
# Electricity for sustainable development

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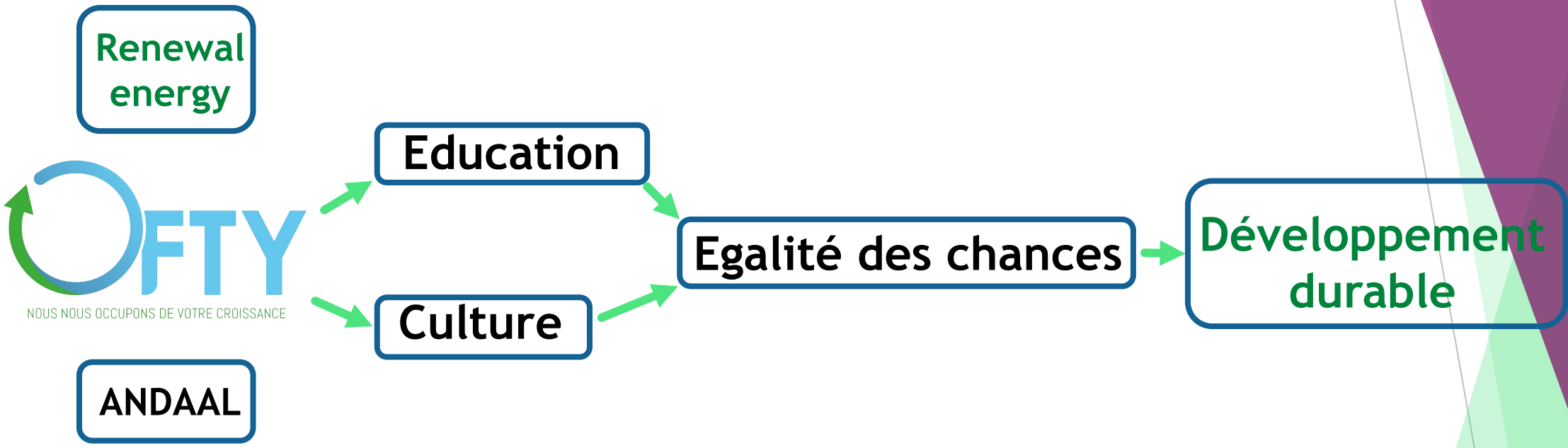
# Who?

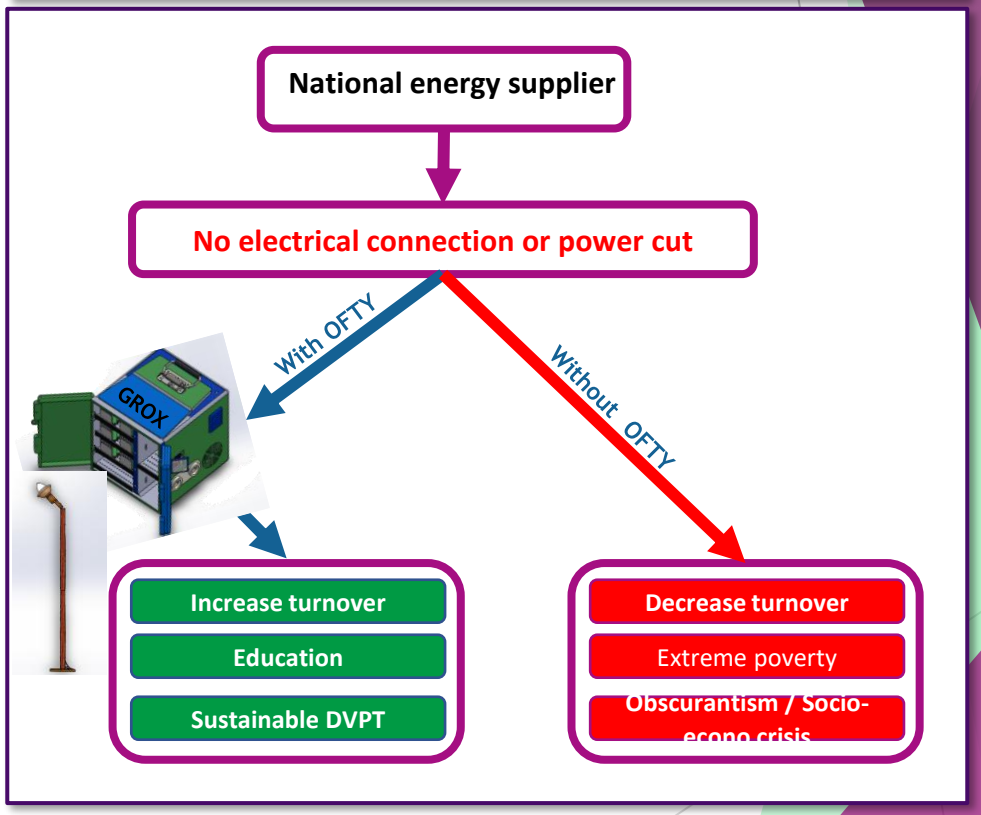

Renewal energy
OFTY
NOUS NOUS OCCUPONS DE VOTRE CROISSANCE
ANDAAL
Education
Culture
Egalité des chances
Développement durable

# Context and Objectives

## What and Why?

- Although home to nearly 1/5th of the world's population, Africa accounts for just over 3% of the world's electricity demand. About 600 million people in sub-Saharan Africa (one in two people) lack access to electricity in 2022. Similarly, about 80% of businesses in sub-Saharan Africa suffer from power cuts, resulting in average annual losses of about 8% of turnover.
- The African population is growing at twice the global rate. About 530 million people (one in three) will still have no electricity by 2030. Electricity demand in sub-Saharan Africa expected to quadruple by 2040.
- Developing a sustainable, green and affordable energy supply to fuel economic development is the major challenge.
- In this context, OFTY has developed a green box (GROX), INDLU, SNETBEE as an environmentally friendly and affordable energy solution to ensure the continuity of services in case of electrical shedding for SMEs.
- The ETUL lamps, powered by a solar powerbank, will be able to regulate social inequalities by allowing students to have a light once night falls, no matter where it is on the continent.

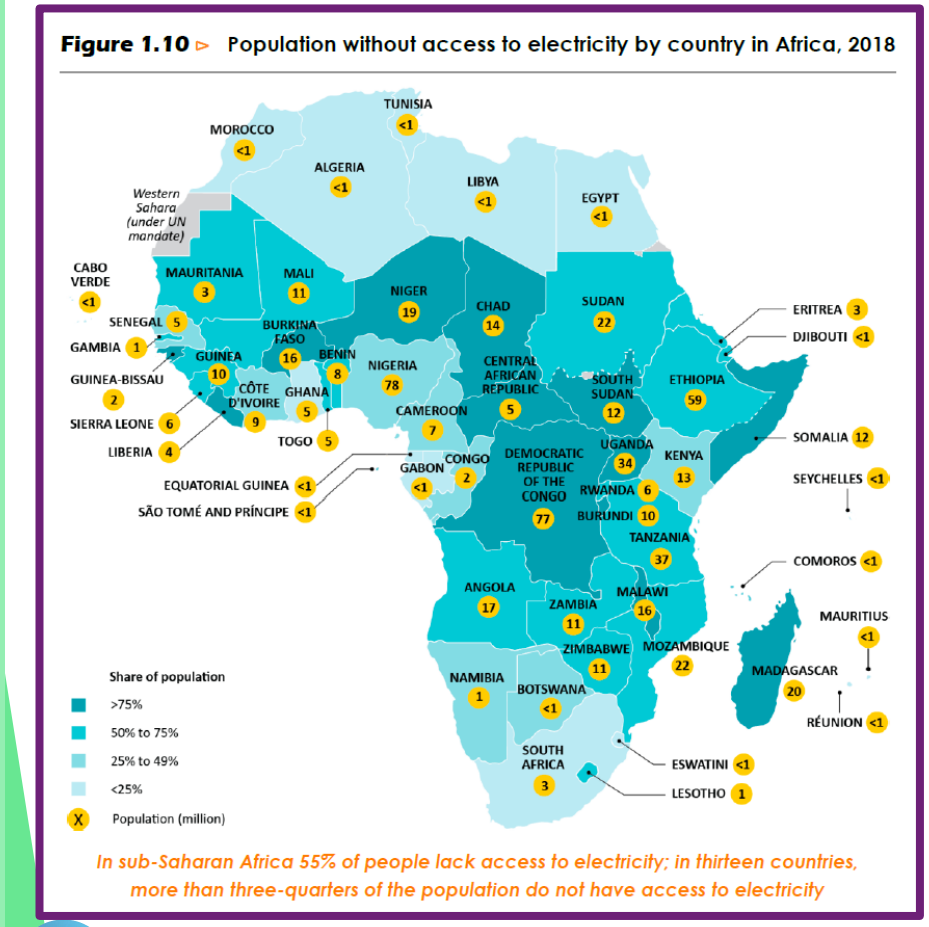
## Objectives




**ETUL & GROX, INDLU, SNETBEE as green, targeted and affordable solutions for African sustainable development**

# Problems

## 1) Darkness causes obscurantism, illegitimacy and inequality of opportunity




*In sub-Saharan Africa 55% of people lack access to electricity; in thirteen countries, more than three-quarters of the population do not have access to electricity*

## 2) Lack of affordable solutions to ensure continuity of service in the event of a outage

**80%** of companies in sub-Saharan Africa are suffering from power cuts

**53%** of Sub-Saharan African companies own or share a generator

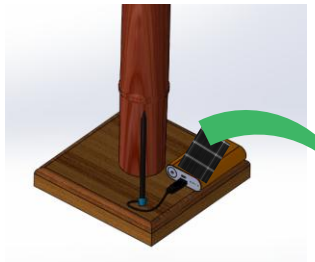
**8%** average annual loss of sales in connection with power cuts.

**16 %** for the informal sector.

# Solutions : A clean and cheaper lighting for everyone

1) **ETUL lamps :** efficient, accessible and affordable lighting solution for all households regardless of income, residential areas (rural and urban) ➔ **NDJO'O LIGHT !!!**


Floor lamp powered by solar powerbank



Power Bank

| Models | Product description |
|---|---|
| E | 5m cable, Bulb, fixtures & Affordable |
| G | Floor lamp, adjustable (2m high) & Prix abordable |
| A | Chic and decorative design Floor Lamp powered by PowerBank |
| L | Chic, bohemian, made of African natural sources (Bambou, Rotins) |

# Solutions : A clean and cheap light for everyone

## 1) ETUL Model E :


# Local competition

## Lampe/Bougie

**PROS**

- Very Affordable (3500/ 125 FCFA) and accessible lampant oil
- Portable, simple to use, reliable and long lasting
- No Maintenance

**CONS**

- Very low lighting (harmful to the eyes)
- Can be messy and causes fire hazards
- Toxic Product (High Benzene and Sulphur and carbon monoxide)
- Soot and Smoke which dirty walls
- Heavy maintainance

## ETUL - MODELE E

**PROS**

- Affordable (from 9 500 FCFA)
- Very good luminance and brightness and long lifespan
- Maintenance (Powerbank & bulb can be changed independently)
- Mounting flexibility
- Mobile powerbank can be either charge everywhere by solar cells or wall socket
- Solar powerbank can be used to charge other devices (Phone)

**CONS**

- Solar powerbank takes long time to charge via sun light
- Need human intervention to charge

## Lampe solaire

**PROS**

- Less expensive (about 12000 FCFA On average)
- Can be recharged either by solar cells or wall socket
- Portable
- Little maintainance

**CONS**

- Poor luminance
- Lighting time very low
- Limited flexibility and short lifespan
- Need human intervention to charge

## Lampes d'urgence LED

**PROS**

- Less Power consumption and longer lifespan
- Have a good luminance
- Very handy, flexible and portable

**CONS**

- Less affordable and poor lifespan (about 6 months)
- Heavier maintainance (bulbs and batteries can't be replaced)
- Heat sensitivity which reduces lifespan
- Poor lighting time(less than 4 hours)
- Contains hazardous materials which requires proper disposal
- Need human intervention to charge

## Système lampes solaires

**PROS**

- Have a Good luminance
- Charged by solar cells
- Good endurance and autonomous
- Can charge other devices like phones etc

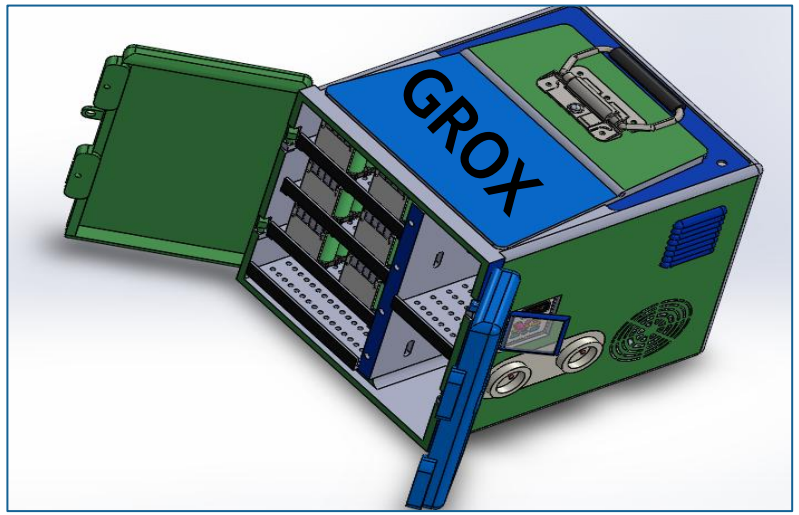
**CONS**

- Very expensive (as high as 85000 FCFA)
- Requires a technical team for installation
- Heavy maintainance

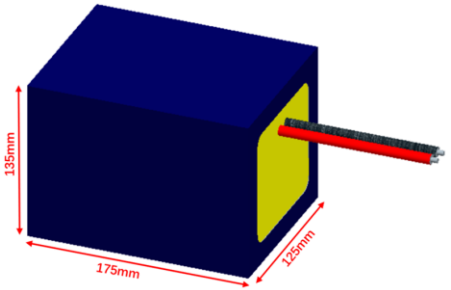
ETUL une solution contre obscurantisme et l'inégalité des chances

# Solutions : A clean battery, cheaper and easy to install

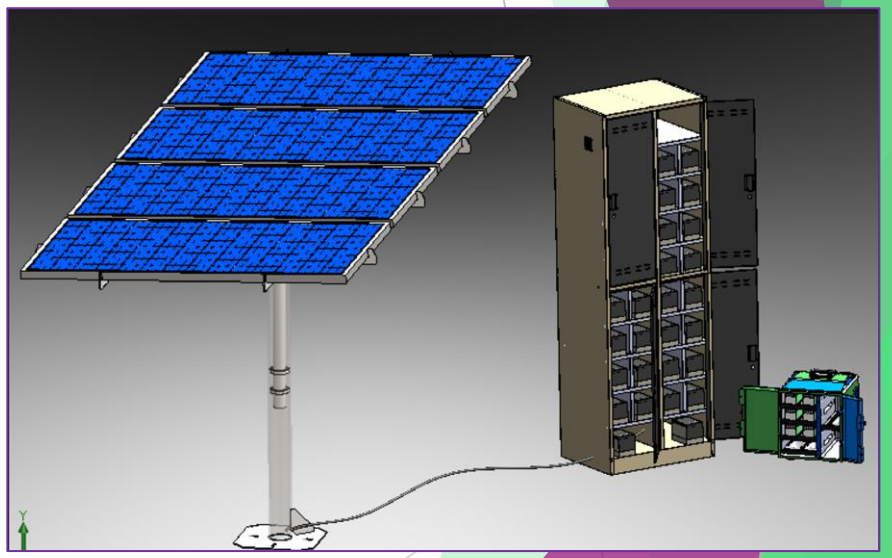
**2) GROX (Green Box);** cheaper, scalable and accessible solution to ensure continuity of service in case of electric shedding for MPMEs, events & utilities




BOX power supply containing modular batteries & inverters




Lithium Ion batteries

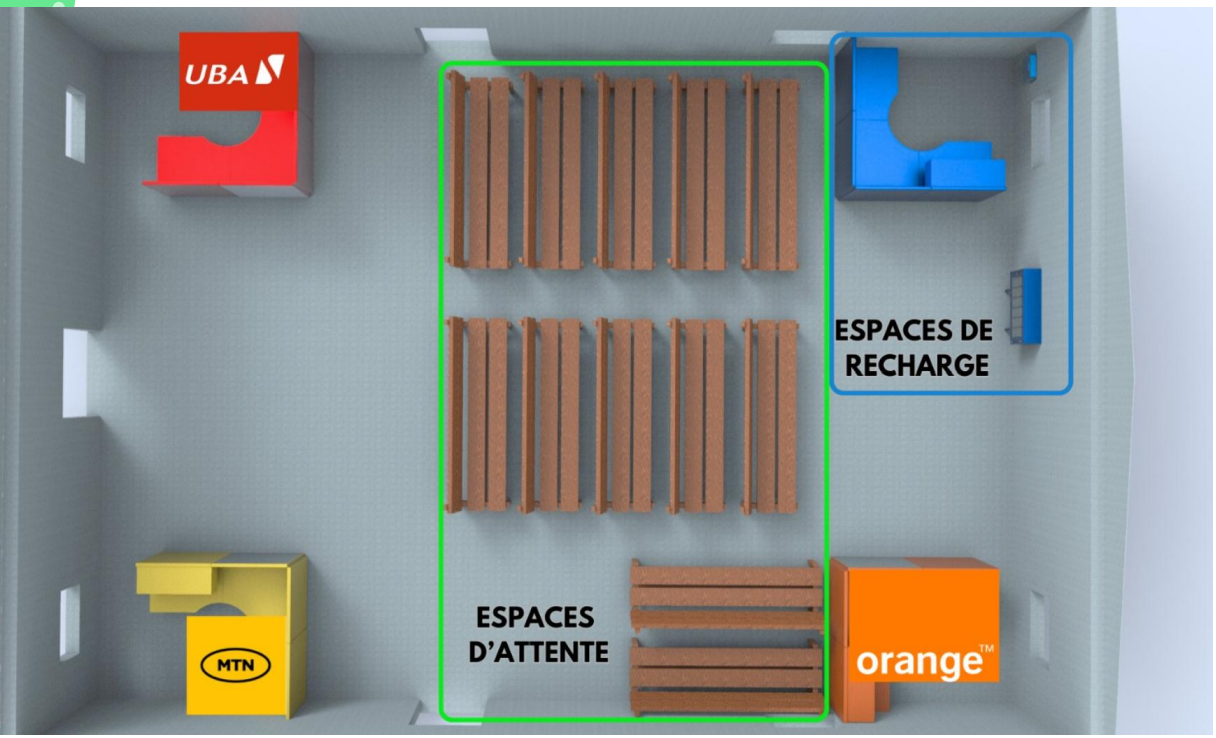


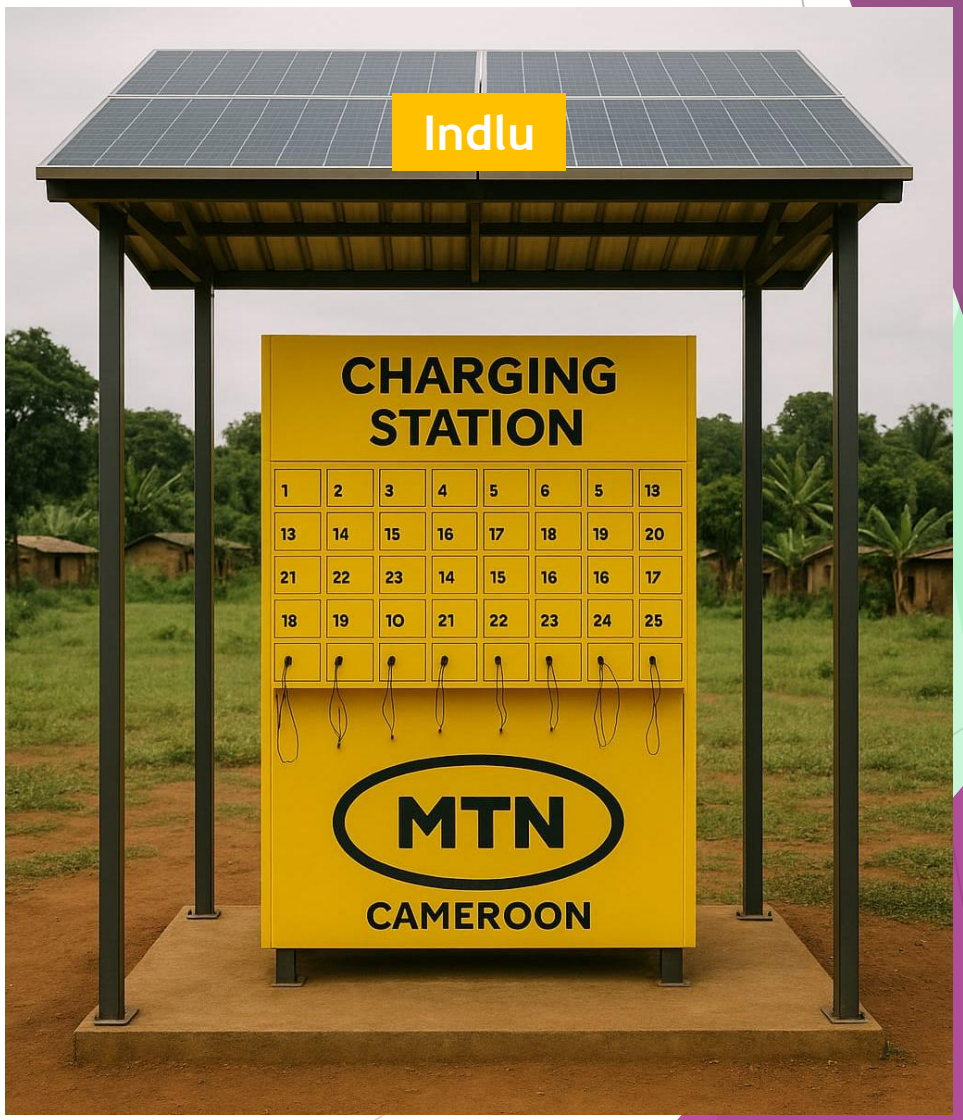
Solar battery charging station

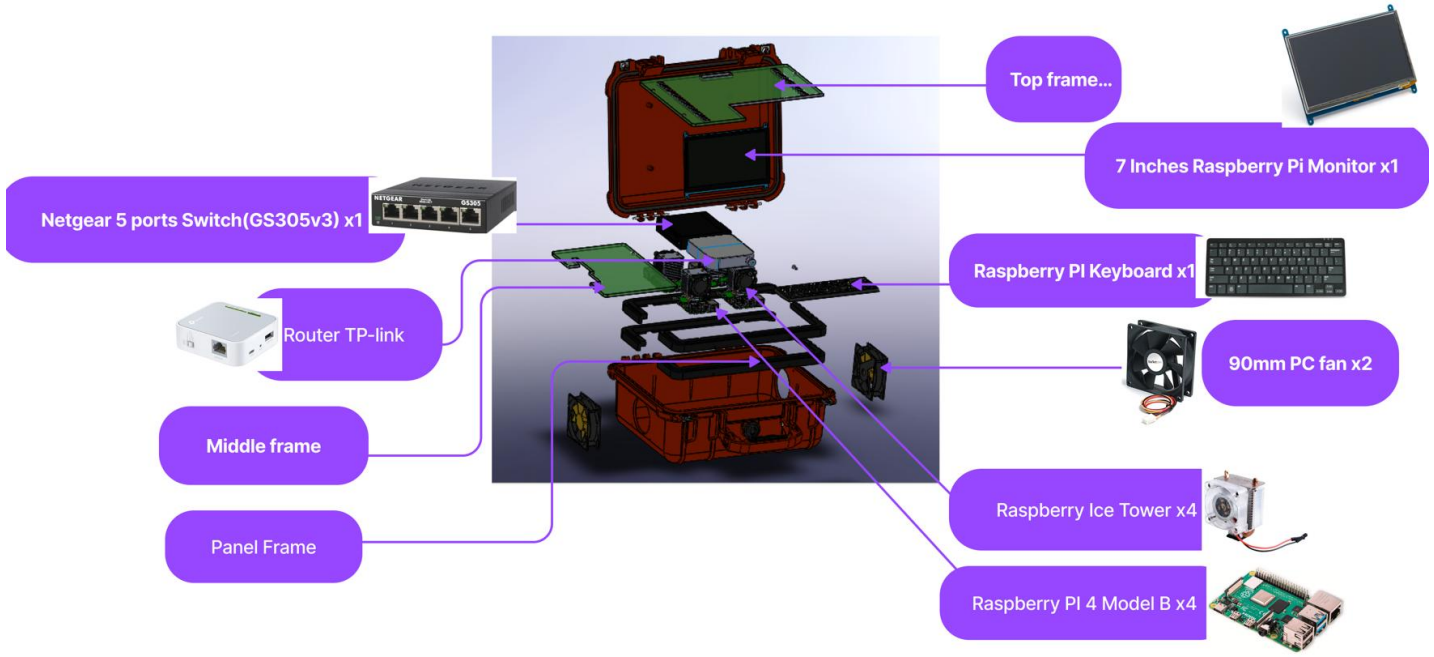
# Solutions : Community multimedia & business center

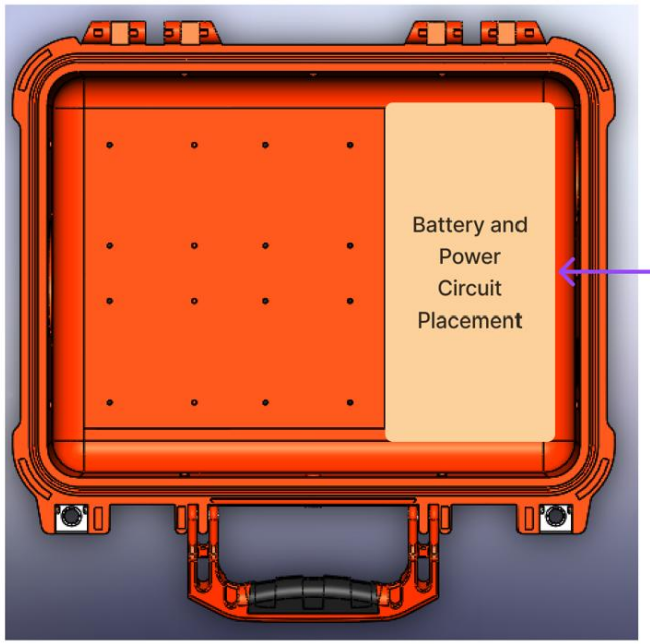
## 3) INDLU: « Arbre à palabre »

**PARTNERSHIPS: Public-Private**







# Solutions : Sustainable development via technology

## 4) SNETBEE ; Mini & autonomous datacenter

# SOLUTION DE RECYCLAGE DE BATTERIE

PAR ITOK STEVE HECTOR
INGENIEUR GENIE ELECTRIQUE
OFTY CAMEROUN

# WE CARE ABOUT YOU