C768 – Task2 – FAQ

Justin A. Langley

Western Governor's University

04/13/2022

Blockchain, IoT, Brave New Agra, Inc., and You

Frequently Asked Questions (FAQ)

Why is Brave New Agra, Inc. implementing these technologies?

In simple terms, we are implementing them to enable end-to-end tracking of the products we create, from farm to table. In the industry, this is known as digital traceability.

What is digital traceability?

Digital traceability keeps accurate digital records of products moving through each supply chain step. It tells the bigger story of how products are sourced, made, packaged, and delivered. Additionally, it will empower our customers with the ability to view a history of data on an individual product themselves.

How is Brave New Agra, Inc. enabling digital product tracing?

We have chosen to use blockchain technology for record-keeping and IoT devices to report data about products moving through our supply chain.

Is blockchain the same as Bitcoin?

No, blockchain is a digital ledger, often publicly viewable. It tends to be implemented as a decentralized network of peers. When data is entered into a “block” on the blockchain, it is verified, stamped with a cryptographic hash, and duplicated across the network to make it “immutable.” Afterward, any changes are detectable by other participants and revoked. The same technology enables cryptocurrencies like Bitcoin to flourish.

Is blockchain secure?

Yes, if sound mathematical principles govern it. While no information system can be considered genuinely secure, blockchain is a step in the right direction. Cryptographic protocols enhance the blockchain by making it possible to detect when cheating, hacking, or tampering occurs and revoke any alterations made. In addition, by making it public, anyone can participate in securing the network.

What is IoT sensor data?

IoT sensor data is data collected by any network-enabled device. Networks can include local area (LAN), wide-area (WAN), wide-sensor (WSN), long-range (LoRa), and, ultimately, the global internet. Sensors include anything that takes measurements, including temperature, location, or light intensity, to name a few. If a device has sensors and a connection, it can report sensor data.

How will collected sensor data be used?

The use cases for collecting sensor data are numerous. Sensor data will provide a real-time look at trends in our supply chain. It can also train machine learning algorithms to predict future trends when given enough data. Identifying trends in our supply chain is vital to meeting product demands.

What trends can sensor data identify?

We don’t fully understand every trend that can be identified, but we’ve gathered a list of the most important. These include identifying shortages, detecting non-conforming products, and climate impacts. Identifying these trends is essential to reducing food waste, preventing recalls, disaster preparation, and meeting consumer demand.