



Supply Chain Management Organic Coffee



TOKS

Toks is a Mexico-based, fast-casual restaurant chain owned by Grupo Gigante. In 1971, Toks opened its first location in Mexico City near the Basilica of Our Lady of Guadalupe. Today, the restaurant chain has over 200 locations across Mexico, with plans for further expansion.



Challenge

As consumers migrate to more sustainable brands, some companies have started to “greenwash” their product offerings. For example, poor quality beans may be blended into organic beans and sold as high-quality organic coffee – this can occur at varying stages of the supply chain journey. Recognizing this problem, Toks wanted to implement a transparent supply chain system capable of verifying the authenticity of its coffee beans from “farm to Toks.”

Solution

SIMBA Chain and the University of Notre Dame worked closely with Toks to develop and implement a blockchain-based supply chain solution. The new system transparently tracks the distribution and quality of coffee beans as they travel from farm to consumer.

Results

The blockchain-based solution allows Toks to track coffee beans based on several criteria, including quality, acidity, and sizing. The system also segments coffee beans based on their growing condition accreditations, whether rainforest, organic or both. This degree of transparency validates product segmentation and eliminates the possibility of greenwashing or mixing beans of different qualities. Together, these benefits have allowed Toks to reduce the number of intermediaries in their supply chain, **increasing the average farmer's income by 700%.**





Background

Although many coffee providers are looking to deliver better quality beans and showcase their sustainability measures, few have adopted the necessary practices. According to a recent report, only one-third of companies have tangible plans for sustainability, and less than 1% (0.6%) integrate blockchain technology. Recognizing these shortcomings, Toks set out to implement a tangible, measurable, and transparent solution.

Toks works directly with cooperatives of small Mexico-based coffee farmers, reflecting its commitment to sustainable practices. As a rapidly growing restaurant chain, Toks was also looking to implement a supply chain solution capable of bringing transparency and quality assurance to these close-knit relationships—and to deliver the best cup of coffee to their customers.

However, the complexity of coffee beans supply chains necessitated a robust system capable of tracing how coffee beans are grown, harvested, graded, deshelled, roasted, and shipped to each restaurant. In search of innovative solutions, Toks turned to SIMBA Chain and the University of Notre Dame to pilot a supply chain platform built using blockchain-based smart contracts.

BEFORE SIMBA



AFTER SIMBA



Senior VP of sustainability and social responsibility for Toks Restaurant Group, Gustavo Pérez Berlanga, worked closely with SIMBA Chain during the implementation process. “It is important that we authenticate, track, and trace every bag by farmer, coffee grade, and production dates. SIMBA Chain’s smart contract solution will help Toks maintain the high quality our customers expect and enjoy,” said Pérez Berlanga when speaking on the need for supply chain transparency.

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To deliver this functionality, the SIMBA Chain solution integrated a unique binding mechanism that links bags of coffee from farming communities and their digital representation on the blockchain. Specifically, a QR code is generated and registered on-chain for each bag of coffee, including physical measurements like humidity and weight. As the coffee moves through the supply chain, these physical attributes change. For example, when coffee beans are deshelled, their weight is reduced by around 20%, often resulting in humidity changes.

This QR code-based system ensures that each bag of coffee is part of an unhackable, immutable ledger, further validating the grade of every bean. As a result, Toks can deliver the highest quality coffee to its over 200 restaurants across Mexico. This optimized supply chain now supports a new, innovative business model that ensures more ethical and sustainable production for farming communities and countless stakeholders.

Speaking on the success of Toks' implementation, Bryan Ritchie, SIMBA Chain CEO, echoed the importance of on-chain data validation. "Transparency will be critical as educated consumers migrate to more sustainable brands. These organizations will need a simple way to verify credentials like Certified Organic, Ocean Wise, and Fair Trade, among countless others. As an immutable, transparent ledger that tracks provenance, blockchain is an easy way to validate these designations and eliminate greenwashing."

Through collaboration with SIMBA Chain and the University of Notre Dame, Toks has given coffee growers and suppliers access to a completely trackable, auditable "farm to Toks" supply chain. This solution has simplified an inherently complex network of intermediaries, including growers, traders, roasters, curers, and other processors.



About SIMBA

Incubated at the University of Notre Dame in 2017, SIMBA Chain (short for Simple Blockchain Applications) provides a scalable enterprise platform that simplifies blockchain development. With fewer barriers to entry, companies can build secure, scalable, enterprise-grade solutions that integrate seamlessly with existing data systems. SIMBA implementations generate value for major government organizations, enterprises, and blockchain companies as a production-grade platform that enables public, private, or hybrid deployments.