Safety and Traceability in the Food Chain. Powered by Blockchain.

A POV from Dan Albright, Managing Partner & Supply Chain Practice Lead, Infosys Consulting

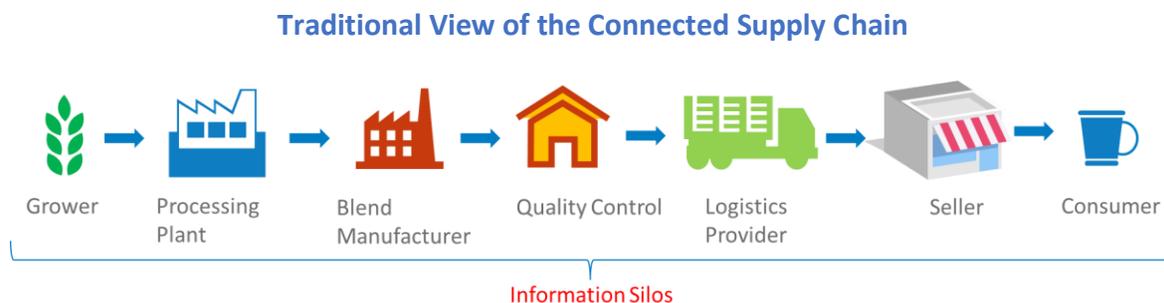### How blockchain can help retailers improve the efficiency & efficacy in food safety programs.

Food and grocery chains across the United States have recently been receiving more attention than usual. In addition to the already significant levels of government regulations to ensure safety, there have been some notable new programs that impact both companies and consumers - the most notable being the Food Safety & Modernization Act (FSMA). Among other things, FSMA regulations shift the liability to retailers instead of the suppliers for food and related imports from overseas producers.

Unfortunately, current processes and technologies do an inadequate job of tracing the source of origin across the food supply chain ecosystem from farm to fork.

Enter Blockchain.

The emergence of this burgeoning new technology is showing promise to solve the changing environment of food safety and traceability – a highly complex and often deeply debated topic that extends from family dining tables to the top levels of federal government.

Food chains have historically been challenged when it comes to traceability and visibility. While retailers may know which suppliers are producing a specific food product, they may not be able to trace it to secondary and tertiary suppliers that extend all the way back to the farm. In addition, the hand-off of data and knowledge across this ecosystem inherently causes complexity and latency.

Traditional View of the Connected Supply Chain

Grower → Processing Plant → Blend Manufacturer → Quality Control → Logistics Provider → Seller → Consumer

Information Silos

As noted by Shachin Prabhat, an expert within Infosys Consulting, "the situation is further complicated by a significant presence of brokers, acting on behalf of other small-scale suppliers." This creates a dynamic challenge for retailers to understand the full origin of products, resulting in significant time loss and manpower dedicated to resolving problems in major outbreaks and product recall situations.

Blockchain can help retailers improve the efficiency and efficacy of their food safety programs. While blockchain has become popular lately, thanks to the rise of crypto currencies like BitCoin, it is fundamentally a general purpose technology bringing new visibility and opportunities across many business segments.

The Connected Food Chain

Processor

Manufacturer

Regulator

Grower

Blockchain Network

Consumer

Shipper

Retailer
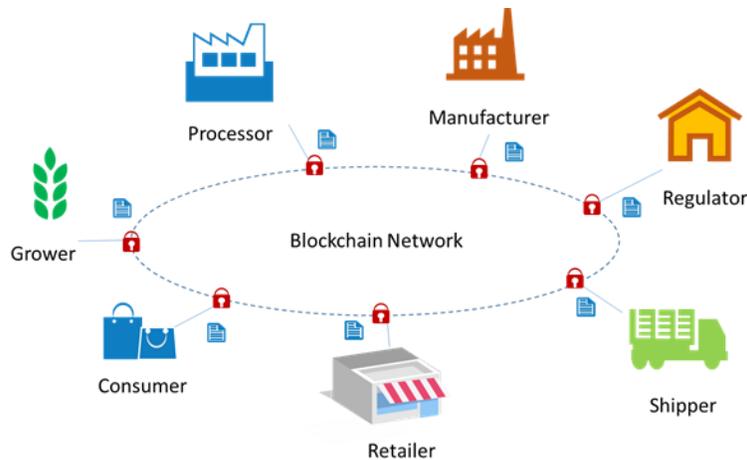
Enhancing Traceability

In blockchain there is the concept of a distributed ledger – and it is highly useful to solve the food traceability conundrum, since it allows…

- All involved parties to update the ledger as a product moves from one node to another in the value chain, making information immediately available.
- All involved parties in the food chain to have visibility into the same version of the truth, reducing conflicts and confusion.

These two aspects reduce the latency in food traceability from days to minutes, as proven in recent pilots by several leading retailers, including Walmart.

An Opportunity Ripe with Benefits

The pairing of blockchain with other advanced capabilities can deliver significant benefits. When a potential outbreak occurs, speed is of utmost importance to synthesize information and minimize damage. This speed, along with accuracy of information, could mean potentially millions in savings and minimized reputational cost.

Food is rapidly becoming viewed in the same light as pharmaceutical products by the U.S. government. The amount of regulation and scrutiny will only increase as the food supply chain becomes a more complex ecosystem – coupled with an uncertain geo-political landscape.

Blockchain technology can play a major role in creating better transparency and traceability for all parties involved – and it can help retailers have the protection and safety they need to run a highly-successful, risk-minimized operation.

About the Experts

Dan Albright, Managing Partner & Supply Chain Management Practice Head, U.S.
Dan has nearly 25 years of management consulting experience in retail, CPG and distribution industries. He currently manages the supply chain group in the U.S., overseeing some of our top client accounts such as XPO Logistics, TKE, Sprint, and Microsoft. He is also a member of our U.S. leadership team, reporting into our unit head. Dan has worked across all components of business and technical transformations. Prior to joining Infosys Consulting, he led the consumer packaged goods, retail, and distribution service practice at Capgemini Consulting.

This piece was co-authored by Shachin Prabhat, a senior principal at Infosys Consulting.