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YEAR ONE









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# Abbreviations

DRE: Distributed Renewable Energy

SHS: Solar Home Systems
VAT: Value Added Tax
PAYGO: Pay As You Go

**REA:** Rural Electrification Agency **REF:** Rural Electrification Fund **NEP:** Nigeria Electrification Project

**USAID:** United States Agency for International Development

**DFID:** Department For International Development

### **Glossary of Terms**

**Agent\*:** A third party entity, institution or an individual that is engaged by a financial institution to provide specific financial services such as customer account registrations, cash deposits and cash withdrawals on its behalf using the premises owned by that entity, institution or an individual.

**Application Programming Interface (API):** Set of routines, protocols and tools for building software applications. Essentially how software components should interact.

**Float:** The balance of e-money, or physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash in) or sell (cash out) electronic money.

**Installer-Agent:** Structure where Installers contracted by SHS companies are equipped to carry out collections from customers.

**Interconnected Mini-Grids\*\*:** Mini-Grids connected to a Distribution Licensee's (DISCO) network and is to be deployed in an underserved area with an existing but poorly supplied or non-functional distribution system



**Mini-Grids**: A set of electricity generators and possibly energy storage systems interconnected to a distribution network that supplies electricity to a localised group of customers.

Omnibranches: Payment agent network in Nigeria owned and managed by Swifta Systems

**Pay As You Go:** System in which customers pay for a service before use and cannot use more than has been paid for.

**Roaming Agents (Mobile Agents):** An agent that can move from one location to another for the purpose of payment collections and other transactions.

**Super-Agent\*:** Any business or individual licensed by the CBN and contracted by the financial service provider, who thereafter may sub-contact other agents in a network while retaining overall responsibility for the agency relationship. A Super-Agent may identify, vet, train, monitor and manage sub-agents independently or as defined in the contract with the financial institution.

**Unbanked Customers:** usually the very poor, who do not have a bank account or a transaction account at a formal financial institution.

**User Acceptance Test (UAT):** The testing of designed software by the user or client to determine whether it can be accepted or not

**Interconnected Mini-Grids\*\*:** Mini-Grids connected to a Distribution Licensee's (DISCO) network and is to be deployed in an underserved area with an existing but poorly supplied or non-functional distribution system

**Unserved Communities:** Communities without an existing distribution grid.

**Underserved Communities:** Communities with an existing but poorly electrified or non-functional distribution grid

\* Efina: www.efina.org.ng

\*\* Nigerian Electricity Regulatory Commission definition



### **Executive Summary**

The Nigeria Off-Grid Market Acceleration Program (NOMAP) is an independent market accelerator that aims to address market barriers limiting energy access in Nigeria. It is supported by the Shell Foundation, USAID and, most recently, DFID. NOMAP accelerates the off-grid energy in Nigeria using a mix of research, coordination and direct interventions. Its key attributes such as independence, a focus on result, local leadership and nimbleness uniquely position it to deliver outstanding results and complement the efforts of other off-grid energy programs in Nigeria.

#### Market Intelligence for the Sector

In the past year, NOMAP has worked with solar home systems companies, mini-grid developers, the Rural Electrification Agency as well as other stakeholders to address two key market barriers facing the sector. NOMAP set out to build credible market intelligence to support the development of mini-grids and the deployment of solar home systems in ten Nigerian states. In support of the Energising Economies Initiative (EEI) in Nigeria, it also worked with the REA in undertaking energy audits across five market clusters in Kano and Kaduna states. The market intelligence it has provided, amongst other uses, has been utilized for various REA programs including its flagship Nigeria Electrification Project (NEP); it is also being used by private off-grid energy companies to develop business and expansion plans.

### Payment Integration for Last Mile Collection

NOMAP also undertook a pilot to assess the feasibility of using agent banking network, in the absence of mobile money, to collect Pay-As-You-Go (PAYGO) subscription from unbanked Solar Home System customers. NOMAP has learned a great deal from these two interventions and has documented its key learnings in this report. To deliver on these interventions, NOMAP has forged cross-sectoral partnerships with FINTECH and Big Data companies, to adapt products from these sectors to address energy access barriers.

#### Going Forward

Based on stakeholders' feedback, NOMAP has gotten the commitment of its funders to extend the program by two years, through to end of 2021. Its interventions will consolidate on the gains made in its first years. NOMAP will convene an advisory board to provide guidance to the program and also hold it accountable. The advisory board will have representations from industry stakeholders and its funders—USAID, the Shell Foundation and DFID. The robust impact framework will assist the board to hold it accountable and help assess the effectiveness of its interventions



## Impact Highlights



1,000 +

TA Hours to SHS companies



3,000 +

Identified offgrid communities viable for mini-grid deployment across 10 states



6,000 +

Identified locations viable for SHS shared to hundreds of stakehlders



5

Supported REA with energy audits in five markets in Kano and Kaduna States as part of the EEI



**150** +

Viable mini-grid communities surveyed by field enumerators to collect granular information and load assessment across 10



40k +

Mini-grid field survey responses collected in viable mini-grid communities across 10 states



50

Interactions (beyond core initiatives)



6

SHS companies successfully integrated into SWIFTA's 20,000+ agent network



1,000 +

Viewings and insights from newsletters and media publications



Net Promoter Score

"Customers in close proximity to Omnibraches agents now make payment with ease, our follow up calls to these customers have reduced due to easy access to these payment points."

- Management, SHS Company

"The level of detail and information on mini-grid and SHS communities provided by NOMAP was extremely useful

- SHS Company

"We were able to expand to two new states, Anambra and Enugu which were on our expansion plans for end of 2019."

- Management, SHS Company

"As we get more customers the system will make payments much easier"

- Installer Agent



# Introduction

Nigeria Off-Grid Market Acceleration Program (NOMAP) is an independent market accelerator that is focused on tackling market barriers limiting energy access in Nigeria. It is supported by the Shell Foundation, USAID and DFID.

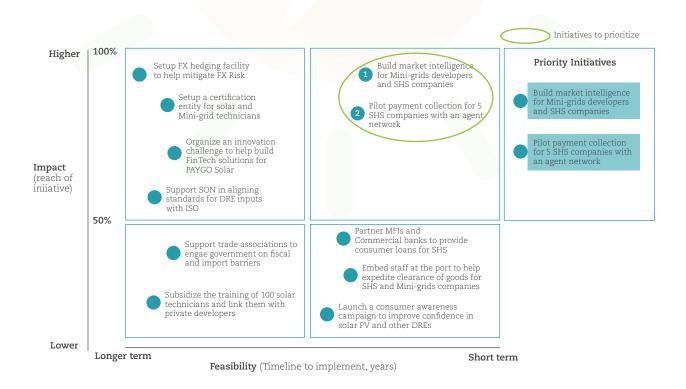
#### **Market Overview**

In H1 2018, Shell Foundation (SF) interviewed a range of off-grid sector stakeholders in Nigeria to understand on-going interventions, identify market gaps, and gain consensus on inadequately addressed market barriers. SF identified seven major market barriers to the growth of the off-grid sector in Nigeria, including:

- 1. Limited financing options for project developers, Solar Home Systems (SHS) companies, and consumers.
- 2. A dearth, and limited enforcement, of technical and consumer protection standards

- 3. Poor consumer perception and skepticism of distributed renewable energy solutions
- 4. Skills and knowledge gaps:
- (a) insufficient supply of Distributed Renewable Energy (DRE) technicians capable of installing and maintaining systems on a massive scale;
- (b) knowledge gap in financing renewable energy projects amongst local commercial banks
- 5. High import duties on components and 5% VAT on Solar Home Systems
- 6. Limited market intelligence to help private developers and public institutions to develop and execute projects
- 7. Inconducive mobile money regulation that limits the uptake of Pay As You Go SHS solutions

Building on this work, the Nigeria Off-Grid Market Acceleration Program prioritized and implemented two high-impact initiatives and sought to determine the viability of longer-term interventions.





Based on stakeholders' feedback, NOMAP in its first year focused on two core initiatives:

- Market Intelligence: collecting market data for 150 large off-grid communities and support to REA's Energising Economies Project
- Payment Integration: Pilot an off-grid payment collection system for SHS companies

### NOMAP: Our Unique Propositions

NOMAP has a market-building mandate to support companies scaling access to energy and other stakeholders in Nigeria. Our unique propositions include:

**Local Leadership/Local Buy-in:** Essentially an in-country team with robust sectoral knowledge and understanding of local context.

**Nimbleness:** Lean team structured to execute swiftly without being bogged down by bureaucracies associated with large programs.

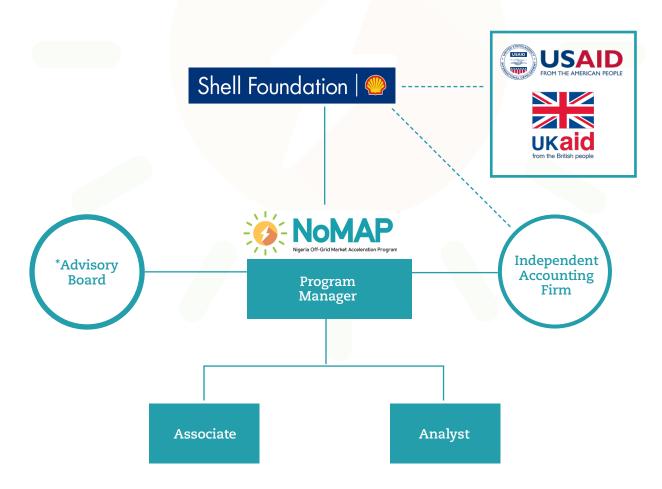
**Focus:** Built to narrow in on a few high-priority areas that deliver strongest impact.

**Partnerships:** Forged "beyond-the-sector" partnerships aimed at addressing off-grid energy issues with companies in Fintech, Big Data companies, etc.

**Independence/Neutrality:** Built credibility that has earned the trust of market actors, government industry associations and other stakeholders.

**Temporal:** Delivering a 5-year roadmap towards a tipping point

### Governance and Team Profile



<sup>\*</sup> Yet to be convened



### **Team Profile**

The program manager is supported by an analyst and an associate as well as an independent accounting firm.



Adedotun Eyinade

Adedotun Eyinade is the program manager of the Nigeria Off-grid Market Acceleration Program (funded by the Shell Foundation, USAID and DFID). His foray into the energy access space started in 2013 as a Global Fellow with the Acumen Fund during which he was seconded to lead business development at Husk Power Systems, a pioneering mini-grid company in East Africa. He went on to work as the country director for Husk Power Systems in Tanzania and business development lead in Africa. Adedotun also had a very short stint at the Rural Electrification Agency in Nigeria. He started his career in risk consulting at KPMG and has degrees in Biological Science and Public Policy from the Obafemi Awolowo University and the University of Oxford respectively.



Boluwasope Ogboye

Boluwasope Ogboye is the program associate of the Nigerian Off-grid Market Acceleration Program (NOMAP) with significant experience in the private sector. She previously held the position of Transaction Advisor on the USAID Renewable Energy and Energy Efficiency Project (REEEP), where she supported energy companies in securing financing by bridging

the gap between themselves and financiers. Her experience includes Global Transaction Banking with Deutsche Bank, Investment Banking with Kedari Capital and a very short stint with the European Union Chamber of Commerce for Africa. She has a keen interest in contributing to the development of Africa by supporting the power, agriculture and education sectors. She holds a Bachelor's degree in Economics from the University of Birmingham, and a Master's degree in International Business from Aston Business School.



Taiwo Ibiyemi

Taiwo Ibiyemi is the program analyst of the Nigeria Off-Grid Market Acceleration Program (NOMAP). He combines his knowledge and capabilities across a range of industries to address development challenges in complex environments. Prior to NOMAP, he worked with Nextier, a multi-competency public sector advisory firm, during which he worked on a number of initiatives to improve energy access. He also led several other non-energy projects in which he interfaced with a number of clients including the National Assembly, international donor agencies, government agencies, think-tanks and many others. He has authored a number of technical and research papers focused on analysing key policy issues especially in Nigeria's power sector, some of which have been published in major national dailies. He holds a Bachelor's degree in Statistics from the University of Abuja and has earned expert certification in Energy and Development from the University of Queensland, Australia.

## 2019

### August

- Constituted
   NOMAP team.
- Developed and finalise work plan.
- Kicked off engagement meetings with SHS companies and SWIFTA.

### September

- Official program launch at the offgrid stakeholders meeting.
- Signed MoU with SWIFTA.
- Signed MoUs with 5 SHS companies to finance and manage their integration into SWIFTA's agent network.

### October

- Service Level
   Agreements (SLAs)
   signed between SWIFTA
   and 5 SHS companies.
- Engaged Fraym to identify commercially viable communities suitable for mini-grids and Solar Home System deployment across ten states in Nigeria
- Supported REA with energy audits and baseline survey in 3 markets in Kaduna State.

### November

- Commenced integration of 5 SHS companies billing system into SWIFTA's agent network.
- Engaged with other agent networks to share findings.
- Fraym completed geospatial analyses across 10 states.

### December

- Completed the integration of 5 SHS companies in SWIFTA's agent network.
- Collected pre-integration data from SHS companies.
- Received longlist of communities potentially viable for both mini-grids and solar home systems across focus states from Fraym.
- Developed web portal that locates viable communities for mini-grid development and SHS deployment across 10 states.

### **January**

- Carried out User
  Acceptance Test (UAT)
  and resolved agent
  network integration
  issues.
- Convened a press conference announcing successful integration of the 5 SHS companies.
- Facilitated series of marketing meetings between 5 SHS companies and SWIFTA.
- Supported REA with energy audits and baseline survey in 2 markets in Kano State.



### March

- Verified the electrification status of 140 communities across 4 states— Nasarawa, Kwara, Oyo, and Edo.
- Assisted the 5 SHS companies with change management to increase collections via SWIFTA's agent network.

### **April**

- Convened training sessions for field enumerators and supervisors in preparation for community-level energy surveys in verified off-grid locations.
- Engaged Odyssey to develop a customised mobile survey application.
- Commenced community level survey in Nasarawa and Kwara states using field enumerators.

### June

- Completed community level surveys in Nasarawa and Kwara states
- Convened a training session for field enumerators in Oyo state
- Commenced and completed community level survey in Oyo state

### July

- Analysed data collected from community level surveys.
- Worked with Odyssey to build load profiles for each of the community.
- Collected post integration data from SHS companies.
- Integrated the sixth SHS company into SWIFTA's agent network.

### August

Documented and submitted final Year 1 report to funders.





## **Progress Across Initiatives Year 1 Initiatives**

### Initiative 1: Build Market Intelligence/Data for Mini-Grids Development and SHS Deployment

### The Challenge

Due to insufficient market data, stakeholders in the off-grid sector—companies, investors, and policymakers—face several obstacles in order to make informed decisions. A lot of market data exists in silos and often, market players do not know where to turn to get critical information. Without this data, private developers continue to face high cost because they will need to invest more resources in prospecting for viable sites for mini-grids. Even SHS companies find it difficult locating communities where customers with the willingness and ability to pay for solar home systems are present.

Previous interventions aimed at providing market data for the sector were limited in scope and the resultant data was outdated. NOMAP thus approached this barrier with the intent to reduce the information gaps faced by private companies, developers and financiers.

### Activity

- Reviewed previous market intelligence interventions in the sector and engaged with the Rural Electrification Agency (REA), mini-grid developers and solar home systems companies to understand their key market needs.
- NOMAP engaged Fraym, a consumer data company, to undertake geospatial analysis to locate commercially viable off-grid communities and other data points for mini-grid development and solar home systems deployment across ten states in Nigeria. The states analysed include: Abia, Anambra, Bauchi, Edo, Kaduna, Kano, Kwara, Nasarawa, Ondo and Oyo states.

- A detailed verification exercise was conducted by NOMAP to ascertain the true electrification status of the communities provided by Fraym in 290 mini-grid communities in four states— Edo, Kwara, Nassarawa and Oyo. The Rural Electrification Agency (REA) also complemented the verification exercise in five states: Kano, Abia, Anambra, Bauchi and Ondo
- Training sessions were convened for field enumerators and supervisors in preparation for community-level energy surveys in verified large off-grid communities in Nasarawa, Kwara and Oyo states.
- Community-level energy surveys were completed in verified large off-grid communities deemed potentially viable for mini-grid development. The data gathering exercise was carried out by trained field enumerators using a customised mobile survey application developed by Odyssey Energy Solutions.
- The data collected during the survey were analysed by the NOMAP team and Odyssey; then made available to the REA to support various rural energy access programs such as the Nigeria Electrification Project (NEP) and the Rural Electrification Fund (REF).
- The data on potential sites for solar home systems (SHS) deployment were hosted on a bespoke platform built by Fraym and login details to the platform were widely disseminated via email to stakeholders and also via the REA website.

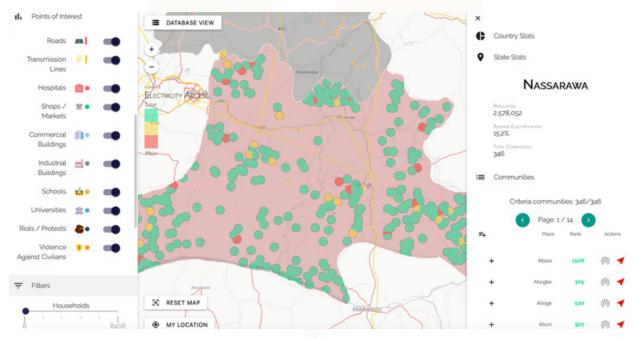


 As part of the efforts to support the REA's Energising Economies Initiatives, NOMAP financed energy audits, baseline surveys and market mapping of the following markets: Printers Market, Makarfi Market and Kachia Market in Kaduna state; as well as Dawanau Retail Grain market and Dawanau processing cluster in Kano state.

#### **Outcomes**

- Developed reliable data on communities potentially viable for both mini-grid development and SHS deployment across ten states in Nigeria. The list was shared with off-grid stakeholders including the REA.
- Developed an online web portal— (https:// nomap.datafraym.io/ that locates viable communities across the aforementioned ten states. The web portal enables an operator narrow down searches to a specific type of community using a number of filters such as distance to the grid, ability to pay, history of violence, customer

- classification, electricity access, population density and many more. Login credentials for the platform was also shared with offgrid stakeholders and can be accessed on NOMAP and REA's websites.
- Identified 51 communities potentially viable for interconnected mini-grids in Nasarawa, Kwara, Oyo and Edo states. Details for these communities were collated and shared with mini-grid developers applying for the Inter-Connected Mini-grid Acceleration Scheme (IMAS).
- Trained 50 youths on community-level energy survey and they are now being engaged by other off-grid energy companies to undertake energy surveys.
- Collected and analysed granular market data that will support the development of mini-grids in 105 viable off-grid communities in Nassarawa, Oyo and Kwara using customised survey application.
- Energy audits and baseline surveys in five markets as support to REA on the Energising Economies Initiative (EEI)



Screenshot of the NOMAP DataFraym Tool



### **Analysis from Site Verification Exercise**

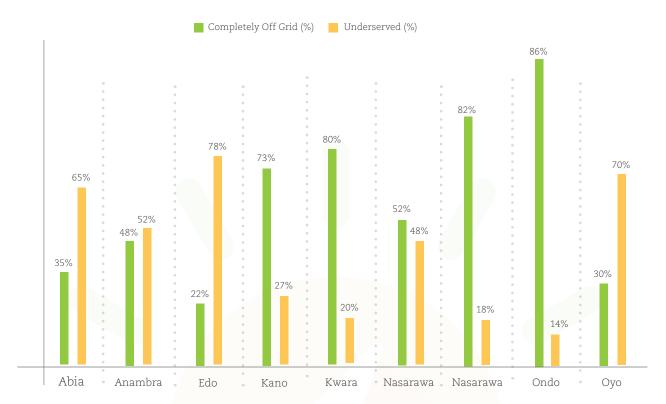
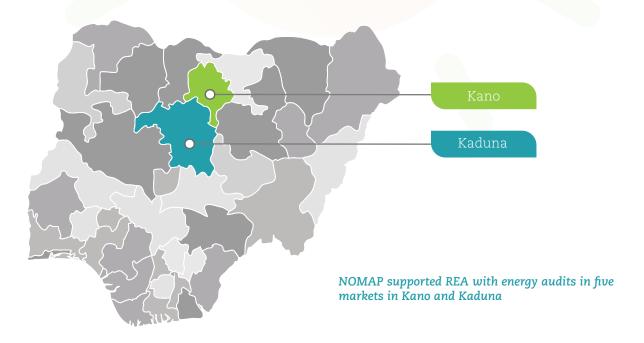


Chart showing electrification status from a sample size of 300+ communities across 10 states \*Kaduna was left out because of security concerns during the verification exercise.

Source: NOMAP; Fraym.

From a sample of 350 communities across 10 states deemed potentially viable for mini-grids obtained from Fraym, NOMAP's verification exercise revealed that Ondo, Nasarawa, Kano states have communities with strong potential for mini-grids based on the number of communities that are completely off-grid, whilst there are opportunities for interconnected mini-grids in Abia, Anambra and Oyo states based on the number of underserved communities.





Photos from the community survey training in Abuja





Survey exercise in Nasarawa





Survey exercise in Oyo State





Survey exercise in Kwara State





Photos from a community survey training session in Oyo State







### **Key Achievements**

Provided the Sector with Credible Market Data for SHS Expansion: NOMAP in collaboration with Fraym, identified over 5,000 communities viable for SHS deployment across 10 states. This intelligence will enable SHS companies expand into new locations across the ten analysed Nigerian states. The analysed data was warehoused in a web-based platform https://nomap.datafraym.io/ which was made accessible sector-wide.

Support to REA/World Bank on the Nigeria Electrification Project (NEP): NOMAP is complementing REA/World Bank's NEP by

providing the REA with list of viable off-grid communities for mini-grid development. This data has also been found useful for the minimum subsidy tender for project developers as well as the Rural Electrification Fund (REF).

Highlighted Potentially Viable Communities for Interconnected Mini-grids: The list was shared with mini-grid developers interested in IMAS. IMAS is a program funded by the GIZ and the REA to support the development of interconnected mini-grids in Nigeria. During the verification exercise, NOMAP gathered information on the communities potentially viable for interconnected mini-grids.



#### Lessons Learned

- Mini-grid developers are increasingly prioritising peacefulness/volatility of potential communities in addition to socio-economic data in their choice of viable sites.
- There are thousands of sites across the country that are potentially viable for interconnected mini-grids. In many of these communities, there are stranded distribution infrastructure that have been abandoned by distribution companies (DISCOs). These assets often financed by the REA, state and local government can be harnessed to increase energy access via interconnected mini-grids.



### Initiative 2: Pilot an Off-Grid Payment Collection System for Solar Home System Companies

### The Challenge

The Central Bank of Nigeria's regulatory framework, until recently, made it almost impossible for mobile network operators to provide mobile financial services without partnerships with commercial banks. The regulatory regime—unlike what obtains in East Africa—has had adverse implications for financial inclusion as well as energy access. These restrictions, coupled with the limited reach of current mobile money providers, constrains the opportunity for Pay As You Go (PAYGO) models to achieve the much-needed scale. In the absence of mobile money, SHS companies face a huge challenge in collecting payments from their last mile customers.

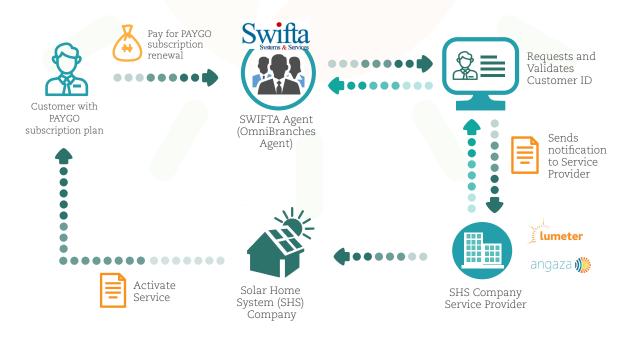
NOMAP sought to ease the challenges associated with payment collection from unbanked SHS customers by financing the integration of SHS companies into SWIFTA's agent networks. SWIFTA is a payment aggregator that provides agent banking services via its proprietary platform OMNIBRANCHES.

### **Activity**

To accomplish this, NOMAP identified six SHS companies that were interested in the pilot—( Sosai Energies, Asolar, Smarter Grid International, Oolu Solar, Azuri and A4 and T) NOMAP offered to finance Application Programming Interface (API) integration into SWIFTA's agent network. In return, the companies would provide data on the effectiveness of agents on PAYGO collection and last mile expansion.

NOMAP signed MOUs with the six SHS companies to formalise the pilot. Also, service level agreements were signed between the six SHS companies and SWIFTA.

In October 2018, SWIFTA commenced API integration of the PAYGO management systems of the SHS companies into its OMNIBRANCHES platform. For PAYGO business models to run seamlessly, SHS companies either develop bespoke, proprietary PAYGO management systems or subscribe to third party providers such as Angaza, Lumiter and Omni-voltaic which provide access to PAYGO platforms as a service.



Off-Grid Payment Collection System for last mile customers



NOMAP provided project management support to SWIFTA and the SHS companies over the integration period which spanned over 6 weeks, resulting in the integration of five SHS companies on 10th December 2018.

Post Integration, a User Acceptance Test (UAT) was carried out at 10 agent locations to resolve user interface issues.

A press conference was convened in January 2019 with executives of SHS companies and SWIFTA in attendance to draw the attention of the public to the new SHS payment channel. NOMAP went further to support the companies' marketing and communications efforts by organising a session for the marketing teams of the SHS companies and SWIFTA during which SWIFTA highlighted some of the challenges identified during the UAT. Subsequently, a training manual was developed for SWIFTA's field agents; also, the SHS companies facilitated train-the-trainer sessions which allowed them to explain in detail how their systems work, installation guidelines, care of products and proposed communication plan.

### Impact of the Intervention on Last Mile Payment

### Increased Efficiency in Collections

Post-integration data gathering activities included interviews with agents, customers, middle management and senior management of SHS companies. According to some of the SHS installers—who were in charge of cash collections from customers before the integration into SWIFTA's platform—the fulfilment process (top-up) was cumbersome. The time between customer payment



Photos of the press conference and Marketing meetings in Lagos, Nigeria Jan. 2019

and receipt of top-up token by customers ranged between 40 minutes to 4 hours. After integration, the agents noted that the time between when payment is made and when receipt of top-up token reduced significantly (less than 5 minutes). In instances where top-up codes were sent as SMS text messages to customers' preferred phone numbers, receipt was almost instant.

### Organic Demand for SHS and Expansion to New Regions

As part of its go-live activities, SWIFTA printed simple promotional banners with the companies' logos and distributed them to over 300 agent locations, alerting customers that they could pay for their Solar Home Systems at

"

We were able to expand to two new states, Anambra and Enugu, which were on our expansion plans for the end of 2019.

-Sales manager of one of the SHS companies

"

As we get more customers, the system will make payments much easier

-Installer Agent



the agent locations. What was observed was an organic demand from prospective customers to purchase the systems from the agents, enabling companies to increase their sales figures and expand into new regions. In all we noted, more than 400 orders for systems during the pilot period. Some of the demand for SHS products were met during the pilot while some weren't fulfilled because the companies were not adequately resourced.

#### **Increased Transparency**

Integration to SWIFTA's platform now allows SHS companies to easily keep track of receivables and reconcile with their account departments as against other payment options such as cash deposit into bank accounts. Consequently, the companies have also found it useful as a mitigation for fraud. As companies on-boarded their installers as agents on the OMNIBRANCHES platform, they gave instructions to divert all cash collections via the platform for ease of reconciliation. In addition, agents are now able to better manage their exposure, as they now inform customers that top-up is strictly on upfront cash payment basis as against the pre-integration pattern when company appointed agents of the SHS companies would often give out top-up token to customers on credit.

#### **Lessons Learned**

### Business case for Agent expansion needs to be compelling

SHS customers are still very sparse. At the moment, they exist in small clusters in a few states. The business case for planting new agents in every community in lockstep with SHS companies is not compelling enough for SWIFTA and other agent service providers especially when the number of SHS customers are below 100 in the community. The cost of setting up kiosks and managing float is borne by the agent service provider and is measured against the expected revenue to be generated from each location. Since agents are increasingly becoming an essential part of the PAYGO solar ecosystem especially in our last mile, more interventions are needed to support their expansion into areas where they can support the twin goals of financial inclusion and energy access.

#### Leverage Agents as External Sales Force:

The demand for SHS systems originating from SWIFTA's agents during the pilot shows that-when used optimally- agent networks can be a strong asset for SHS companies struggling to develop an internal sales force, enabling them to scale faster into last mile communities. Three of the SHS companies that participated the pilot expanded into new states due to the integration into SWIFTA's agent platform.

However, we noted that some indigenous SHS companies struggle with inventory financing and management. There are opportunities for financiers offering receivable financing or securitization to meet their needs. It bears restating that inventory management must be structured and automated as continued unfulfilled orders would lead to customers losing interest in the solution or going for low quality alternatives in the market

#### Information sharing is key

Agents can be best optimised when there is information sharing between the SHS companies and the agent services providers. From our experience, there is a reluctance amongst agent aggregators to share detailed location information of the agents on their network. Overlaying agents' locations over a map of SHS customers might be a useful resource in helping SHS companies match their customers to proximate agents. In instances where SHS companies have a list of agents' locations, they need to increase their messaging efforts to actively drive customers' attention to agent locations closest to them. Also, when SHS companies expand into regions where the agent companies do not have coverage, they should explore the option of partnering with agent companies to onboard new agents in these communities.





incidence of repeated and time-

multiple channels.



### Year 2: NOMAP's Workplan (2019-2021)

### Initiative 1: Improved Access to Market Data/Intelligence to Increase Solar Home System (SHS) Deployment

NOMAP will collect data relevant for the SHS market. This will include data needs on credit worthiness, availability of collections/payment channels, stability of community etc. The proposed data gathering efforts will be able to identify communities viable for SHS.

#### Key activities will include:

Geospatial modelling of viable sites for SHS in 20 states in partnership with data partners such as Fraym and Nithio; targeted assistance with select SHS companies to determine proxies to assess creditworthiness in offgrid communities; Expansion of existing web platform to accommodate more data; tracking

of deployment of SHS to assess expansion into new areas.

The overall target is to create a pipeline of more than 3,000 communities that are most viable for solar home system. This pipeline will meet the immediate needs of SHS companies seeking to leverage the World Bank NEP funding for expansion, and potentially could catalyse 100,000 new connections over the next three years.

NOMAP plans to work closely with the REA, technology providers such as Fraym, Nithio, and NPSP to deliver this intervention.

### Initiative 2: Catalyse the Development and Scale-Up of a Single Payment Integration Solution

NOMAP has validated that agent networks could be a promising solution in addressing payment collection from unbanked customers. However, relative to the size of the country, more cash collection agents are needed to support the expansion drive of PAYGO energy solutions. To enable the sector the scale, there is a need for a Single Point of Integration (POI) for all SHS

and mini-grid companies to be able connect to networks of cash collection agents, financial institutions providing agent banking services as well as Payment Service Banks (PSB) (when they become licensed and operational. NOMAP will work with other stakeholders to build consensus on commonly shared infrastructure for off-grid energy payment.

### Initiative 3: Piloting a Demand Stimulation Strategy for the Mini-Grid Sector

NOMAP will design a robust demand stimulation strategy for mini-grid developers. The strategy will be largely geared towards supporting the mini-grid projects being built under the World Bank's Nigeria Electrification Project and the Rural Electrification Fund. NOMAP will work with a select group of developers to implement a few pilots to validate the strategy and help mini-grid developers optimise load with a

view to increasing their top line from the electricity tariff. In addition, an intervention will also be designed to support stand-alone solar companies to design and pilot new business models that will scale productive use technologies: solar irrigation pumps, solar kits for welding, businesses and cold storage into off-grid communities.



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