State of Food Traceability

REFLECTION AND PERSPECTIVES FROM INDUSTRY EXPERTS

FoodLogiQ®

Contents

Introduction

Traceability. It's been discussed and debated in the food industry for years. Conference sessions devoted to the driving forces, the benefits as well as the barriers. As we reflect back on the last ten years, we have made significant growth in food traceability. There have been huge advancements in technology and traceability standards as well as regulations driven by the Food Safety Modernization Act.

Food companies now have access to an enormous amount of information and critical supply chain data at their fingertips. With a few taps of a screen, consumers can learn nearly anything they would ever want to know about a food company, from nutritionals to understanding if the company has had a major recall. Because of this instant access to information, consumers are demanding transparency and patronizing food companies that provide it.

In this e-book, featuring quotes and perspectives from industry thought leaders, we will explore how far we have come, what is driving adoption, and the future vision for food traceability.

"Traceability is fast becoming a ticket-for-entry into the global food system and companies will be evaluated on their ability to recall unsafe products in a crisis. A standards-based technology platform is a critical enabler for traceability and recall. More importantly, the technology facilitates the flow of information to consumers and reduces information asymmetry - this is where transparency of product information enhances consumer trust."

John Keogh
President & Principal Advisor.
Shantalla Inc.

Changing Regulatory Landscape

Enhanced traceability has been driven forward in light of the changing regulatory landscape with the introduction of the Food Safety Modernization Act, the most sweeping reform of food safety laws in more than 70 years. The FDA now has a legislative mandate to require comprehensive, prevention-based controls across the food supply chain.

The regulation has completely transformed the FDA's approach to food safety from a system that reacts to outbreaks to one that prevents them. FSMA impacts all levels of the supply chain, pushing foodservice operators, retailers, suppliers, distributors and growers to bolster their safety and traceability practices.

Growth in Standards Adoption

The advancement in standards for food traceability have been significant. This year marks the ten year anniversary of the Foodservice GS1 US Standards Initiative. GS1 Standards are the most widely used supply chain standards in the world, with over 1 million companies leveraging GS1 standards to remain relevant and competitive.

It's also the ten year anniversary of the Produce Traceability Initiative (PTI). Representatives from over 40 companies - from growers, packer/shippers, marketers, distributors and wholesalers, foodservice, retailers, various trade associations - as well as FoodLogiQ - came together to work on the Produce Traceability Initiative to ensure the industry adopted a plan that worked across the entire supply chain. Based on using data standards and electronic storage and retrieval of traceability related data, the result was a traceability solution that large and small produce companies alike could adopt and is now a critical component of many's food safety plan.

Food Safety Makes Headlines

It has been 25 years since the E. coli outbreak at Jack in the Box. It was a monumental turning point in food safety that initially sparked the industry to modernize and examine processes. There was also the massive outbreak of Salmonella Typhimurium in 2009, in the Peanut Corporation of America's products causing 9 deaths and 714 people in 47 states to get sick. The outbreak was one of the deadliest in U.S. history and resulted in recalls of 3,913 different products made by 361 companies. This had a ripple effect because it was not only a single product but also an ingredient in many others. Since then many companies have made food safety a priority to protect consumers as well as their brands, limiting the financial and reputational damage that a recall can inflict on a company.

Recalls might seem like they're on the rise but it's partially because we have more visibility into them. Now, we're getting information quicker and responding faster. We, along with consumers, are also more aware and plugged into the news due to social media and 24 hour news channels. The industry is more proactive and more accountable, submitting itself to voluntary recalls. Without a doubt, the food industry is under increased pressure.

What's Driving the Adoption of Food Traceability

Food traceability initiatives are being driven forward by increased regulation, consumer demand for transparency, and corporate social responsibility efforts. In addition businesses are realizing the benefits from having visibility into their supply chains, and the risks associated with recalls.

The good news for our industry is that consumers are patronizing companies that are embracing transparency as a strategic business strategy and these are the companies who are winning market share as a result. They are seeking out companies that are open and transparent about their practices, whether they are sourcing foods from local, organic farms or have dropped GMOs or are avoiding preservatives and chemicals. They are gravitating to companies who are including this information in their marketing through labeling, advertising, blogging and through the media.

"Traceability seems to be a confluence of a few factors. The marketplace's expectations have risen in response to recalls and outbreaks, while recent regulatory updates are also raising the bar."

Willette M. Crawford
Principal & Owner.
Katalyst Consulting LLC.

> *"Consumers want to know where food is from, for purchasing decisions, and the food industry wants to know where food went to enable more effective withdrawal of products due to defects (biological, chemical (e.g., allergens), and physical)) discovered post production in food manufacturing AND to prove to the consumer the food source"*

Hal King
Ph.D., President.
Public Health Innovations LLC.

Food companies are facing unprecedented pressure to provide supply chain transparency not only to comply with FSMA and other regulations but to earn customer trust and loyalty.

Transparency is no longer an added bonus when buying food — there is a massive movement around farm-to-table, non-GMO, and sustainably grown food, and this trend has now been reflected on a federal level by way of the GMO Labeling Bill.

The ability to track food from the farm to the table allows all industry entities to closely monitor movement of product. If food is exposed to contaminants at any point, it's easier for organizations to mitigate the risks and keep food out the hands of the public.

> *"While traceability has always been important to the food industry, there is even greater emphasis as consumers now expect complete transparency from field to fork and cow to carton. Consumers want this information so that they can verify how the animals were treated, the location the food is produced, and a myriad of other personal factors. While not all food companies are able to currently provide this level of traceability, those that can have the advantage with those consumers. This can also lead to challenges within companies as to how to manage the potential questions and what information will be allowed to be released to consumers. For companies considering implementing such traceability programs, it will be important to consider what information will be disseminated and how it will be disseminated prior to advertising this level of traceability."*

Elise Forward
Forward Food Solutions.

Key Elements to a Successful Track + Trace Effort

While this report is not meant to serve as a how-to guide for traceability, several elements were raised as key to a successful track and trace effort. Key elements for a successful track and trace effort include:

- Common supply chain data built around GS1 standards

- Effective data governance policies and practices

- A solid implementation plan that brings together all of your supply chain partners

- Standardized processes and core information sharing between trading partners

- Clear definitions and common terminology along with accurate and complete documentation

- Visibility with a mechanism that enables you to see all the elements in proper context and up-to-date

- Standardized labels and Product IDs

- Food safety status of product

- Location of product with the ability to remove it from service within one hour

With enhanced traceability technology, ingredients can be traced back to their point of origin in moments. This feature is especially important if there is a situation in which quality is compromised. Advanced tools make it possible to initiate an investigation, notify suppliers, and locate related product immediately - which means better response times and reduced risk.

> "While the industry thinks about tracking individual shipments, units etc. in a linear fashion, or as linear as the supply chain can be, regulators are looking for something entirely different. Tracing a single item isn't important-- it's the ability to compare numerous supply chain paths to determine convergence. The accuracy of each linear path is a prerequisite (appropriate capture of Key Data Elements at each Critical Tracking Event) but that is not the end goal of public health."

Jennifer McEntire
Vice President of Food Safety & Technology.
United Fresh Produce Association

The Future of Traceability

The food safety industry has embraced the "one-up and one-back" (OUOB) system to manage its traceability, allowing it to know where products came from and where they're being sent or sold.
However, this process lacks visibility in that users can only be sure of the last place their product was, and where it goes next in the multifaceted food supply chain.

While OUOB has been the go-to traceability method for many food companies, whole-chain, end-to-end traceability offers ideal safety and transparency—in line with the direction the food industry is fast-tracking towards. The value of seeing the entire past and future of each product is that companies can easily verify the safety practices of their suppliers, the origin and authenticity of the ingredients, as well as be aware of potential allergens.

"In the future there will be a comprehensive link of every ingredient to each product and it's food safety status (e.g., temperature during transportation, shelf-life, warehouse location) in real-time throughout the supply chain including where product is currently at (and data analytics to alert when any of this is out of compliance)"

Hal King
Ph.D., President.
Public Health Innovations LLC.

In order to retain conscious consumers, brands must maintain a greater level of transparency, achievable by a whole-chain traceability solution. By investing in comprehensive track and trace technology, brands can utilize the information collected to empower and educate their consumers with the data behind their food. This also allows brands to have increased visibility into their suppliers and growers, enabling them to be confident in the integrity and authenticity of their products—even more valuable as food fraud is becoming a rampant issue.

The food industry is experiencing a renaissance, with safety and transparency the cornerstones of this new direction. As consumers continue to express concern with what is in their food, and federal regulations begin to reflect this sentiment, it is increasingly important for food growers, suppliers, and retailers to deliver the highest quality products with the most clarity possible. End-to-end supply chain traceability can help the industry to meet these stringent requirements, maintain brand integrity, mitigate future quality issues, and empower conscious consumers.

Without a universal, whole-chain traceability software platform, tracking down the necessary information in a timely manner can be a daunting task resulting in delays that could put consumers' lives at risk, as well as put the brand's reputation and credibility in jeopardy.

There is still a lot of work to do but the future of food traceability looks promising. Food companies are embracing global standards to increase efficiencies and build a foundation for traceability and supply chain visibility. Now adding Blockchain, SmartLabel, and IoT data to the technology mix will continue to advance the modernization of the food industry. The future of food traceability promises an increase in information at every step of the supply chain, allowing food businesses to identify potential hazards and mitigate risk of compromised product. As companies and consumers gain more visibility into the source of their food, greater accountability will be a natural result. That means safer food for everyone.

"In ten years traceability initiatives will be near 100 % compliance of industry standard traceability practices for all companies fueled by Blockchain for traceability and transparency implementations by major retailers and foodservice operators."

Ed Treacy
Vice President.
Supply Chain Efficiencies, Produce Marketing Association

Growth in Traceability Among FoodLogiQ Customers

8,800,000+
Traceability Events Captured

8,500+
Suppliers Onboarded

~40
Major Brand Owner Customers

103,000+
Quality Incidents Captured

"The future is bright for food traceability. As industry adoption continues to grow, so will the significant benefits realized across the industry. The growth in traceability is paramount to FoodLogiQ achieving its mission of mapping the world's food chain, making it as safe as possible and empowering people with the information they crave about the food they eat."

Dean Wiltse
CEO, FoodLogiQ.

What About Blockchain?

What is Blockchain?

Simply put, blockchain is a distributed ledger where all transactions are recorded chronologically and publicly. Blockchain data is public to ensure security through transparency, providing a ledger that all parties can rely on. This level of transparency is one of the main advantages of blockchain, considering the data can't be altered, faked, or cheated.

There's certainly no shortage of news coverage taking place around blockchain, especially when it comes to food traceability. This coverage can over hype blockchain and position it as a "light-switch" solution, often without a deep discussion on the amount of effort that goes into traceability as well as the importance of data quality. We all know Rome wasn't built in a day and neither is an enhanced traceability program.

The Light-Switch Misconception

It's always nice to think a new tool or the latest technology can take a complex process and simplify it with the click of a mouse. As nice as this may be, the fact is, traceability requires having all parties aligned with best practices and requirements for data standards and entry, just to name a few. Blockchain would be a conduit to enable the collaboration, but not the standard or the technical toolset to execute it.

The output or result - in this case, end-to-end traceability - is only as reliable as the input data. Alignment and standardized processes are crucial requirements for internal teams and all supply chain partners when looking to adopt blockchain.

Getting Blockchain Ready

Many are asking, "What should my organization do to get blockchain ready?" In short, a modernized supply chain with standardized data built on GS1 standards is imperative in preparation for becoming blockchain ready.

At FoodLogiQ, we assist organizations in their quest to modernize their supply chain in preparation for blockchain and vow to integrate our end-to-end traceability solutions with the blockchain of their choice. *(FoodLogiQ is continuing to develop blockchain resources for you, so be sure to keep an eye out for new material on the subject. We're always available to talk with you about how you can get blockchain ready today.)*

Ready to begin working toward greater efficiency, transparency and increased ROI? Contact us for a free demo to discover how FoodLogiQ is transforming the future of supply chain traceability.

foodlogiq.com/demo