

APPLICATIONS OF IoT IN DEVELOPMENT OF COLD CHAIN INDUSTRY IN NIGERIA

PRESENTED BY:
OGHENETEGA
IORTIM

NIGERIAN LOSS STATISTICS

220M
UNDERNOURISHED
(SUB SAHARA AFRICA)

55%

FRUITS & VEGETABLES

35%

FISH & SEAFOOD

22%

MEAT

20%

DIARY PRODUCTS

The Problem



POOR OPERATIONS VISIBILITY

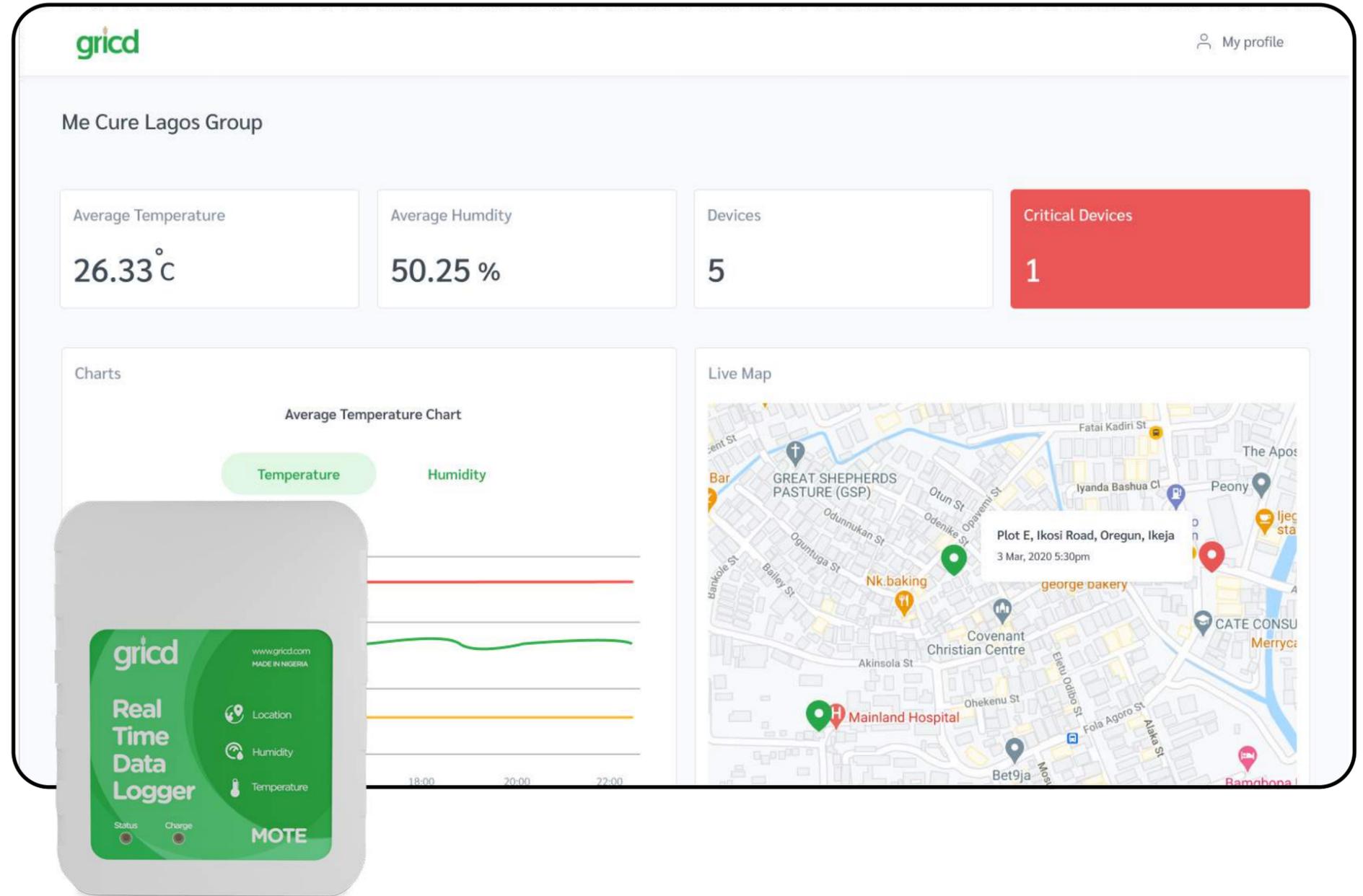


POOR INFRASTRUCTURE/ PROCESSES

IoT A Tool?

Internet of Things, machines connected to the internet to report relevant parameters.

- Temperature
- Humidity
- Location
- Luminosity
- Vibration
- Tilt
- Speed
- etc



Sensors that Improve Cold Chain Ops

Temperature



Temperature affects shelf life of perishables

Humidity



Excess Moisture can lead to losses

Location



Eliminate theft or personnel negligence with location tracking.

Light Intensity



This can be used to determine product exposure

Vibration



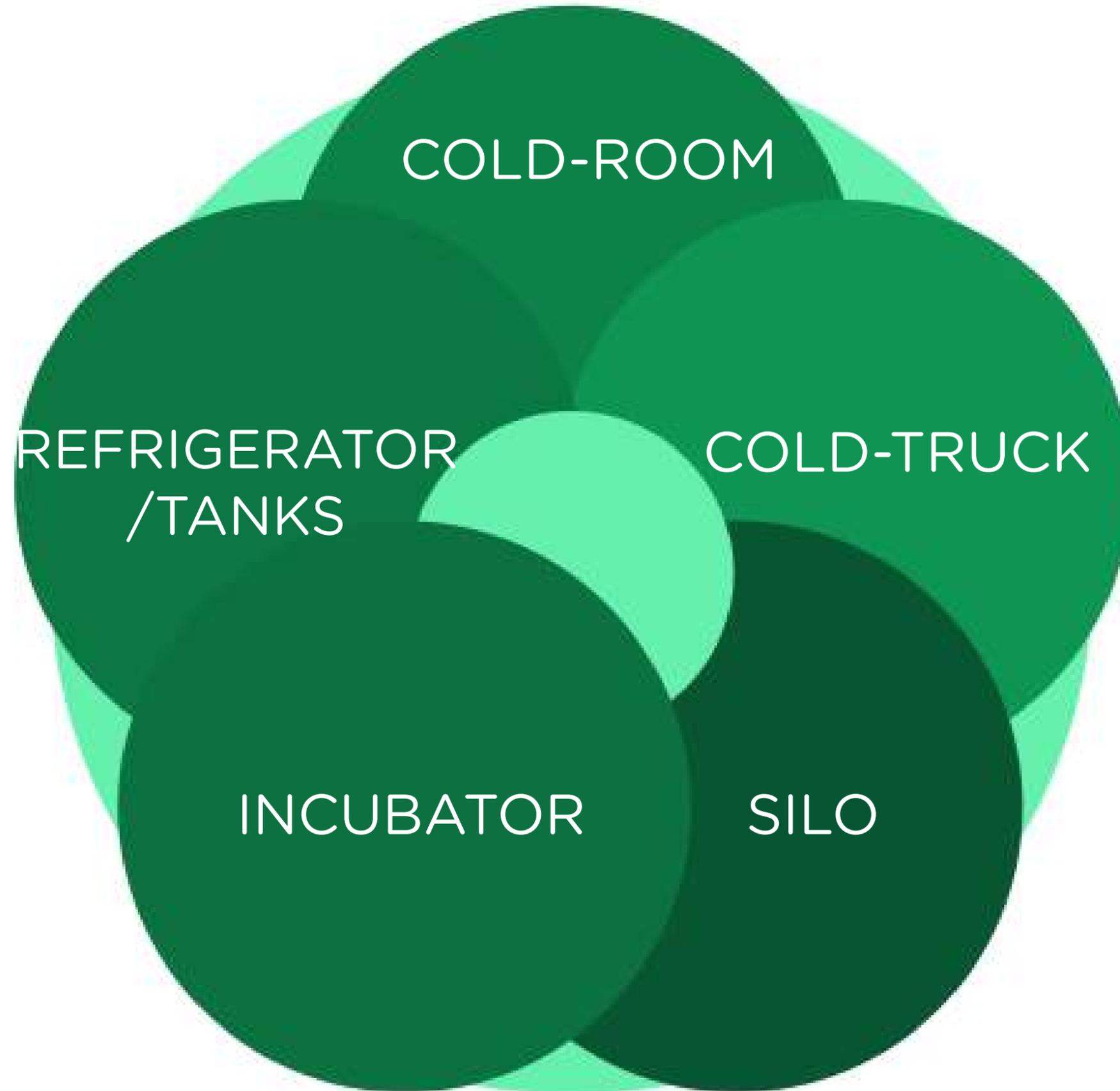
Excess vibration can lead to loss of vegetables and fruits through injury

Tilt



Tilt levels indicate how properly stacking may have been done.

Who?



Benefit



Improved Inventory
Tracking



Improved Asset
Tracking



Predictive Maintenance to
prevent downtime



Real-Time Tracking
of Cold-Chain



Improved Supply
Chain Transparency



Cost Savings
through Efficiency

CASE STUDY:

CAM DIARIES

CHALLENGE

CAM diaries collects fresh milk from the field, stores in the cold room facility before converting to other dairy products. However, due to the epileptic nature of power supply in Nigeria, the cold room is always at risk of breaking the cold chain.



Resolution

The Grid Mote was deployed to the cold rooms to monitor the temperature of the cold room in real time and also deployed on cold vans to monitor location and temperature information of milk in transit.

Result

CAM Quality Assurance Team was able to monitor the cold rooms in real time and receive excursion alarms once temperature, humidity or location thresholds were exceeded. Beyond this, the data proved significant in understanding efficiency of cold room as pertains to temperature retention and power consumption.



CASE STUDY:

DAYTONA SUPERMARKET

CHALLENGE

Daytona Supermarket in Lekki had a challenges of losses due to epileptic power supply and human errors. This challenges affected goods being stored in refrigerators in stores.



Resolution

The LoRa device was deployed to the cold rooms to monitor the temperature of the refrigerators in real time.

Result

The management at Daytona now monitors the storage conditions of products in the refrigerators remotely. In cases where there are excursions, they are able to respond immediatly as they are prompted through messages in real-time.





About Gricd

WHY WE EXIST?

Bridging the trust gap in cold-chain management for Africa.

WHAT WE DO

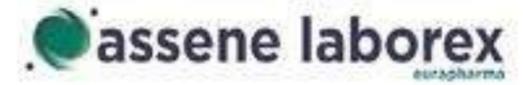
Build reliable technology for preserving cold-chain integrity in Africa.

HOW WE DO IT

Provide real-time transparency into the storage and transportation conditions of temperature sensitive products.

Notable Clients

Health



Agriculture



Logistics



**Thank
You!**

ADDRESS:

LAGOS,
NIGERIA

PHONE:

2347036677576

MAIL:

tega@gricd.com

URL

www.gricd.com