Hungry for information: How blockchain can build trust in food supply chains

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We live in an age of belief-driven buyers. Increasingly, consumers worldwide are making purchase decisions based on the impact they have on the world and on their health, and are seeking help in making sustainable choices, according to [Nielsen's 2018 report, "The Evolution of the Sustainability Mindset."]

And yet that belief is tested every day — from reports of misleading or outright fraudulent labeling to headlines about difficult-to-track foodborne illnesses. Are these carrots really organic? Where did this romaine come from? Is that calamari or is it … trust me, you don't want to Google that.

A lack of end-to-end visibility along an ever-expanding, yet fragmented, supply chain presents opportunities that are ripe for fakes, and inefficiencies can abound. Disruptions to the food supply chain during the spread of COVID-19 underlines the need for accurate, up-to-date data to keep retailers and their consumers better informed.

The call for transparency

Consumers today expect companies to act with transparency, commit to sustainable practices and, of course, deliver what has been promised. According to the Nielsen survey, more than eight in 10 global respondents feel strongly that companies should help improve the environment, and nearly half say they're inclined to pay higher-than-average prices for products with high quality and safety standards, commonly associated with strong sustainability practices.

Demonstrating such a commitment — showing, not telling — is not just a critical strategy, it's essential for survival. And it's crucial, as we've seen in the food supply chain, for public health and delivering essential goods in times of crisis. But the complexity of the supply chain makes it impossible for one company to do it on its own.

That's why the private sector, and more recently, government regulators, are turning to blockchain, the distributed ledger technology that enables transparency while ensuring privacy for all parties. This increases trust and security through the supply chain and gives peace of mind to consumers.

The transparent flow of information enabled by blockchain is the foundation upon which other validation points can be integrated. Using internet-connected devices, for example, a distributor can track the temperature of a shipping container to determine whether the food inside might be contaminated, or whether a case of fine wine has been jostled too much in transit, which can impact the look, taste and value.

Applying blockchain to the supply chain

At Mastercard, we're collaborating across industries to use our private blockchain technology to provide end-to-end visibility into the product journey with our Mastercard Provenance Solution, enabling the digital identity of things. Our new partnership with Australia-based Fresh Supply Co. helps them digitize avocado exports to Malaysia, Singapore and Thailand with plans to expand to other products, such as beef, honey and abalone, giving consumers more confidence that the products they buy are safe and genuine.

The Fresh Supply and Mastercard partnership enables insights, not previously available to consumers, into digitally-assisted retail. By scanning a QR code with their phone, shoppers can find out where the avocados were picked, the farmers who harvested them, when they were shipped, and even tips on how to prepare them (crispy avocado tacos, anyone?).

Provenance is the starting point for this and so much more. It's a mechanism to digitize and transform supply chains regardless of industry — agriculture, luxury goods, logistics, cosmetics and pharmaceuticals — and show authenticity to consumers as well as convey sustainability information. It places a lens on production and distribution networks to deliver traceability and efficiencies into supply chains that impact sustainability measures and the global environment.

In increasingly complex and globally-fragmented supply chains, empowering consumers to make informed purchasing decisions enabled by deeper visibility into the identity of things is a powerful way to "think globally, act locally." This transparency can help to highlight those that are committed to ethical and sustainable practices. It's the first step in ensuring that what we're buying is all that it should be.

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