

# INNOVATION SERIES

## BUSINESS PROFILE



COLDHUBS LIMITED

OWERRI, IMO STATE, NIGERIA.

[HTTPS://WWW.COLDHUBS.COM/](https://www.coldhubs.com/)

### ABOUT COLDHUBS LIMITED

- Company status:  
Limited Liability Company,  
created in 2015.
- Number of employees: 68.



**Nnaemeka Ikegwuonu,  
Founder and Executive Director**

Nnaemeka Ikegwuonu holds a Bachelor of Arts degree from the Imo State University, Nigeria, and a Master's degree in Cooperation and Development from the University of Pavia, Italy. Having been raised in a farmer family, he founded in 2003 the Nigerian radio station *Smallholder Farmer Rural Radio* (under the *Smallholders Foundation Ltd./Gte*) to share

knowledge on agricultural best practices to an audience of now two million Nigerian. As a very active entrepreneur, he is also the founder and CEO of ColdHubs, as well as the creator of following initiatives: *The Agriprenurship Academy* (to train young farmers), *The Smallholders Seed Store*, *Smallholders Microcredit*, and *GrainStore polypropylene bags* (grain preservation bags). He has been awarded 23 times, with following distinction among others: Ashoka Fellow 2008, Rolex Awards 2010, Fast Company's 100 Most Creative in Business 2012, Nigeria's Young Person of the Year 2011, Niigata International Food Prize Laureate, 2012 and 2013 Laureate of the Yara Prize for Green Revolution, special prize Start Up SDG2017, Waislitz Global Citizen Disruptor Award 2020.

This series of events is organised by the PAFO and the COLEACP. COLEACP operates within the framework of the development cooperation between the Organisation of African, Caribbean and Pacific States (OACPS) and the European Union, with the support of the French Development Agency.



## BUSINESS MODEL

As an agricultural radio broadcaster, Nnaemeka has spent years travelling in Nigeria to talk to farmers and to daily follow the challenges they are facing. One of them is the massive loss of harvested fruit and vegetables which perish before having reached the market due to the lack of cold storage facilities. Cold storage facilities usually work with electricity but smallholder farming plots are often not connected to the electric grid, while diesel-based refrigerators are a too expensive alternative. Thus, in 2015, Nnaemeka created the company ColdHubs to build solar-powered walk-in cold storage rooms for 24/7 cold storage of perishable foods. The innovation extends the shelf life of fruit

and vegetables from two to 21 days and thus addresses the problem of post-harvest losses and increases profits.

Mission: To contribute achieving food security by preserving perishable products, uplifting and empowering local Nigerian communities, especially women through hiring mainly women to manage the operations and collection of revenue at ColdHubs stations.

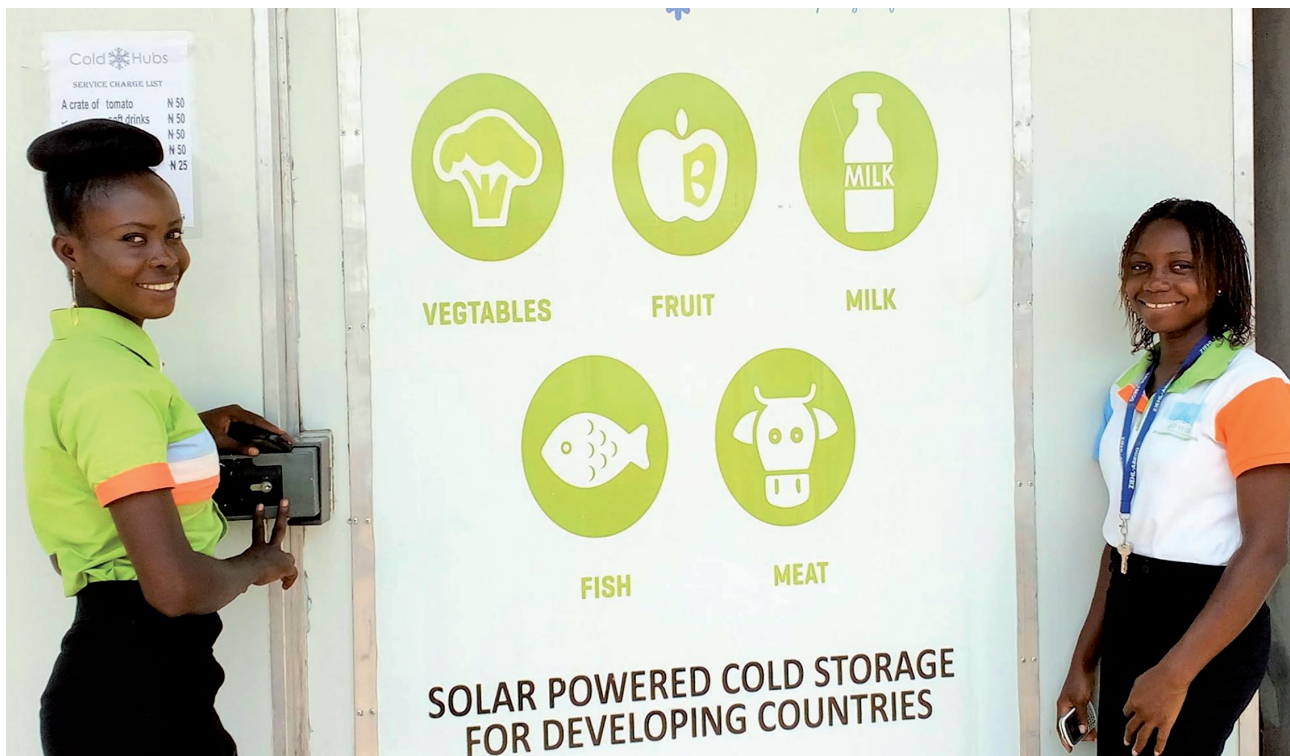
ColdHubs is a breakthrough innovation destined to the local community and smallholder farmers. The company is leading the market for innovative and affordable cold-storage solutions.

## CLOSE RELATIONSHIP WITH SMALLHOLDERS

The farmers use ColdHubs cold storage rooms by transferring their perishable foods into 20kg (44lbs) returnable plastic crates on a flexible pay-as-you-store subscription model: they pay a daily flat fee of about US\$0.50 per for each crate of food they store.

ColdHubs is installed in major food production areas, markets, and farms. 54 ColdHubs storage rooms are currently available and serve 5,250 users.

ColdHubs has created new jobs for 66 women to manage and oversee the cold rooms operations since its establishment in 2015.



## ABOUT COLDHUBS STORAGE ROOMS

The ColdHubs storage rooms have a dimension (LxWxH) of 3m x 3m x 2m (10ft x 10ft x 7ft) and can store up to three tons of food (150 crates) at an adjustable temperature of -15 to +25°C. Their walls are insulated, floors steel galvanized and doors gasket sealed. Their roofs are equipped with photovoltaic solar panels which generate energy to power the walk-in fridge beneath it. Each cold room features solar panels to generate six kilowatts of energy every hour, whereas the cold room itself only uses 1.5 to 2 kilowatts per

hour. The surplus electricity is stored in high-capacity batteries and allows for refrigeration in all weather conditions 24/7. The cold rooms use the natural refrigerant propane (R290) to reduce their contribution to atmospheric pollution as propane has no Ozone Depleting Potential and a very low Global Warming Potential.

60% of each ColdHubs storage room is made locally with the other supporting components imported from Europe.



## INNOVATIONS: MILESTONES AND EXPANSION PLANS

Initially, people did not believe that cold storage can prevent food from spoiling. Thus, ColdHubs offered free trials to demonstrate that its innovation works and to promote it.

54 ColdHubs are currently in operation in 22 of Nigeria's 36 states. In Nigeria's "food belt" in the north, ColdHubs storage rooms have been placed in farming clusters to store the new harvest. In the urbanised south of the country, the cold rooms have been installed in markets to be used by retailers and wholesalers. 30 new cold rooms are being built.

ColdHubs has won a \$50,000 cash prize with its Waislitz Global Citizen Award and plans to invest

it into the installation of two new cold rooms in two fruit and vegetable markets in Nigeria. Both new facilities are expected to save 3,285 tons of food each year, increase the incomes of 200 users and create four new jobs for women.

ColdHubs further plans to operate cold rooms in South Sudan, Sierra Leone, Liberia, Benin, and Kenya. The goal is to have deployed 5,000 ColdHubs in 2030 across Africa.

Along the expansion of its market, ColdHubs is also working on meeting the high demand of storage into the cold rooms. As each new unit is very quickly filled up, ColdHubs creating a second-generation cold room named "ColdHubs 2.0".

## SUCCESS FACTORS AND LESSONS LEARNED

Both ColdHubs' innovation and business model meet the Nigerian farmers' needs. After having developed the ColdHubs concept, Nnaemeka took into consideration that most farmers could not afford to buy the cold rooms. Thus, he decided to remain the owner of the cold rooms and opted for a pay-as-you-store model, asking the users for a using fee.

By extending the shelf life of perishable food from 2 days to 21, ColdHubs reduces post-harvest loss by 80%. The current 54 ColdHubs stations saved 42,042 tons of food from spoilage in 2020. Consequently, with more of their harvest to sell, smallholder farmers increased their monthly income from previous US\$60 per month to a minimum of US\$120 per month.

