

PARTNERS





The balanced participation of EU and AU private, public and civil society organisations in the consortium will ensure the knowledge transfer North-South and South-South, and the sustainability of value chains based on local value creation and entrepreneurship.

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Empowering Communities,
Energizing Futures

LEAVE NO ONE BEHIND:
BOTTOM-UP ENERGY
TRANSFORMATION OF
LASTMILE COMMUNITIES



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CONTEXT

Sub-Saharan Africa (SSA) accounts for **85% of the population living in energy poverty** without access to electricity.

This lack of access to electricity creates **instability in the food supply chain** and makes it difficult to access clean drinking water.

More than 1.8 billion people **lack access to clean cooking** technologies and fuels.

Finally, women and young girls spend about **40B hours per year transporting water**, a figure which corresponds to a full year of labour at the EU labour market.



CONCEPT

United by the common goal to find a solution for access to clean energy, European and African research institutions and private sector have joined forces in this project to pilot SWARM-E - a circular and bottom-up renewable energy infrastructure that links SWARM grids with other renewable energy generation and storage assets (solar mini-grids, solar containers, water purification).

The inter-disciplinary collaborative project proposes a solution for affordable, reliable, modern and sustainable access to clean energy that **LEAVES NO ONE BEHIND** and meets the energy and water and food productivity needs of all users in communities in the SSA.

The solution is a bottom-up modular and dynamic infrastructure called SWARM electrification (SWARM-E) that deploys a circular renewable energy system called a SWARM grid in which households and businesses with solar home systems are interconnected with those without via a low-voltage distribution grid.



EXPECTED IMPACT

SWARM-E will operate and replicate

- 5 pilots in Rwanda and Tanzania, under which 5 SWARM grids are installed,
- delivering 6.9 GWh of renewable electricity while generating income through the trading of electricity and avoiding the discard of 3,200 batteries;
- 5 water purification applications delivering 101.M L of clean water;
- 15 light electric vehicles delivering farmers' produce, power mobile productive uses and cold storage, increasing the yields of 1,000 farmers and reducing the food losses of more than 5,000;
- 700 kg of H2 are blended with LPG for cleaner cooking,
- and more than 500 jobs for women and youth are created.

