

5. Conclusions

This pilot project has successfully demonstrated the viability and transformative potential of a market-driven, Pay-As-You-Go (PAYG) model for accelerating the adoption of modern electric cooking in Tanzania. By establishing a functional supply chain, deploying over 900 PAYG-enabled appliances, and engaging directly with end-users, SmartPika has validated a scalable pathway to address the twin crises of household air pollution and energy poverty.

The project's key achievements—including the development of a robust distribution network, the successful implementation of a token-based financing system, and the generation of critical customer insights—provide a strong proof of concept. Crucially, the findings underscore that **affordability, not awareness, is the primary barrier to adoption.** The overwhelming demand for flexible payment terms, even among higher-income groups like educators, unequivocally confirms the necessity of innovative financing to unlock the market at scale.

While challenges in supply chain management, product refinement, and intensive customer education were encountered, each has yielded valuable lessons that directly inform a more resilient and effective scale-up strategy. **The foundational support from FCDO has been catalytic, directly unlocking follow-on funding that will enable us to reach over 8,500 customers by the end of September 2026. We are now on schedule to receive 3,200 units in mid-March 2026 and the remaining shipment in mid-May 2026 to achieve this target.**

The project has not only displaced significant charcoal use and improved lives for thousands of families but has also created a data-rich, investable blueprint for sustainable growth. We extend our sincere gratitude to UKAid, the Foreign, Commonwealth & Development Office (FCDO), and Loughborough University's MECS programme for their foundational support and partnership. This collaboration has been instrumental in proving that a commercial approach, strategically supported, can be a powerful engine for achieving clean cooking access, public health goals, and climate action in Tanzania and beyond.