SOLVING SUPPLY CHAIN Management Challenges WITH BLOCKCHAIN

Global Supply Chain Management comes with inherent challenges. Recent events have only exacerbated these pressures, placing severe strain on supply chains from procurement to consumer delivery. As a result, many companies are looking for new ways to optimize their supply chains, generating valuable insights and lowering costs. According to KPMG, **67% of CEOs plan to increase spending on disruption detection and innovation processes.**

Blockchain is one technology that can play a part in this movement, allowing companies to reimagine their supply chain processes. Specifically, the transparent, immutable nature of blockchain provides a single source of truth, validating the location and characteristics of inputs. This real-time feedback can generate immense value, helping to streamline asset management and process automation.

Organizations like **Boeing**, **CAT**, and the **U.S. Air Force** already rely on blockchain's transparency, immutability and security.

U.S. AIR FORCE

SIMBA Blocks helped the USAF reduce man hours required to track non-conformance by 99%.

Supply Chain Challenges

COMPLICATED: Countless stakeholders use asynchronous technologies to process orders that can be split, combined and redistributed. Just-in-Time deliveries add to the complexity.

TRUSTLESS: With no trust amongst stakeholders, and unaligned data streams, there is no single source of truth. It's impossible to see across the entire supply chain.

EXPENSIVE: Transportation rates are high, and every intermediary adds to the cost. Without clear visibility across the supply chain, it's hard to streamline flows effectively.

Ultimately, most complications arise due to the lack of visibility from procurement to consumer. Although each intermediary can make efforts to improve their stream, most initiatives will have limited impact without insight into the entire journey.

Blockchain Benefits

TRANSPARENT: Blockchain is inherently transparent; every stakeholder sees the same data, at the same time.

IMMUTABLE: Data cannot be changed or manipulated without leaving a trace of those edits. You can always rely on the data you see.

REAL-TIME: Every stakeholder has access to real-time data — leaving no person or mission critical information behind.

Blockchain technology's transparent, immutable nature makes it possible to trace items to a specific location in real-time. In addition to this core functionality, blockchain-based smart contracts can further streamline workflows by automating on-chain logic or rules (i.e., if this, then that). By eliminating the intermediaries that typically handle such processes, blockchain effectively reduces human error, lowers costs, and saves time.

SIMBA Chain is Trusted By:

BOEING · NAVY · TOKS · U.S. ARMY · SPACE FORCE

SIMBA BLOCKS

In most cases, building blockchain applications takes months of planning, building, and testing before production can start. Fortunately, SIMBA Blocks was designed with Supply Chain Management in mind, simplifying the development process. Specifically, SIMBA Blocks delivers an intuitive web interface for administration and monitoring, plus powerful tools that help integrate blockchain technology with your existing data systems.

On the front end, SIMBA Blocks auto-generates REST APIs that connect to smart contracts. Behind these scenes, these APIs can communicate with different blockchain protocols. When developers call these REST APIs, SIMBA Blocks seamlessly converts them to blockchain transactions. SIMBA Blocks also monitors blockchain updates, allowing users to configure applications in response to change.

SIMBA Block's Key Benefits

Dynamic APIs

SIMBA Blocks leverages Swagger UI to auto-generate virtual REST APIs that connect to smart contracts on multiple protocols. That means developers don't need to compile implementation logic like API calls, error codes, expected responses, or intended payloads. Instead, Blocks fills out this information automatically, enabling cut-and-paste functionality that simplifies application integrations and reduces deployment times by weeks or months.

High Availability

SIMBA Blocks delivers high availability by auto-scaling in response to your software throughput requirements. This resilient infrastructure rebalances the system to prevent network failure, ensuring the success and speed of each transaction.

Full Chain Freedom and Interoperability

Blocks allows you to choose one or more supported blockchain protocols. In addition to delivering full chain freedom, Blocks will be entirely interoperable later this year. That means developers can soon migrate code between traditionally incompatible protocols like Ethereum and Hyperledger Fabric. Beyond future-proofing your investment, this functionality will allow you to build and deploy interoperable public, private, or hybrid solutions.

Developer-Focused Tooling

SIMBA Blocks supports multiple tooling solutions that optimize the developer experience. For less experienced developers or those new to Web3, the Blocks UI makes it easy to start, while more traditional developers can utilize SIMBA SDKs and Dynamic APIs. Finally, Web3-native developers can work with well-known tools like Truffle and Hardhat. No matter the method, the Blocks platform streamlines the path to production, bolsters scalability, and makes blockchain more accessible.

Structured Data

SIMBA Blocks utilizes structured data to annotate smart contracts at design, meaning you can use GraphQL to query unique identifiers after deployment. As an extension of this functionality, asset graphs seamlessly query smart contracts across multiple chains. From supply chain management to manufacturing, structured data and subsequent GraphQL querying generate powerful business intelligence insights.

Enterprise Ready

SIMBA Blocks is an enterprise-proven platform delivering speed, flexibility, scalability, and cost-effectiveness. In addition to offering enterprise blockchain protocols, Blocks allows you to integrate your preferred compliance-ready tools like wallet, storage, and identity management solutions.

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