



Brief: Teleficient's PAYG Application in Sierra Leone



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The following document outlines key findings and recommendations derived from research into Teleficient's use of pay-as-you-go (PAYG) technology to manage sales and payments for Azuri solar products in Sierra Leone.

SOBA Background

Sierra Leone Opportunities for Business Action (SOBA) is a private sector development programme that uses a market systems approach to facilitate pro-poor economic growth in Sierra Leone. The programme collaborates with private sector businesses in three primary areas: (1) agriculture, (2) renewable energy, (3) professional services and entrepreneurship markets, to trial and to scale innovative and inclusive business practices that reduce poverty and improve economic opportunities for poor women and men.

SOBA is implemented by Adam Smith International and funded by UK Aid.

Methodology

The methodology employed included a rapid literature review and mixed methods research administered at the customer- and agent-levels. In total, 152 customers were interviewed across six districts in Sierra Leone. The data analysis took into account customer characteristics, energy usage and needs, repayment frequency, reasons for default payments, product malfunctions and overall user experience.

Background

The 'rent - to - own' model to finance solar home systems has taken East Africa by storm and now making its way to West Africa. Azuri Technologies is a leading solar energy provider extending tailored consumer financing to off-grid customers across 10 countries in Africa. In 2013, Azuri launched operations in Sierra Leone in partnership with a local company, Teleficient Communications Ltd. to adopt and replicate the supplier's product offering and pay-as-you-go (PAYG) business model to service last mile consumers marking the entry of PAYG financing in Sierra Leone.

Within the span of 24 months, Teleficient brought light to over 3,000 off- and on-grid households providing a safe alternative to traditional energy sources and impacting the lives of low-income communities across Sierra Leone. Upon the launch of operations, Teleficient built a network of 30 agents, the latter expanding their networks to collectively oversee 50 sub-agents. Agents were provided with opportunities to expand their small businesses and effectively service their customer base via customer service skill trainings, installation and maintenance training, and marketing tools and tactics to effectively reach last mile consumers across off-grid communities in Sierra Leone.

As operations were rapidly expanding, the company's efforts were stopped short upon the outbreak of Ebola Virus Epidemic. Emerging from Ebola, Teleficient is renewing its focus on solar resale. Teleficient aims to employ PAYG approaches, adapting strategies based on previous learning and to maximize sales and returns.

To inform these efforts, a research study was

conducted to assess Teleficient's PAYG approach and devise recommendations for improved strategy¹. The research captures quantitative and qualitative data through questionnaires administered to initial Teleficient PAYG customers in six - provinces across the country².

Azuri Technologies Africa

UK technology company, Eight19, came up with an innovative way to spread the cost of a solar system – the Indigo pay-as-you-go controller that is activated by weekly scratch card payments. Azuri Technologies was launched in 2012 as a spin-off to promote the technology. By March 2013, 5,000 systems had been delivered to dealers and 2,400 systems had been installed and activated, benefitting about 12,000 people.

Findings

Customers

In its targeting, Teleficient prioritizes off-grid households in urban, peri-urban and rural areas. Teleficient's customers, on- and off-grid, rely on one of the following sources of energy: grid, generator, torchlights (commonly known as 'Chinese' lights), solar lights and makeshift lights, which vary by village. Of the customers interviewed, less than 20% cited grid access as their main source of energy.

Although the initial barrier to customer acquisition for the off-grid segment is high, once acquired, these customers are more likely to be regular-paying customers considering their limited alternatives to access light. Acknowledging the inherent risks of

¹ Study conducted by sierra leone opportunities for business action (soba), renewable energy team

² Initial customers - who had completed their 20-month payment plan, customers still making payments, and customers who used both scratch-cards and mobile money were interviewed. The data collected assessed individuals access to the grid and a large number of socio-economic factors; age, gender, marital status, number of dependents and source(s) of income to distinguish between good and risky customers.. Provinces: Western Area Urban, Western Area Rural, Tonkoili, Bo, Kono, Koinadugu

Table 3: Comparative Average Weekly Expenditures on Energy Needs:

ENERGY SOURCE	Average Expenditure (sll)	Average Expenditure (USD)
Torchlight	9,000	1.2
Fuel for generator	42,745	6
Battery pack	9,755	1.3
Electricity (National Power Authority)	29,000	3.9
Solar Light (Azuri 2-bulb)	10,623	1.4

servicing customers in an ecosystem with nonexistent credit history, Teleficient builds another layer of customer segmentation focusing on income generating communities such as farming, fishing, and petty trader communities, while also tapping into trust networks through agents and sub-agents that are embedded deep into the communities in which Teleficient operates.

An overwhelming majority of the customers, reported higher preference for Azuri lights versus traditional sources of energy. Quality, durability, and cost-savings and reduction in energy expenditures were noted as key benefits and main reasons for recommending the product to others. Apart from minor switch malfunctions (discussed below), the product has proved to be durable, with customers using their Azuri lights daily for over 3 years.

Scratch Card Technology

Carrying a range of Azuri products, Teleficient trailed a PAYG method in which customers would purchase scratch-cards supplied directly from Azuri and imported into the country. Once fully charged the Azuri two-bulb solution provides light throughout the night and

charges a phone. Upon installation, all customers pay a deposit fee to be followed by a series of pre-determined weekly or monthly payments with contract periods of up to 80 weeks. Teleficient considers customers in good standing as those who miss no more than four scheduled payments at any given time

“This product has taken us from trouble, we no longer worry that the fuel is finished and we don’t have to call a fitter to fix things.”- Amadou Kargbo, School Teacher



during the contract period. High-risk customers, on the other hand, are those who miss four to six consecutive payments, and are unable to be reached by the company's agent and sub-agent network (See Annex 2 for more information).

On the wake of Ebola, and as a result of significant fluctuations in foreign exchange rates, Teleficient was faced with high printing, shipping and transportation costs in delivering scratch cards to the provinces. This resulted in widespread reduction of scratch card



"We are appealing to you (addressing enumerator), please tell the company to come back. We really want the light, if they can even provide more bulbs it would be good." - Members at Masingbi Village, Tonkolili.

availability and isolation, rendering customers unable to reach the network of agents through which Teleficient distributes. Azuri and Teleficient quickly mobilized and responded to the impact of Ebola through the launch of a national communication campaign to reach isolated customers in badly impacted regions. In efforts to continue uninterrupted service to their customers, a

'28-day free promotion' was launched via community radio. Customers could call-in and receive a message via their mobile phone with a special access code allowing 28 days of energy access at no cost. This campaign reached customers in the capital city of Freetown as well as those in remote areas.

However, with continued limited mobility during Ebola, company service post the 28-day promotional period became logistically and operationally challenging. Customers consistently noted their ability to pay to continue topping up their units, but were unable to load their meters due to unavailability of scratch cards in their community. Anecdotal customer reports noted waiting times of up to two days prior to being able to access a scratch card.

Transitioning to mobile money payment platforms became a high priority. In 2014, Teleficient started to transition operations away from scratch cards to mobile money completed in 2016.

Transition to Mobile Money

The transition to mobile money provided customers with direct access to top-up codes obviating the need to reach an agent. On the surface, this transition was poised to garner high-customer satisfaction and reduce operational costs for Teleficient. Yet, a few key challenges quickly emerged:

- Customers complained of limited awareness of the transition to mobile money due to lack of accompanying advertising and awareness-raising
- Existing mobile money use among Teleficient communities was low as was customer awareness and understanding of mobile money use
- There was high customer resistance toward the newly introduced mobile money technology and mobile money payment

To this last point, customers trusted the scratch card technology and the direct access to an agent to make payments. Customers expressed that the transition from scratch-cards to mobile money was a difficult one as they had developed a sense of security with the scratch cards and felt confident in using them. Use of mobile money was perceived as a high-risk transaction; limited mobile money education coupled with low trust in a technology that required customers to send money electronically and where receipt of the code was a risk eroded customer confidence.

“I am a working man, but I don’t know how this works, if the agent just showed us how to use this mobile money it would help us use it more.” Petty Trader, Bo

Customer Service and Agent Network

Since starting operations in 2013, Teleficient has brought onboard 30 core agents across the country. To prepare agents for the role, Teleficient provides training across the following:

- Marketing and awareness raising
- Customer service and communication
- Installation, maintenance, repairs and payment processing
- Record/bookkeeping

Agents’ remuneration consists of a base salary, commission on sales of scratch-cards, and benefits based on performance and customer acquisition and retention.

Agents are often located in urban and peri-urban areas, but this often limits reach to off-grid rural customers. Agents developed an interesting workaround to this

challenge. Teleficient agents further recruited sub-agents, approximately a network of 50 since 2013. The main difference between agents and sub-agents is that the latter are embedded within communities and readily available to make house visits to ensure high-quality customer experience and customer service. They also strengthen linkages and connectivity with core agents and headquarter support from Freetown to resolve customer issues.

Agents at the Freetown headquarters also make outbound courtesy calls to customers to gather insights on user experience and to promote news offers and deals. Three customer hotlines are provided on each scratch card through which customers can reach the main office.

“I enjoy the connection and friendship I have with this job. The other agents are like my family” - Abubakarr, Agent.

Reported user experience in the initial stages of engagement with Teleficient namely, during the first six months, was noted as high both in customer satisfaction and service delivery from agents, sub-agents, and headquarters. Trends in customer satisfaction show a steady decline in the later parts of their contract period, particularly, in the second year, primarily due to:

- Difficulty locating nearby agents for top-up (via scratch cards and/or mobile money) and/or for support in resolving problems with product
- Challenges with mobile money (i.e. process, codes etc.)
- Difficulty reaching head office for assistance including with product problems

Reported challenges with the products are summarized in Table 4. Noteworthy are the number of customers who report ongoing unresolved issues with the product as well as the high-reliance on neighbor

support. These respondents highlight an opportunity for Teleficient to strengthen agent performance and improve headquarter customer service support.

Table 4: Approach to Solving Problem with Product

# (those who encountered with problem) [n=74]	How did you solve the problem?				
	Problem not yet solved	Solved it myself	Teleficient solved problem	Neighbor solved it for me	Other
On/off switch problems	5	12	6	3	
Light just goes off/not consistent	10	2	7	2	1
Battery/charging problems	9	1	3	2	1
Payment process is difficult/not working	2		2	2	2
Product is too costly			1		
Product does not fit my power needs (low energy load)	1				

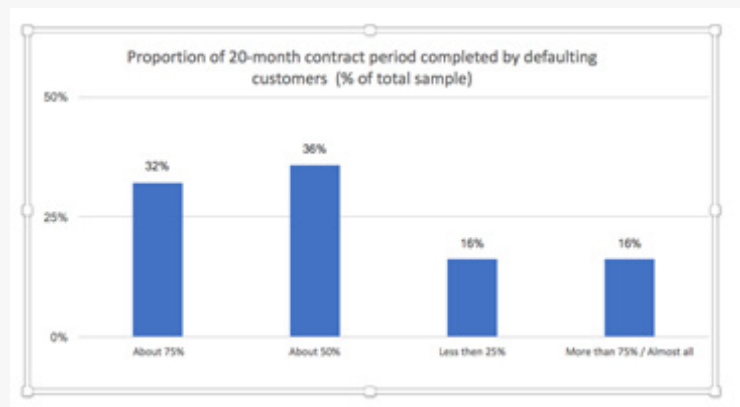
Payment Instalment Progress

A majority of respondents, more than 60%, earning above the monthly minimum wage (USD 100) completed their 20-month payment plan and unlocked their Azuri solar home system securing full ownership of the unit. Gender was not a major factor in determining payment schedule. Income, though, influenced the frequency of payments and likelihood of purchasing an additional system. In total, of the respondents interviewed, 37.1% did not complete their 20-month payment plan, namely missing more than six consecutive payments, thereby falling in the default category.

Of the proportion of customers in default, Graph 1 provides further insights on reasons behind payment non-completion. The following reasons are noted to drive defaults:

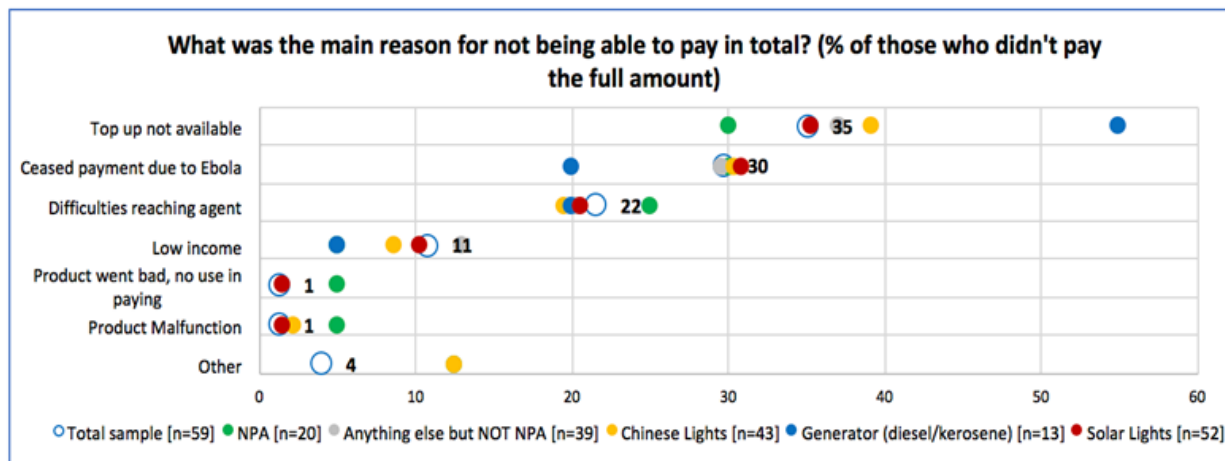
- Top-up not available due to delayed delivery of scratch-cards to provinces and cutback of scratch card production³.
- Customers affected by the Ebola outbreak, which resulted in loss of communication with the

- company and access to top up (scratch cards and mobile money)
- Financial constraints - unable to afford top-up cost



Graph 1: Proportion of Payments Completed by Defaulting Customers

³ This takes into account customers' ability and willingness to pay. Customer who could afford to make regular payments were delayed in payments as a result of limited access to scratch cards.



Of the 37.1% who did not complete payments, Graph 1 captures how far customers progressed in their payments. Noteworthy, of the 37.1% of customers categorized as defaulting, the majority, more than 84% of them completed more than half of the payments, promising results that show high value for the product along with strong ability and willingness to pay.

Recommendations

Credit-worthy customer base: PAYG helps to establish a credit-worthy customer base. The opportunity in the long-term is to leverage these customer and initial credit relationships to provide additional services and products in complement to a customer's initial energy purchases.

Product basket diversification and add-on services such as TVs, radios etc. enables PAYG providers to graduate customers along the energy access continuum with higher-load energy products while enabling providers to gather more in-depth data on customer credit behaviors that can lower portfolio risk and improve portfolio quality. PAYG providers should invest in building a robust credit scoring mechanism.

Customer service and management of field-based agent networks: Ensuring that your company is optimally staffed with technical and soft skills service is paramount in servicing PAYG providers' growing and, at times, geographically distant customer base for those reaching last mile customers. As was the case with Azuri and Teleficient, the company's agent network rapidly expanded with agents recruiting sub-agents. This enabled the company to build wide reach, and led to initial high-uptake as agents were able to quickly close on easily obtained gains.

Altogether, the strategy of a large and far-reaching agent network, without key safeguards and considerations in place, can threaten long-term customer-agent relationships. Customers complained that a few months after their purchase, agents were inactive in their geographical areas, particularly for customers those in more remote, isolated communities.

Companies could trial a mix of approaches, from building in incentives for customer retention to assigning agents to specific geographical areas with market penetration targets that dictate when expansion to a new area may be undertaken. Investing in staff through trainings and

a competitive base-level compensation can go a long way to support these efforts as does consistent and reliable headquarter support to field agent network.

Mobile Money Education: Teleficient's customers relied heavily on the security of the scratch-card technology. The transition to mobile money proved difficult. Public campaigns that educate customers on the use of mobile money and leverage customer testimonials on use of mobile money platforms, can support in building a case for the use of mobile money.

Importantly, solar providers need not do this alone; mobile money providers are also keen to reach a larger customer base. Often, in contexts such as Sierra Leone where mobile money is still in its infancy, PAYG providers are spearheading mobile money education, driving mobile money sign-ups, and accelerating mobile money penetration. To support these efforts, companies are standing up in-house customer service units or call centers that can offer the following services:

- Troubleshoot agent issues and flag maintenance and unit service checks
- Reinforce customer guidance in plug and play device installations/operation
- Offer remote mobile money education, navigation and customer activity record keeping
- Undertake marketing and sales call as part of wider customer retention strategies such as courtesy calls and deals and promotions

Altogether, the aforementioned recommendations can well-position PAYG providers to balance portfolio growth and scale with portfolio quality that builds in optimal safeguards to reduce risk.

Annex 1: Teleficient Customer Standing

Customer Standing			
	Teleficient Terms	Good Rating	Risky Rating
Deposit fee (required)	50,00SLL (\$6.7 USD)	Paid	Paid
Weekly Fee	10,000SLL (\$1.3)	Paid	Missed payment
Monthly Fee	40,000SLL (\$5.3)	Paid	Missed payment
Total Number of payments	20 months	20 -23 months	Over 25 months
Number of payments missed to become risky	1 - 4 scheduled payments	1 - 4 scheduled payments	Over 6 weeks