

RESEARCH AND DEVELOPMENT FUND PROJECT SPOTLIGHT

OVO SOLAR

MODULAR SOLAR POWERED EGG INCUBATOR FOR SMALLHOLDER FARMERS

This project will develop a modular, Pay-As-You-Go enabled solar-powered egg incubator. This will allow farmers to scale their hatchery production as they grow their poultry businesses.

Climate change is making it harder for farmers to rely solely on seasonal crop harvests, as crops are often affected by extreme weather patterns. Enhancing livestock production could significantly improve farmers' resilience by diversifying their income.

OVO egg incubators can help address the global food security challenge faced by smallholder farmers. The company will adapt their current base egg incubator unit and develop egg tray modules, which can be stacked on top of the base unit. Farmers will be able to install each egg-tray-module incrementally, increasing the total unit capacity as each module is added.

The incubator will automatically regulate temperature, humidity and air exchange and integrate Internet of Things (IoT) hardware. This IoT integration will record unit performance data including temperature, humidity, CO₂ levels and the condition of the battery and panel. The data collected will help to optimise performance and return of investment for the end-user. The IoT hardware will integrate with Pay-As-You-Go GSM hardware and software.

The egg incubator will be sold with PAYGo financing, meaning farmers can initially make a small down payment and then make monthly payments until their incubator is paid in full. This will enable farmers to use their incubator appliance to generate further income and re-invest their profit by purchasing additional egg tray modules.

This project will include manufacturing 10 trial units for poultry farmers in Kenya. Its objective is to gain insight into the unit's performance in-field and collect end-user feedback, which will inform future product development.



AT A GLANCE

R&D Awardee
OVO Solar

**Efficiency for Access
Funding**
£92,417

**R&D Funding Unlocked
from OVO Solar**
£11,052

Project Locations
Canada, China, Kenya