

DIGILOGIC INSIGHTS #8: Transforming cold-chain storage and logistics

The DIGILOGIC Team talks to Dike Princewill Chinedu, head of supply chain operations at ColdHubs Limited in Nigeria, and Chinedu Hardy Nwadike, Information Technology System Manager at ColdHubs Limited.

Dike Princewill Chinedu and Chinedu Hardy Nwadike talk to DIGILOGIC about helping farmers increase revenue by transforming the life of their perishable foods.

The start-up solution

ColdHubs offers solar-powered cold-storage solutions to help farmers keep their perishable foods fresher for far longer: reducing post-harvest losses by up to 80 per cent. “Our major aim is to extend food life from its current two to three days to 21 days,” Princewill Dike explains.

ColdHubs achieves this by providing walk-in cooling facilities at a range of locations where local people gather including, for example, schools, marketplaces and agricultural clusters. Farmers can transfer their perishable food, usually fruit and vegetables, into crates that fit neatly into the chilled storage facility where they are kept overnight. ColdHubs offers support to farmers to help them understand the many benefits of food preservation and what is required to achieve it. Aside from nutritional benefits and cutting down on substantial wastage, ColdHubs’ better preservation techniques can increase revenue by up to 25 per cent because farmers and growers save much more of their perishable crops which can then be sold.

The crates are transported in special refrigerated trucks for onward journeys to other areas of Nigeria. ColdHubs already operates in more than 24 of Nigeria’s 36 states and by the end of 2023 aims to have hubs in up to 26 states. Over the coming year, the company plans to expand its operations into Kenya, Ghana, Cameroon and Gabon.

Dike is keen to emphasise that from the outset a key element of ColdHubs’ philosophy is to promote and empower women to manage all the operations and collect revenue at the different hubs.

The development challenges

The first challenge for ColdHubs, explains Dike, “was that people did not want to deviate from their old preservation methods. Introducing the technology and a modern way of preserving food was difficult at the start.”

Before ColdHubs commissions any new storage facility, local people are encouraged to see for themselves how well the technology works and how it can be managed on a continuing basis.

The first step, therefore, is always to introduce Post-Harvest Management (PHM) techniques to local farmers and growers to show them the value of using efficient cold storage facilities. “We bring along fresh fruit and vegetables and store some in the night-time dew, which is the traditional way of preserving food, and we store the rest inside a ColdHubs facility. We leave the food alone for two to three days and then we ask people which method has worked best. The results speak for themselves. People could see the fruit and vegetables inside the cooling unit were still as fresh as they should be.”

At the same time, Dike says, ColdHubs understood the rental cost of a storage unit also had to be affordable. “We have kept that at an acceptable level of 200 Nigerian naira (about 0.23 euros).” per night per crate. An extra advantage, adds Dike, was eliminating the use of raffia baskets which often rupture tomatoes and spoil other delicate crops.



“Farmers embraced the change,” explains Dike, “The education is a must because without it people might not have a clear picture of what you are talking about. With harvest management education, we can let them know exactly what we do at ColdHubs.”

As the supply chain officer responsible for ColdHubs’ refrigerated trucks, Dike is conscious of the many challenges involved with transportation logistics. These include, but are not limited to: poor road quality, the risk of theft, the siphoning-off of diesel fuel from a ColdHubs truck for resale and ensuring that drivers maintain high standards when they are behind the wheel of a ColdHubs truck.

Dike’s solution was to source an In-Vehicle Monitoring (IVM) system which, among other advantages, helps ColdHubs eliminate diesel theft because the amount of fuel in every truck is calibrated. “And because I can stream a live feed while a truck is in motion, this helps control drivers’ behaviour including reckless driving, speeding, alcohol misuse and any break-ins.”

Working with a leading fleet management company in India that supplies the IVM, Dike produces weekly and monthly reports that monitor diesel expenditure and driving patterns ensuring that ColdHubs can transport perishable goods more efficiently.

A further challenge, and perhaps one that is not often discussed, is extortion on the road, at times carried out by police officers. ColdHubs worked closely with government agencies to acquire what is, in effect, an official police clearance document. The document explains that the goods on ColdHubs trucks are perishable and time-sensitive to potential delays.

ColdHubs’ technology is constantly monitored and checked in the hubs and the trucks. The temperature and humidity sensors in the cooling facilities “help us serve our customers very well because they know their food and perishables are being stored properly.”

Looking to the future

Next year ColdHubs are launching their own production line to make the plastic reusable storage crates that are stacked both inside the walk-in facilities and the refrigerated trucks. In the past the crates have been bought from an outside supplier.

Dike does not see huge changes coming to the logistics industry over the next five to 10 years. Rather the future is more a question of: “Building on and improving the technologies that we already have and advancing these further.”

Dike hopes, however, that in the longer-term the major concern about poor road quality will be an issue of the past and that travel times for deliveries will be reduced from the current two to three days to 24 hours or less. “This will offer on-time delivery to our customers and develop a seamless service.”

The future, as Dike concludes, “is a continuous progression for us. We will keep improving within the food cold-chain environment, including improving our data. Over the next seven to ten years, we are looking at ColdHubs becoming the leading cold-chain company in Nigeria, and an industry leader in cold-chain logistics in Africa.”

<https://www.coldhubs.com/>

