

Nguvu Jumuiya

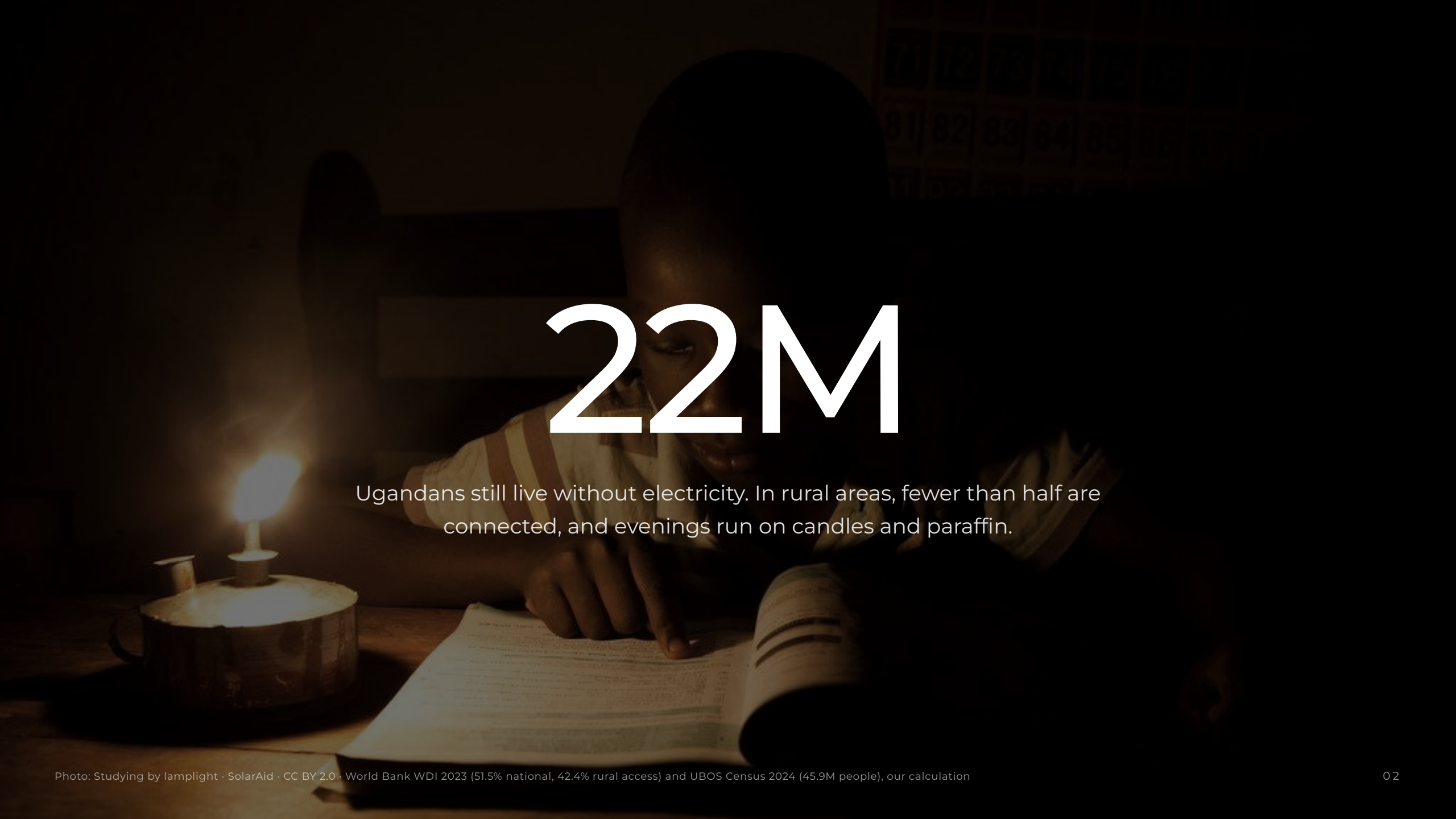
Your neighbour's battery is the bank.

INVESTOR PRESENTATION

MBARARA, UGANDA

NOVEMBER 2026

Photo: Rural home in Uganda · Alvinategyeka · CC BY-SA 4.0



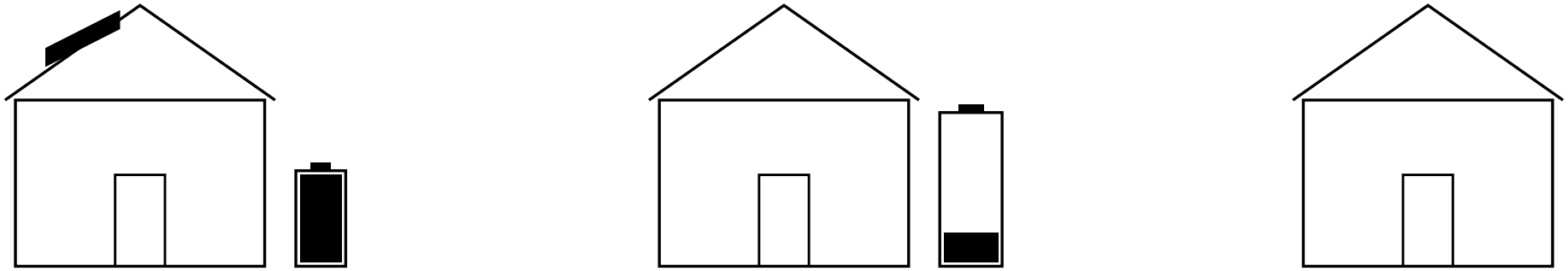
22M

Ugandans still live without electricity. In rural areas, fewer than half are connected, and evenings run on candles and paraffin.

Photo: Studying by lamplight · SolarAid · CC BY 2.0 · World Bank WDI 2023 (51.5% national, 42.4% rural access) and UBOS Census 2024 (45.9M people), our calculation

THE INSIGHT

The sun is not the problem.
The storage is in the wrong house.



MORE PANELS THAN BATTERY

MORE BATTERY THAN PANELS

NEITHER

Uganda gets 5 to 7 kWh of sunshine per square metre every day. Panels and batteries are already in the village, just not in the same homes.



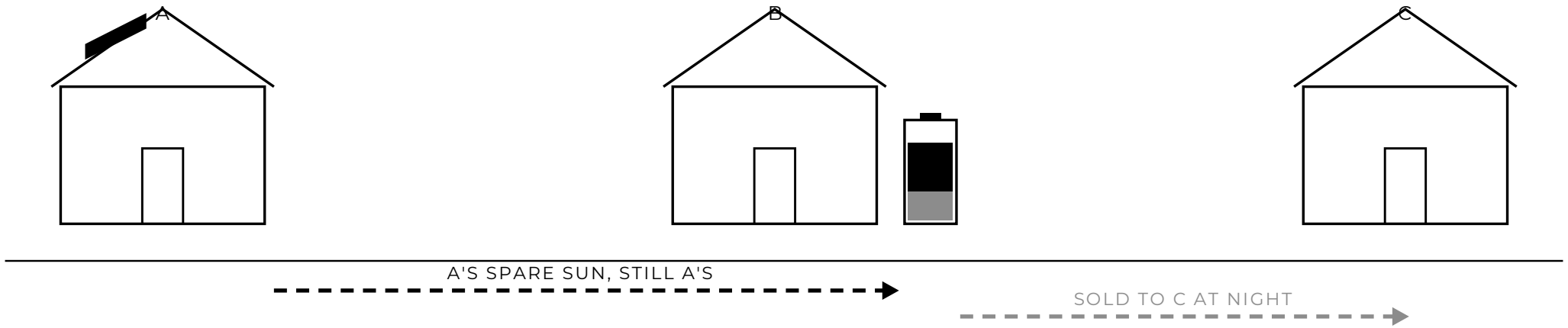
NguvuBank

Spare sun, stored next door. Still yours.

Nguvu Jumuiya village, simulation

HOW IT WORKS

Fill. Lock. Sell or take back.



Fill

A's spare sun charges B's battery over the community line.

Lock

B's battery chip records it as A's. B cannot spend it, but earns rent.

Sell or take back

C buys it at night and A is paid, or A draws it home.

Settle

Sarafu za Nguvu by USSD and Mobile Money. NguvuBank keeps 5%.

BUILT IN

Trust, enforced by hardware.

0
SIGNAL CABLES
Messages ride the power line

100%
OF TRANSFERS SIGNED
Forged messages are rejected

5%
NGUVUBANK FEE
On every payment between homes

1
SHORT CODE
Works on any phone, no data

Energy moves only between homes that are enrolled and prepaid. Ownership lives in the battery, not on a server. If the meters do not match the wires, that connection switches off.

HARDWARE

Three devices. One line.

Smart box

Meters solar, battery, load.
Opens the line only on a
signed GRANT. LCD + keys.

Battery chip

Knows whose energy is inside.
Signs every change.
Protects the cells.

NguvuBank hub

Enrolled and prepaid?
Then GRANT. Keeps the ledger,
reads the weather.

Phones

USSD for customers.
App for technicians.
4G to Mobile Money.

COMMUNITY LINE · POWER AND SIGNED MESSAGES ON THE SAME TWO WIRES

Design v0.1 for the pilot: ESP32-S3 controller, INA228 meters, ATECC608B device keys, AC power-line modems, standard 240 V AC line, grid-ready. Not yet built.

Any phone. No data.

Balance, banked power, selling on or off, Mobile Money top-ups and weather advice by USSD.

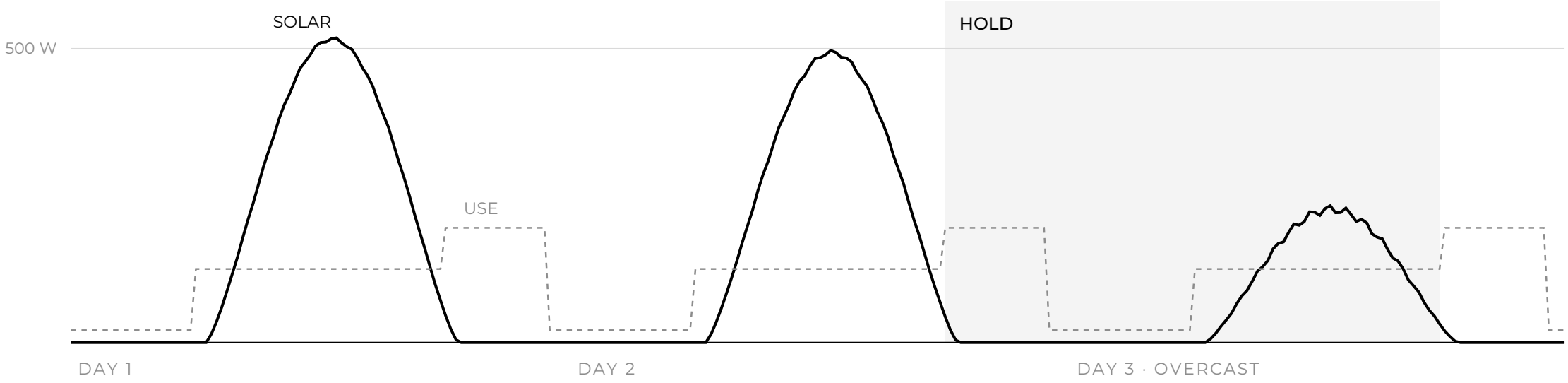
```
Nguvu Jumuiya
1 My balance
2 My stored power
3 Sell my spare power
4 Buy power
5 Top up
6 Weather advice
```

```
Your power
In your battery
  0.64 kWh
Banked with neighbours
  1.42 kWh
```



Photo: Mobile Money agents, Gulu · wrcomms · CC BY-SA 2.0

Before a dull day, it tells owners to keep their power.



86%

OF THE SUN USED

not wasted, over three simulated days

1.7 kWh

BANKED NEXT DOOR

owned by the producer throughout

2.3 kWh

SOLD BETWEEN HOMES

with the 5% fee on each sale

Simulation of four design-case homes, not field data



After dark, the barber shop buys A's stored sun.

D is not enrolled, so nothing flows to D.

WHY WE WIN

Others trade energy. We also store it for each other.

	PAY-AS-YOU-GO SOLAR	P2P TRADING	ENERGY TOKENS	NGUVU JUMUIYA
Examples	MTN Lumos, StarTimes	SOLshare	Powerledger	Uganda
Neighbours share power	No	Yes	Yes	Yes
Stores energy for others	No	No	No	Yes, escrow in the battery
Works without a smartphone	Partly	No	No	Yes, USSD
Weather-aware	No	No	Yes	Yes
Data cables needed	SIM	Yes	Internet	None, power line

From public product pages: solshare.com, powerledger.io, MTN Lumos, StarTimes Solar

BUSINESS MODEL

We earn on the box, the chip and every exchange.

UGX 400K	UGX 150K	UGX 100K	5%	UGX 50K
SMART BOX	BATTERY CHIP RETROFIT	INSTALLATION	OF EVERY EXCHANGE	MAINTENANCE PER YEAR

+1,111
Sarafu earned by A, the home with more panels

+309
Sarafu earned by B, the home with more battery

1,500
Sarafu spent by the barber shop on power

UGX 17.7M
year-one revenue target from the pilot cluster

Prices and target from the CITT application. Earnings: three simulated days, 1 Sarafu = 1 UGX

TEAM

Built in Mbarara.



Mayinja Bob

CEO

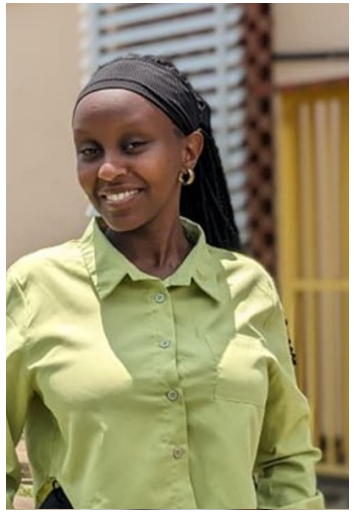
Mechanical & Industrial Engineering, MUST. Founder of Wingloft and Droni Kilimo.



Musisi Sharifa

ENERGY & SUSTAINABILITY

Petroleum Engineering & Environmental Management, MUST. CNOOC HSE internship.



Atuhaire Daphine

MECHANICAL DESIGN

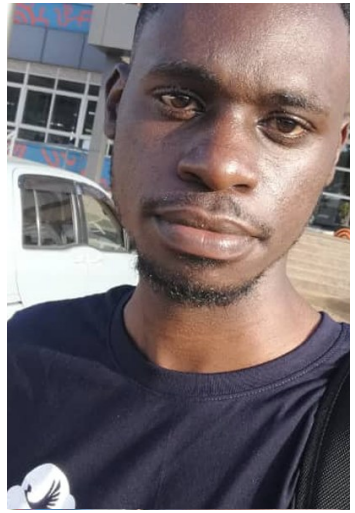
Mechanical & Industrial Engineering, MUST. Enclosures, mounts, manufacturing.



Kambere Degaulle

ELECTRICAL LEAD

Electrical & Electronic Engineering, MUST. Smart box and battery chip.



Ntambi Nassim

HEAD OF SOFTWARE

Crane Cloud, Makerere University. Firmware, hub and USSD.



Maureen Kevin

SITE IN CHARGE

Civil Engineering, MUST. Installation and community work.

SUPPORT

Funded to build. Talking to the right institutions.

CREEC EMPOWERHER

Prize awarded for the prototype

CITT

Seed grant application for the pilot

MUST AND EDIC

Academic backing and fabrication

UEDCL, UEGCL, ERA

Grid integration and approvals to explore

Logos show institutions we are engaging, not endorsements

ROADMAP

From simulation to a village.

DONE

Prize funding. Full system in simulation, USSD, dashboard, 3D and VR.

MONTHS 1–2

Smart box and battery chip on the bench.

MONTHS 3–4

Two-home trial on real batteries.

MONTHS 5–6

Three-home pilot in Bwizibwera, Mbarara.

NEXT

Clusters of 20+ homes. Grid-ready.



TODAY: THE VILLAGE IN SIMULATION



NEXT: CERTIFIED INSTALLATION



THEN: WHOLE STREETS

Photos: Lior Sperandeo CC BY-SA 4.0; Alvinategyeka CC BY-SA 4.0

UGX 6M

For the three-home pilot. A seed round follows on real numbers.



MAYINJABOB@GMAIL.COM

Photo: Solar installation, Nyanza Primary School, Uganda · Lior Sperandeo · CC BY-SA 4.0

Nguvu Jumuiya

Power to the people. Built by the people.

MAYINJABOB@GMAIL.COM · MBARARA, UGANDA

CREDITS

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