



# Is the world on the brink?





# How people, planet and profit come together

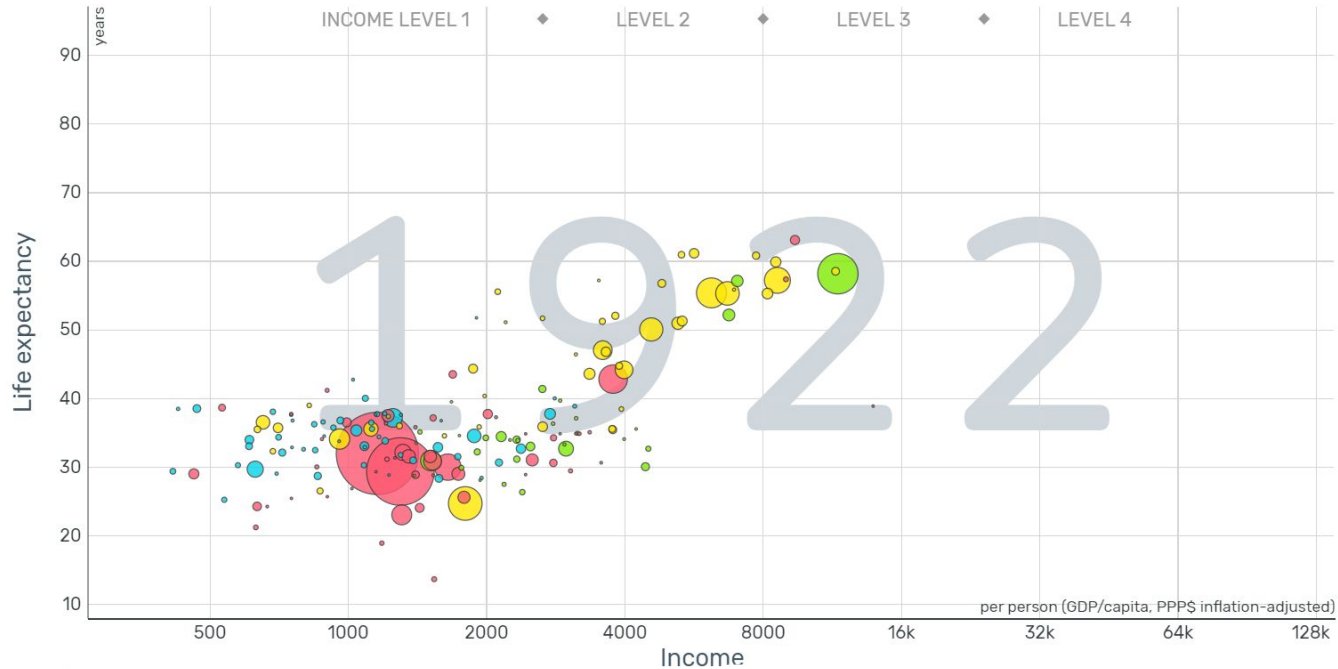
by Prof. Dr. Wolfgang Rams  
Co-Founder of Africa GreenTec  
Professor for Entrepreneurship &  
Innovation Management



# EMPOWER



# Life expectancy - income 100 years ago



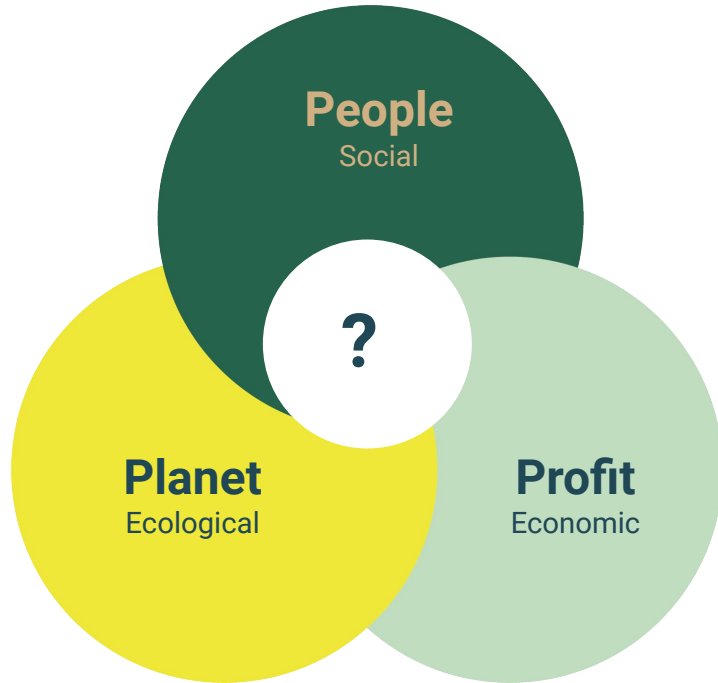
Source: [https://www.gapminder.org/tools/#\\$chart-type=bubbles&url=v1](https://www.gapminder.org/tools/#$chart-type=bubbles&url=v1)



# Life expectancy - income today



Source: [https://www.gapminder.org/tools/#\\$chart-type=bubbles&url=v1](https://www.gapminder.org/tools/#$chart-type=bubbles&url=v1)



**Do people,  
planet and  
profit come  
together?**



# 600 M

people in  
sub-saharan  
Africa have no  
access to  
electricity\*

\* iea 2019



# The lack of energy access has massive effects on critical infrastructures in Africa



**600 M**  
people have no access to electricity<sup>1</sup>



**54 %**  
of rural population has no access to clean water<sup>2</sup>



**40 %**  
of the fruit and vegetable harvest goes to waste<sup>3</sup>



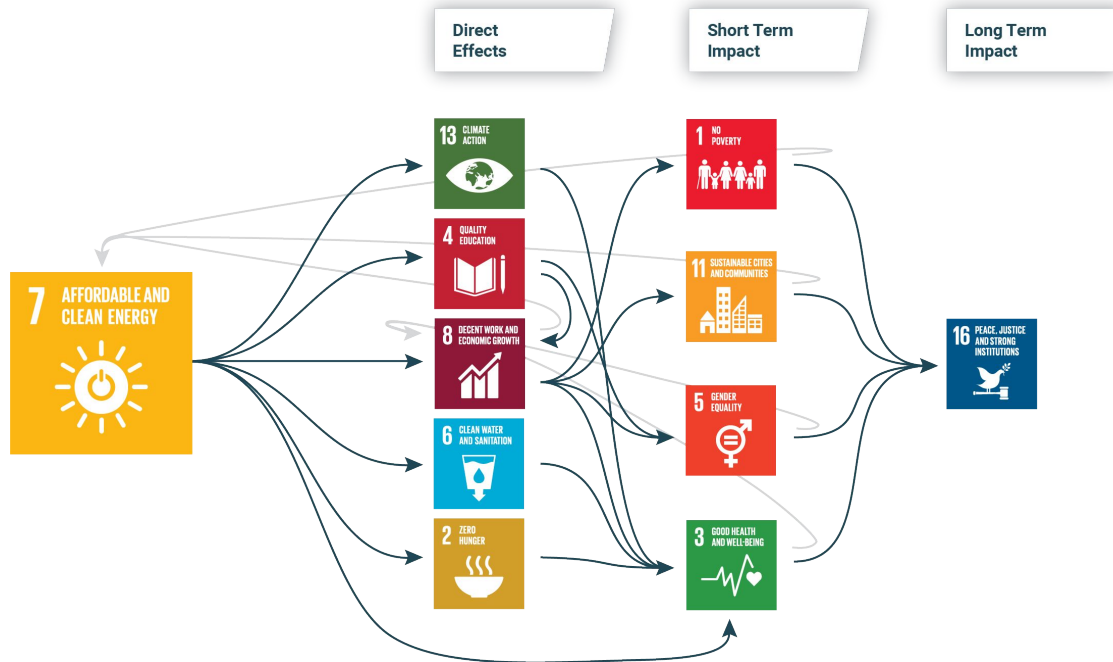
**71 %**  
of the population do not have access to reliable internet<sup>2</sup>



<sup>1</sup> Iea 2019 <sup>2+4</sup> World Bank, 2020 <sup>3</sup> FAO, 2018



# Electricity as the main driver for sustainable development







# Africa, a young & dynamic continent

**25 %** of the world's population will live in Africa by 2050<sup>1</sup>

**> 70 %** of Africa's population is under the age of 35 (995 M people)<sup>2</sup>

<sup>1</sup> Worldbank <sup>2</sup> World Economic Forum 2022





# Africa, continent of economic opportunities

In 2022, African startups attracted **\$7B** funding<sup>1</sup>

**x4** is the projected increase in Africa's collective GDP by 2050<sup>2</sup>

53 of Africa's 54 countries posted **positive growth**<sup>3</sup>

<sup>1</sup> Forbes 2022 <sup>2</sup> BCG 2022 <sup>3</sup> AfDB 2023





# Challenges also represent opportunities

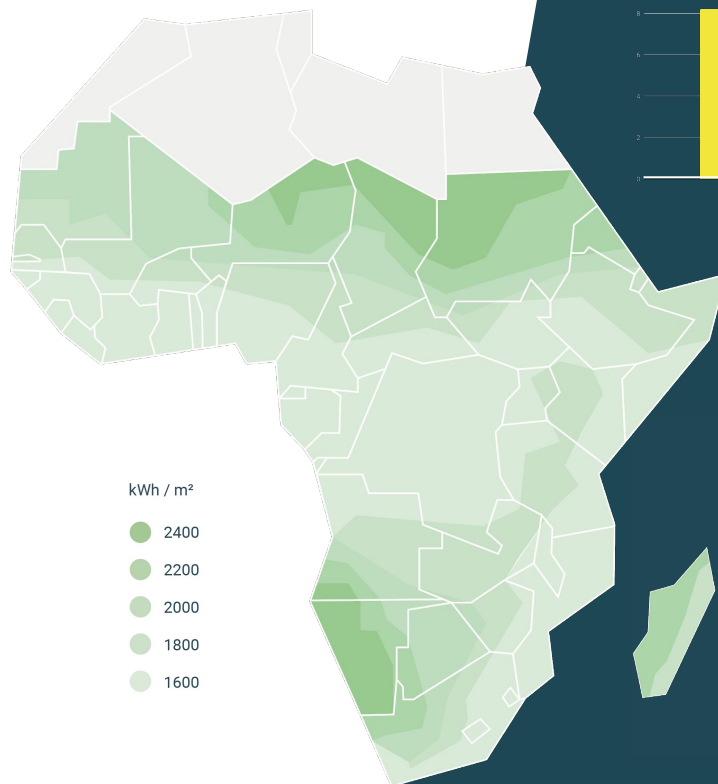
McKinsey estimates that **\$835 billion** of investment is needed to meet sub-Saharan Africa's energy needs by 2040.



# The power of Sub-Saharan Africa

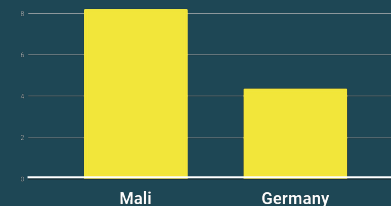
## A continent with a vast innovation potential

Innovation in intelligent and sustainable infrastructure technology is the next big global market opportunity.



## Free sun power SSA

Mali: 8.22 h/day

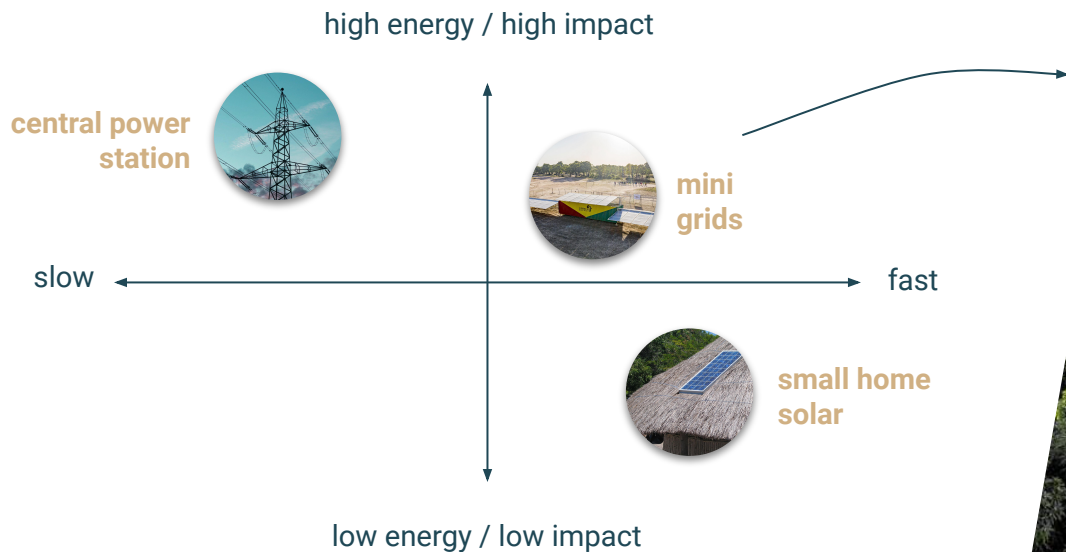




Solution

# Mini-grids

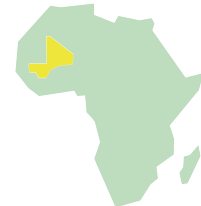
Decentralized PV + battery systems are the most eco- & cost-effective way to electrify and empower Africa.





Nassou Oumar – "Serial entrepreneur"

Without electricity it is impossible to turn my ideas into reality, electricity is the foundation of everything. Electricity enabled me to increase my productivity by 70% and then to open a restaurant, where I was able to hire six people.





Diessira Diallo - Kiosk owner

Now, I not only throw away less food, but I also attract new customers. They come to buy cooled products and then hang around - my shop has become a meeting point for the village and my income has multiplied.





53 %

of the population  
in sub-saharan  
Africa is employed  
in Agriculture.\*



**Bara Ndiaye**

Farmer who moved back to his home  
village to invest in local food production.



\*World Bank 2019





# Millions of people like Bara have an enormous growth potential

The median income of a person in Mali is \$ 863 per year according to the World Bank. By purchasing a diesel-powered water pump it is possible to increase the harvest and the turnover over 3000€/year, but:



**1,000 €**

acquisition cost of the diesel powered water pump



**275 €**

monthly operating costs for the diesel



**40 %**

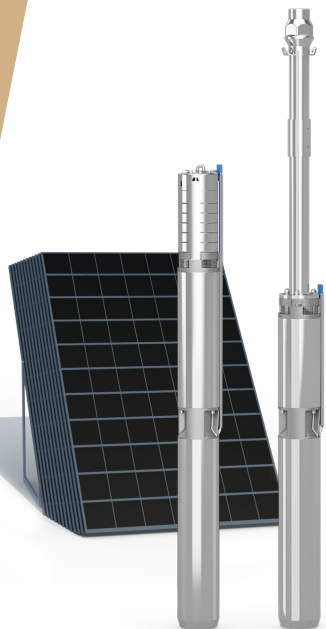
of the fruit and vegetable harvest goes to waste



Bara N'diaye  
Farmer



# PumpUP<sup>®</sup> – Solar water pump systems for impact and profit



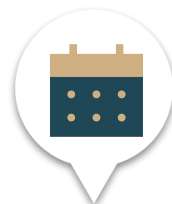
**275 €**

monthly operating costs for the diesel



**200 €**

monthly leasing costs



**3 years**

later he owns the solar water pump system





# Cooltainer<sup>®</sup> – mobile cold storage for impact and profit



**40-50 %**

fruit and vegetable losses

**100 %**

income increase possible due to preserving through cooling

**22,50 €**

monthly usage fee to rent a box in the Cooltainer (room for up to 60 boxes)





# “My old diesel generator was too expensive and constantly failing.”



**2 h**

interrupted electricity supply through diesel generator

**8 h**

reliable power per day, a productivity increase of 300%

**34 %**

savings on energy costs



Modibo Traore  
Welder





My old diesel generator was constantly failing and too expensive. Now I have a lot more orders than before. Ever since this boost, I have hired several young people and now I employ over 20 people in total. To me, my business means independence, self-sufficiency and freedom.

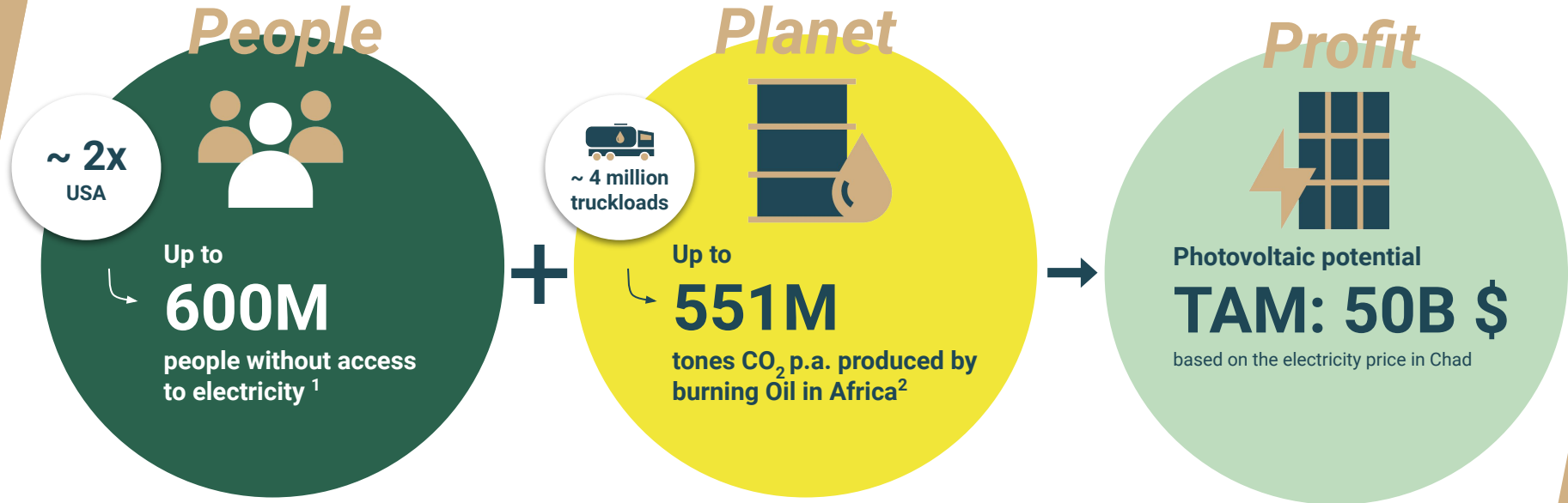
Modibo Traore - Welder





# Market and Impact Potential

In our business model: people, planet & profit are NOT contradictory, but mutually dependent



<sup>1</sup> Iea 2019, <sup>2</sup> Our world in data 2019



# Let's do - not talk



We don't need to turn our whole economic system upside-down to help people



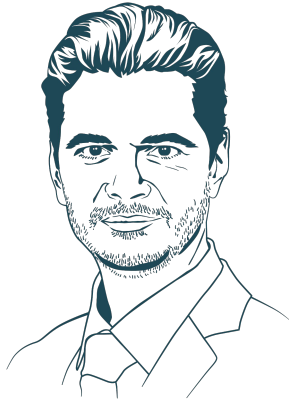
People, planet and profit can come together. For this it is critical that the needed energy for growth is provided by renewable energies.



If we act ourselves instead of just talking or waiting for politicians to decide, we can make a difference.



# Get in touch



**Prof. Dr. Wolfgang Rams**

Co-Founder & COO

[wr@africagreentec.com](mailto:wr@africagreentec.com)

**Follow me on LinkedIn**

 [linkedin.com/in/prof-dr-wolfgang-rams-738305/](https://www.linkedin.com/in/prof-dr-wolfgang-rams-738305/)

**WE DO.**

