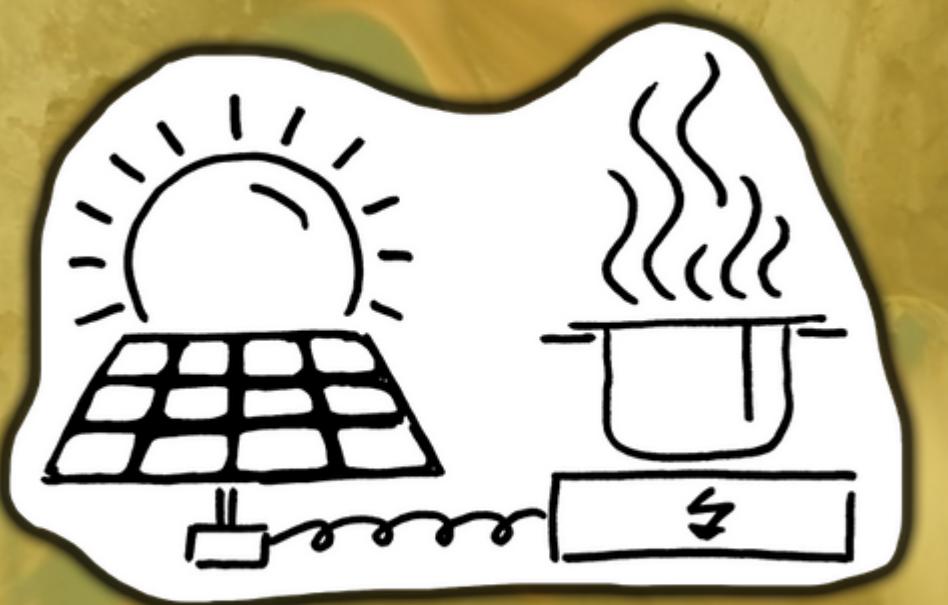


# SolarBites



THE  
**Port**



# Challenge

4 million  
premature  
deaths each  
year

1 billion people  
around the world  
live without  
electricity

2.4 billion people  
lack access to clean  
cooking facilities

1.9-2.3 % of  
global CO<sub>2</sub>  
emissions per  
year

# Technology



## FIREWOOD & LPG

- Deforestation
- Time consuming
- Availability



## SOLAR COOKING

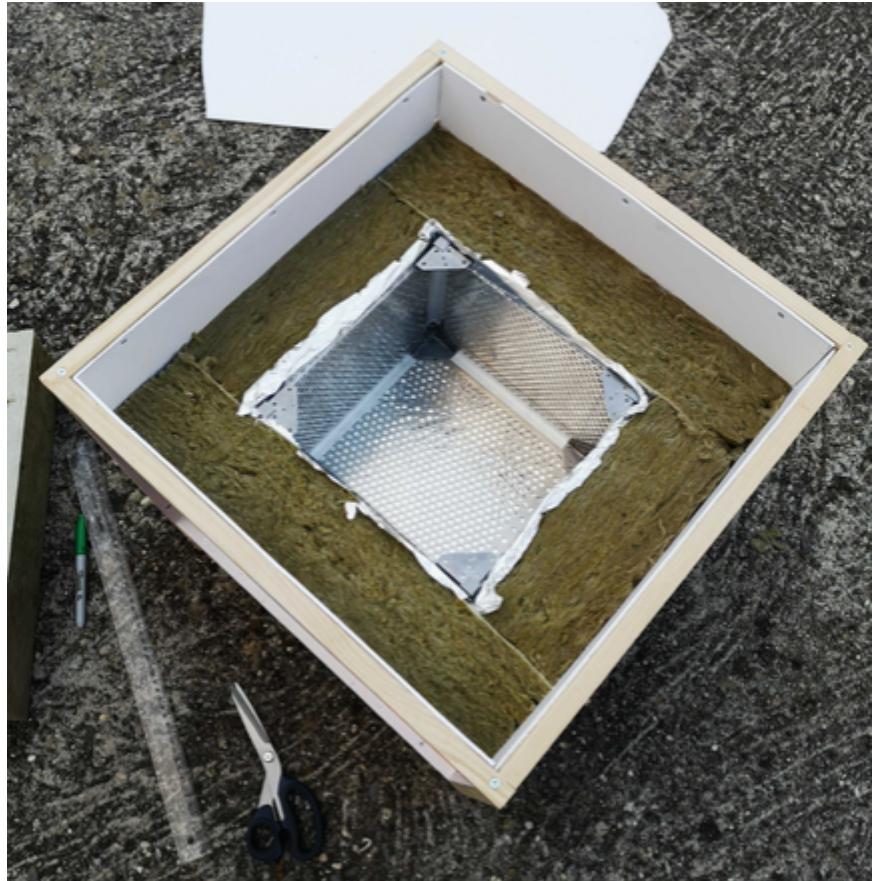
- No temperature control
- Season dependent
- Outdoors



## ELECTRIC COOKING

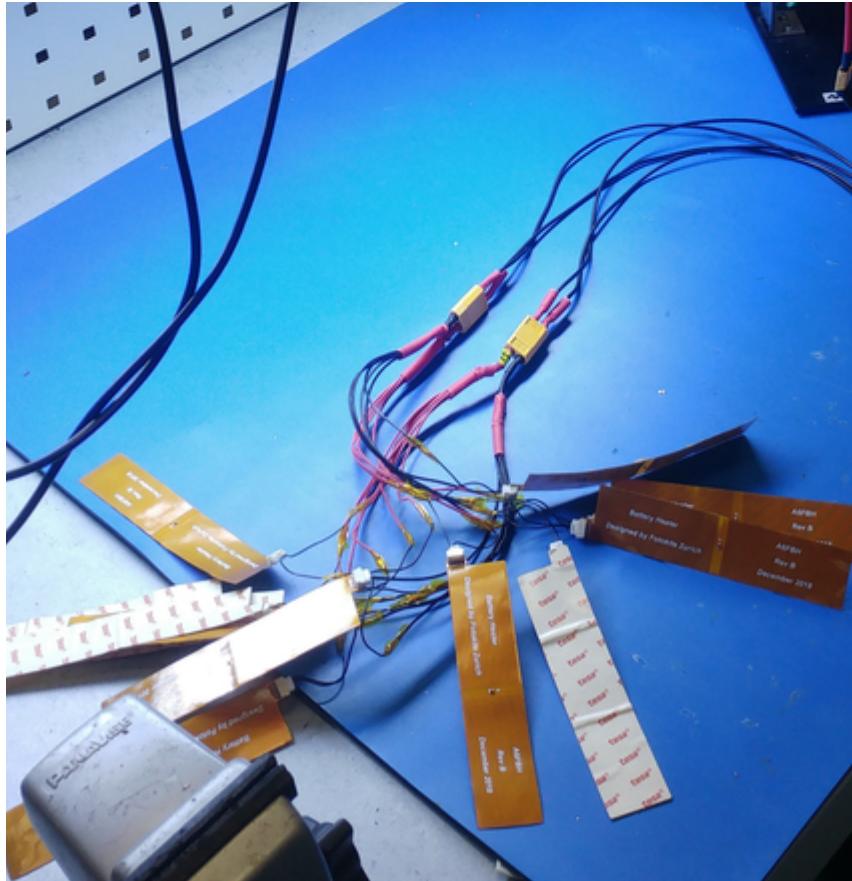
- User friendly
- Reliable
- Safe

# Solution and Prototype



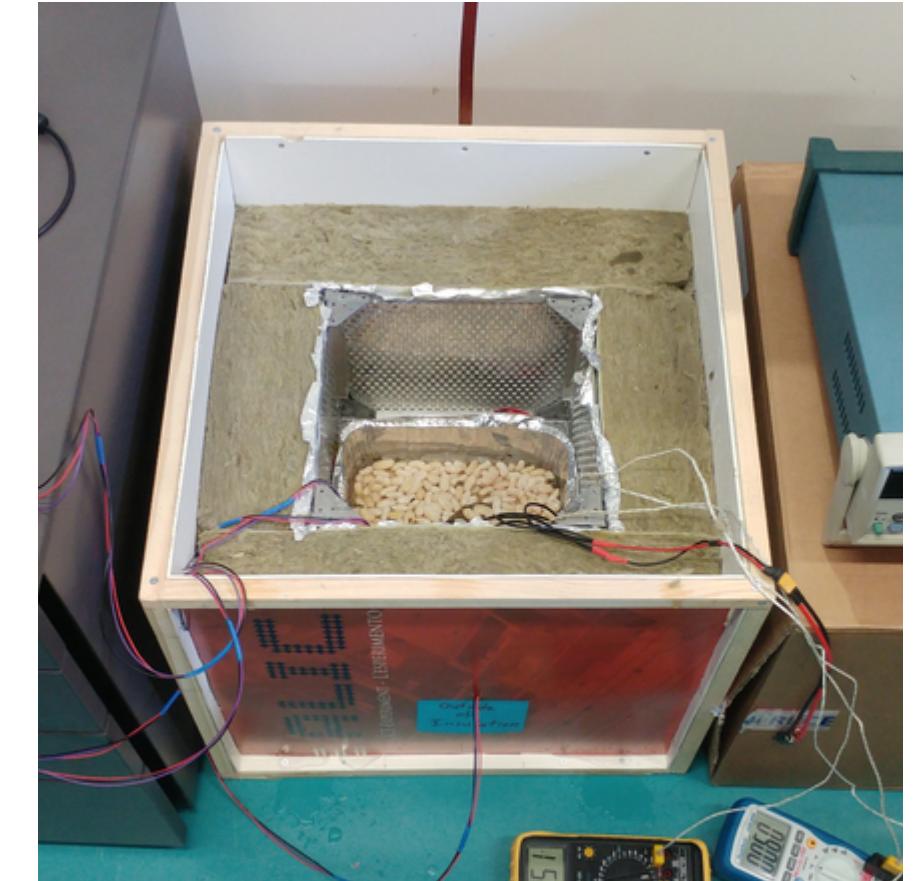
INSULATION

- Reduced heat losses
- Customized enclosure



HEATING ELEMENT

- Flexible heater PCBs
- Commercial crockpot



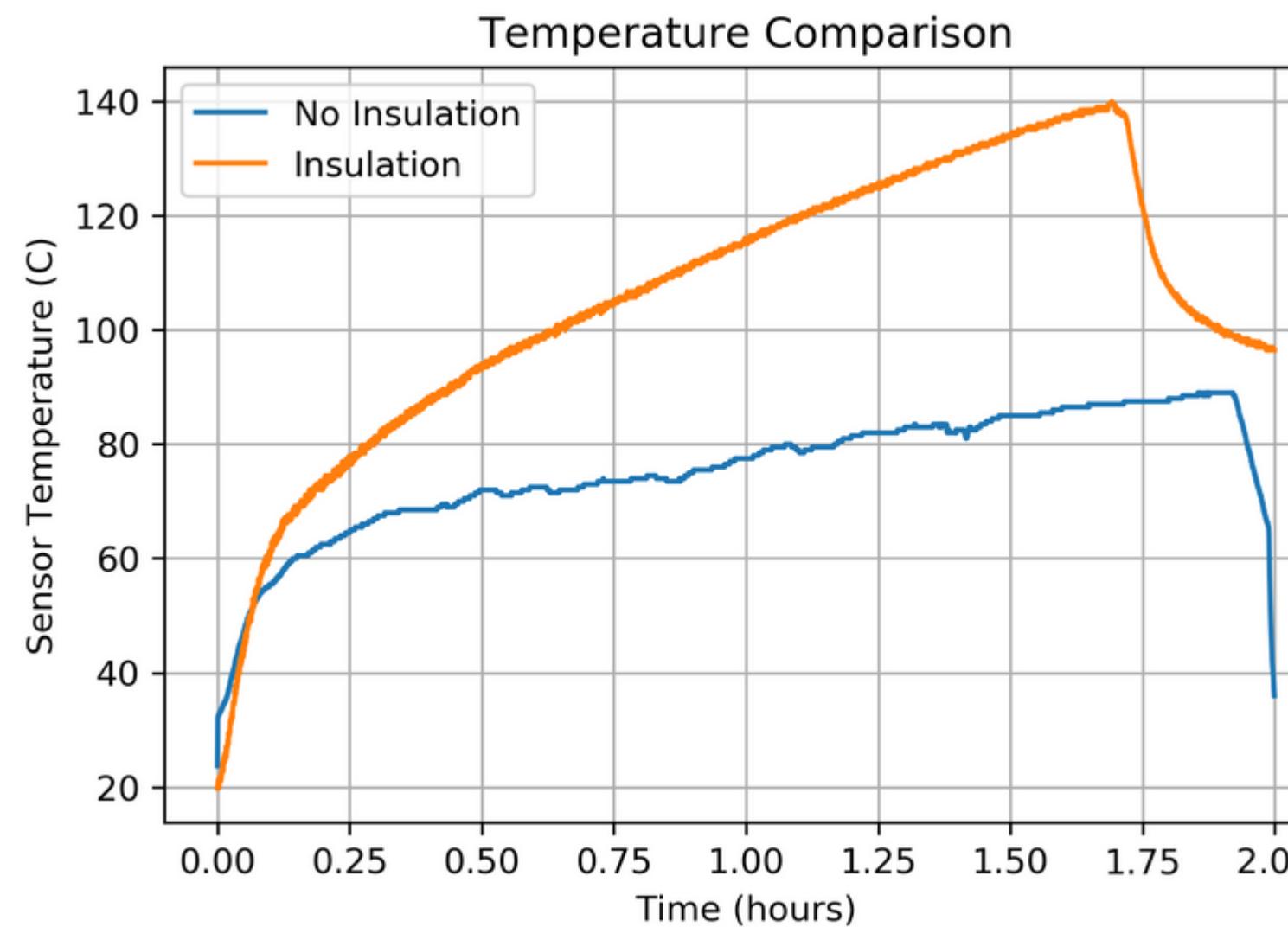
PROOF OF CONCEPT

- Boiling 0.5l
- Soaked beans

# The Results of the Experiment

## ■ INSULATION EFFICIENCY

- ~50Wh saved to reach boiling point
- Keeps food warmer for longer time



## ■ PCB HEATERS

- ~50% energy saved compared to crockpot



# Cultural Aspects

- Local and camp tensions
  - Commercial package
- Long adaptation process
  - Training



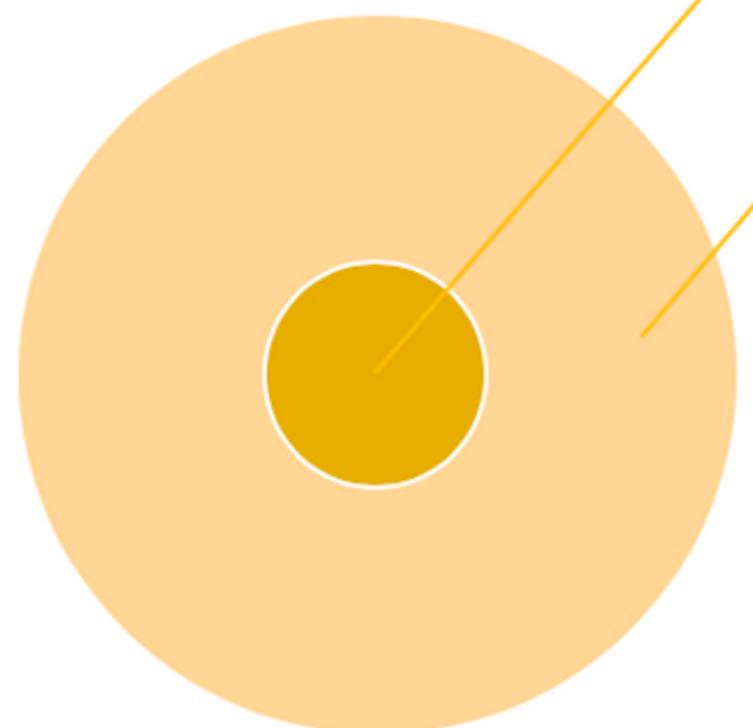
# Flexible Financing Model

## Cost on the camp residents:

- Traditional/mobile payment (e.g. Pay as You Go)
- Cash policy (e.g. voucher)

## Funding from donors/partners

- phase 1
- phase 2



IKEA Foundation





## Conclusion

It's possible to cook a meal with less energy  
This allows to power it with photovoltaic  
technology

## Next steps

Optimize the device  
Find partners to support us  
Involve local communities

THANK YOU