How AntTail is Ensuring Pharmaceutical Product Quality, Safety, and Integrity by Using IoT Technology and Mendix

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Seamless temperature monitoring in the Pharmaceutical supply chain

Powered by AntTail
Agenda.

1. Supply Chain Challenges
2. Sensor topology
3. Mendix Mobile App as Bluetooth Gateway Architecture
4. App screen shots
5. GDP monitoring architecture is the end result
6. Questions?
Supply Chain Challenges
“Quality is as good as “all the previous steps”
Long and vulnerable supply chain

Pharmaceuticals supply chains are typically long and fragmented—thus vulnerable to temperature variation and counterfeiting.

- Data is often incomplete and not timely available to the responsible person in case of an excursion.
- More than 60% of the reported excursions are false positives due to the current design of the temperature alarms; rigid, temperature zone based.

No audit trail exist. All parties of the chain only have local temperature records and local alarms, making it impossible to review and analyze data on an aggregated level.

Source: AntTail
Supply Chain Challenges

- Easy Access
- Less waste
- Reduce error
Network Topology
Server & Sensor work together seamless

- Sensors
- Gateway
- Smartphone Apps
- AntCloud
- Customer Portals
Sensor Topology: No Buttons, no human error
Zero tolerance for data loss

0%

Never lose a sample
Scaleable, secure and load-balanced

100+
Sensors connect to 1 smartphone

10+
Smartphones and Gateways cooperate

8640
Datapoints << 60 seconds per thread

5 + 1
Threads on 1 smartphone for data history requests
Mendix Mobile app as Bluetooth Gateway Server
Live Demo of the AntTail App
Mendix App is a also Bluetooth gateway
Screens for apps
The AntTail app operates as a gateway on a mobile device. The gateway inside this app receives the temperature measurements from the AntTail sensors and stores these measurements into the AntCloud.
GDP Mobile Monitoring
Monitoring medication temperature to safeguard quality for patients
Questions?