One Size Doesn't Fit All:
Diversifying Solutions

Tara Ramanathan ◦ Clean Energy Program Director

Nexleaf Analytics is a mission-driven technology company. We work to preserve human life and protect our planet by designing sensors and data analytics.

10 years of proven experience in clean cooking and immunization, and actively engaged in 9 countries across Asia and Africa

with partners and supporters from….

Solving Barriers

Poor equipment design

Little/no maintenance

Limited impact on health

Inappropriate financing & pricing

Identify critical metrics
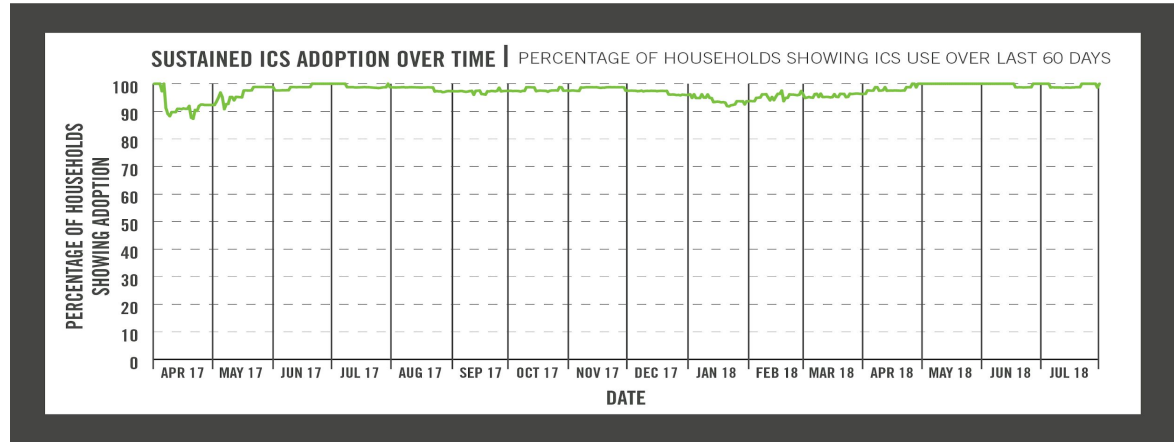
Adoption

Affordability

Durability
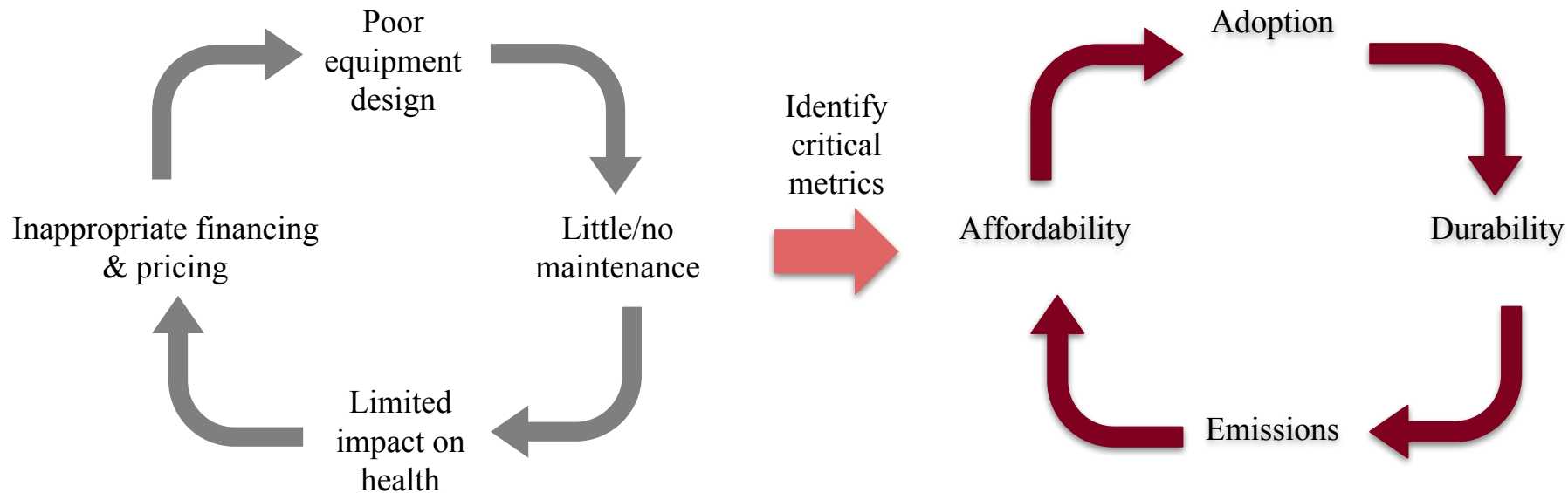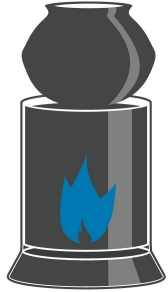
Emissions

Proving Sustained Adoption is Possible

1. **Adoption:**

   a. Usage: sensor data showed 100% of households cook on the ICS at least 1 hour per day on average over the most recent 60 days

   b. Usability: qualitative surveys

2. **Emissions:** reduces Black Carbon by 30.83%

3. **Affordability:** affordable compared to other stoves tested

4. **Durability:** no major issues detected

SUSTAINED ICS ADOPTION OVER TIME | PERCENTAGE OF HOUSEHOLDS SHOWING ICS USE OVER LAST 60 DAYS

Replicating in Nigeria: Testing phase 1

Biomass 1

1. Adoption* ✗
2. Emissions ✓
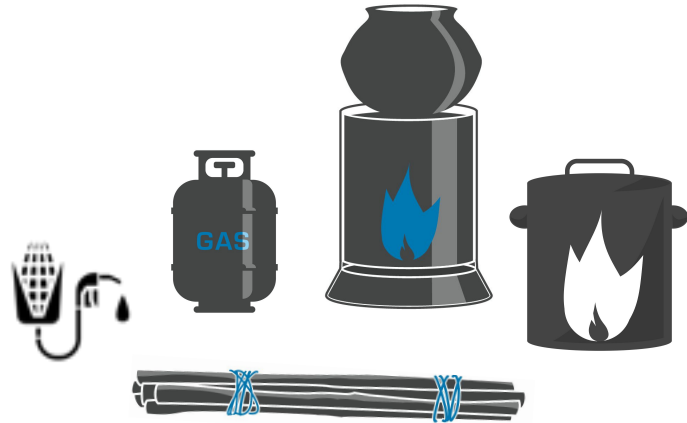3. Affordability ✗ ✓
4. Durability ✓

Biomass 2

1. Adoption ✗ ✗
2. Emissions ✗ ✓
3. Affordability ✓
4. Durability ✓
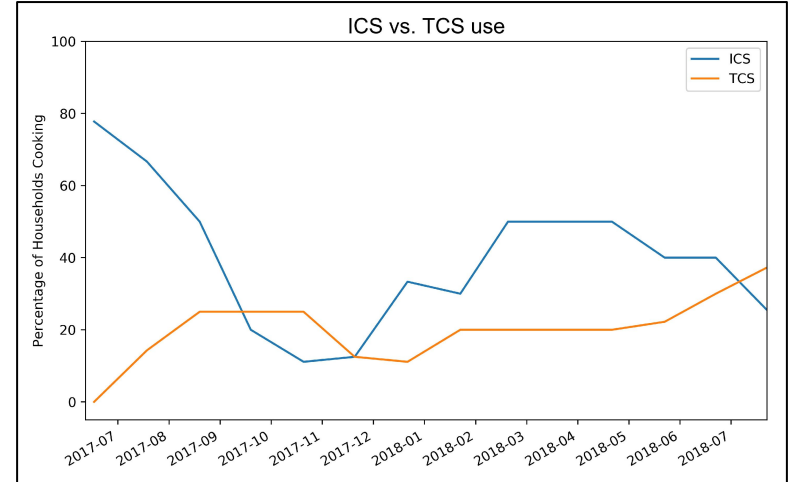
Biomass 2 cooking activity.

*Biomass 1 showed high usage but low *usability* based on qualitative feedback.
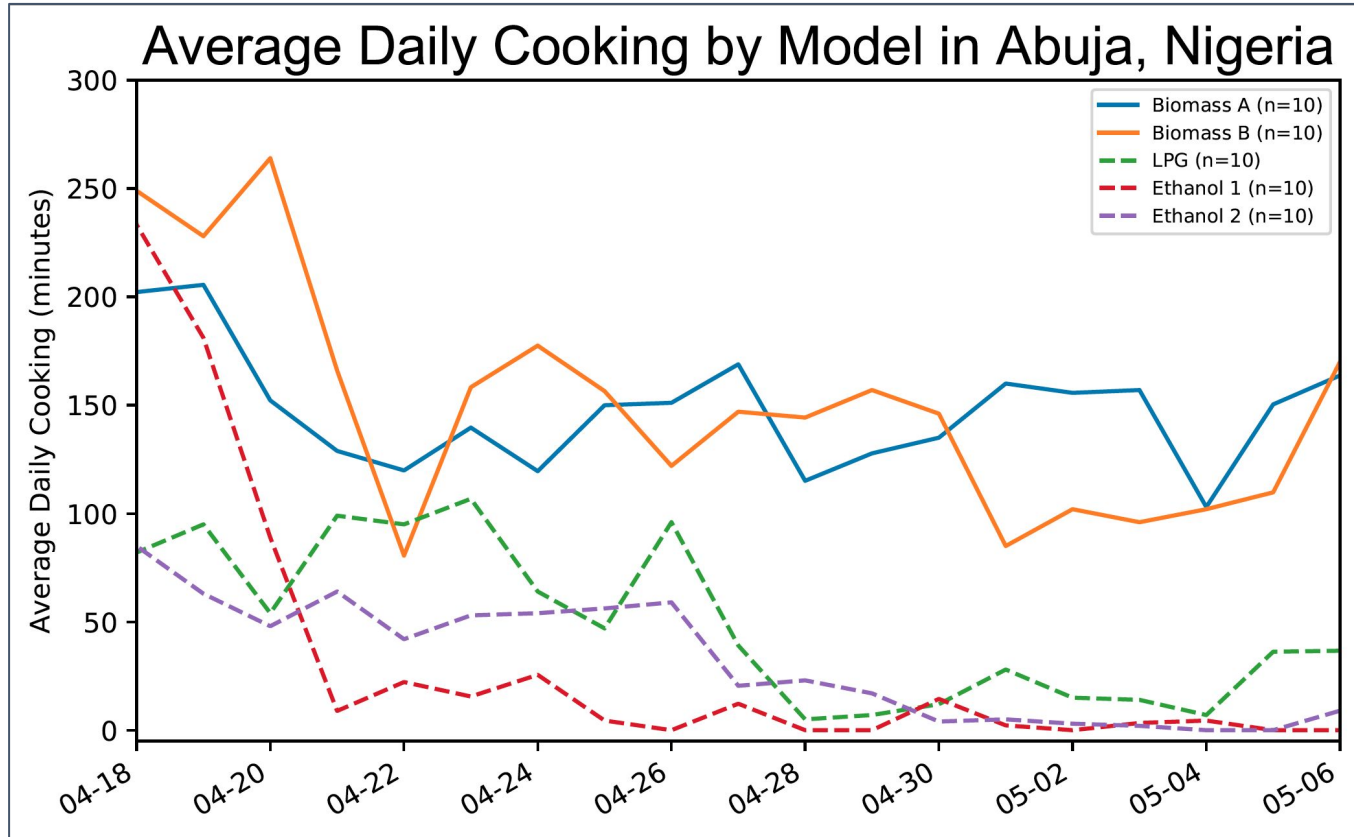
Nigeria: Phase 2

Evaluating 5 solutions across 50 homes:

- 2 biomass models
- 3 clean fuels
- Plus 3-stone fire

Comparing 5 Diverse Cooking Solutions

Average Daily Cooking by Model in Abuja, Nigeria

Evidence Drives Implementation

STEP 1 — Ensure only Tier 3+ solutions are deployed to households

STEP 2 — Prove initial uptake in 10 households through field testing

STEP 3 — Prove sustained adoption in 100 households through field testing

STEP 4 — Test air quality in 1000 households

STEP 5 — Demonstrate health impact and scale data visibility in 10,000 households

Key Takeaways

- Don't take shortcuts

- Understanding and emphasizing the needs of women by combining sensor data & survey data

- One size doesn't fit all: Finding a basket of solutions

Thank You!

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