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### Experts say artificial intelligence is the future but have yet to convince those who want to stay compliant

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By Sascha Matuszak

The food industry is increasingly looking to technological solutions for logistical problems. From artificial intelligence (AI) to self-driving delivery cars to blockchain solutions for supply chains, major grocers are competing with each other to provide the highest quality and safest food possible in the most efficient way.

The most recent headline concerned Albertsons Companies LLC, one of the largest food and drug retailers in the United States, joining the blockchain-based IBM Food Trust network. The network gained media attention after the first major retailer, Walmart, Inc., signed on, mandating that direct suppliers of several different food items join its blockchain by Jan. 31, 2019, and that farmers, logistics firms and business partners of these suppliers join by Sept. 30, 2019.

Walmart joined the network following two widespread outbreaks of E. coli contamination in romaine lettuce. The food industry initiated two costly recalls, but not before dozens of people grew sick. The contamination led to several industry-wide initiatives, including the Leafy Greens Food Safety Task Force and a statement from the U.S. Food and Drug Administration's commissioner, Scott Gottlieb, calling for "widespread ... adoption of existing and emerging technologies" and a thorough review of the Food Safety Modernization Act's Produce Rule and Preventive Controls for Human Food Rule.

The IBM Food Trust network, a "collaborative network of growers, processors, wholesalers, distributors, manufacturers, retailers and others enhancing visibility and accountability in each step of the food supply," has more than 80 participating brands, including Dole Food Company, Inc., Tyson Foods, Inc., Carrefour S.A., Smithfield Foods, Inc., Topco Associates LLC and others. The more brands that join the network, the more powerful the blockchain solution becomes. The technology relies upon members sharing information with each other across a shared ledger that removes duplication, dispenses with a large amount of paperwork, and allows for transparency and the capability to trace back in the event of a recall or contamination.

Walmart's former vice president for food safety, Frank Yiannas, joined the Food and Drug Administration in December 2018 as deputy commissioner for food policy and response. His mission is to advise Commissioner Gottlieb on the "development and execution of food safety policies, including [the Food Safety Modernization Act], as well as outbreak response, traceback investigations, product recall activities, and supply chain innovations."

In terms of innovations, Yiannas has been a strong proponent of blockchain and AI technologies to achieve supply chain transparency, which he sees as one of the main drivers of food safety and compliance with domestic and international standards and regulations.

### **Faster and leaner**

Besides food safety, one of the most active sectors of the food industry is logistics; that is, getting food from the farm to the fork as efficiently as possible. There are a host of technologies and pilot projects underway, the

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majority of which deal with inventory and delivery optimization through the use of AI. Retail giants like Amazon.com, Inc., China-based JD.com, Inc., Walmart and others are leveraging AI to streamline supply chains to where humans will be minor players, and in some cases, may be completely removed from the procurement process. Current developments include massive fulfillment centers delivering items using robots and drones; self-driving pods that can load and unload containers; self-driving trucks and cars; and sophisticated machine learning algorithms that optimize everything from loading trucks to locating certain items in a warehouse.

Technologies that seemed far-fetched are being rolled out right now in major metropolitan areas: Kroger, the United States' largest grocer, launched a self-driving grocery delivery service in cooperation with California-based start-up Nuro in April, and another grocery store chain, Food Lion LLC, is using AI to overhaul how it processes its inventory. An interesting quote from this story on Kroger's new service regarding safety highlights the compliance issues companies may face as they race to implement new technologies: "Quincy Allen, district engineer for the Texas Department of Transportation, said governmental agencies will closely watch Kroger's autonomous delivery program as it expands. 'Safety remains our top priority, and we expect Kroger and Nuro to meet our safety standards,' Allen said."

The food industry is driving innovation and disruption in logistics, even as the logistics industry as a whole is still tepid about adopting blockchain solutions. In a paper prepared by the Boston Consulting Group, the authors found that, although most logistics providers believe that blockchain, AI and other emerging technologies will have great impacts going forward, few industries had actually implemented the technology or rigorously pursued it. Some of the issues this paper cited were a reliance on people and paper, and a reluctance to share information with potential rivals.

## Can technology replace people?

These issues are also raised in an article about the burden of regulatory compliance, and how technology can only address part of the problem. Especially in the food industry, retailers often have hundreds if not thousands of suppliers. Introducing new technology is, in and of itself, difficult; the systems and platforms are emerging, untested and require specialized training.

Large pilot projects like IBM Food Trust can attract massive retailers and establish the platform necessary to share information, but that information still has to come from suppliers; i.e., actual people. In the article linked above, Randy Fields, chairman and CEO of ReposiTrak parent company Park City Group, sees the limitations of technological solutions in the need for input from people before the solutions can actually function. This bottleneck is reflected in Walmart's demand that suppliers join its blockchain network by certain dates. By "join," Walmart means "provide all of the necessary information, certifications, Food Safety Modernization Act-related documentation, inspection data, etc." — and that takes time.

Fields told PYMNTS.com, "When you tell people that their customers need them to provide documentation so they can continue to do business, and you email them to say that if they don't provide documentation then they'll lose a customer, and you need up [to] a 16.8 percent participation rate — do you [think] the problem is technology, or is it people? It's people."

## Takeaways

- The food industry is embracing emerging technology, such as AI and blockchain, to address food safety and logistics concerns.
- Although the biggest players in the industry are moving fast to adopt these technologies, there is still the need for a mix of people and technology in order to make the technology most effective.

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