Blockchain: The Next Logistics Frontier?

Blockchain, simplified - by BDP International

What is blockchain?

At its core, blockchain is a new solution for an old problem in computer science. Blockchain is based on a decentralized, distributed ledger. Blocks of data are added to this global ledger in a secure and irrevocable manner by a community of computers known as nodes to obtain consensus and provide provenance. The result is a trustless network without the need for a central authority.

One of the main benefits of a blockchain network, is that almost anything of monetary value can be recorded, leading to fewer risks and reducing costs for all involved parties. The blockchain expands with each transaction, with every block containing a digital fingerprint unique to that particular block, known as a hash. Also included are batches of recent transactions (and a timestamp for each one) and the hash from the previous block.

Helpful blockchain terms

Distributed ledger
A synchronized database that is shared between networks, whether geographically, company, or site-wide.

Immutable
Simply stated, once something is as such, it cannot be modified or altered. As it relates to blockchain, immutability pertains to the transactions of the record-keeping - once the data files have been logged, they can never be removed or amended.

Hash
A digital fingerprint of a blockchain transaction, unique to that particular block of information.

Cryptography
A method for exchanging secure communication between parties that requires stringent password protected data validation.

Peer-to-peer
In peer-to-peer networks, the sharing and exchange of information does not filter through a third party approval process, the transactions are swapped directly between users in the network.

Smart contract
A digital agreement stored on the blockchain that is unalterable, once signed. It defines certain logic operations that have to be fulfilled in order to perform tasks such as deposit money or data.

Blockchain and Logistics

Blockchain offers new and exciting opportunities for many sectors of business such as the financial industry, the real estate market, and of course - global logistics. Many proponents of blockchain solutions for supply chain claim that the advent of blockchain functionality will usher in a new era of transparency, visibility, and paperless data transfer. For instance, by utilizing smart contracts, companies can automate the purchasing process while cutting costs and saving time, and simultaneously improving the transaction flow and adding new levels of security.

Blockchain and BDP

BDP is actively collaborating with start-ups and well-established firms on new projects that show the promise of adding value to BDP and our customers.

As of April 2018, BDP has partnered with Chain.io to develop a compliance blockchain solution for customers by using Vault - a secure, blockchain-backed digital locker for critical supply chain compliance records. The simplicity of integrating Vault with BDP's existing platforms provides customers with the option of having an additional level of compliance with no extra effort on their part. This technology will be available to BDP customers in the near future. Read more here.

Additionally, BDP is currently partnering with United States Customs and Border Protection (CBP) as a member of the Emerging Technologies Working Group. Later this year, CBP will test the use of blockchain technology to record and track certifications required for import clearance. CBP identified key members of the trade community to refine processes prior to implementation, one of which was BDP Chief Compliance Officer, Michael Ford. This provides BDP with the opportunity to provide valuable feedback and facilitate discussions on both the current and future state of operations, and how blockchain would alter both.

In 2017, BDP had the opportunity to participate in one of the first pilot programs that explored benefits and implications of utilizing blockchain technology in the supply chain.

Blockchain and BDP Smart Suite®

As BDP Smart® continues its evolution, it is well positioned for its next-generation version to serve as a key decentralized application (Dapp) on the global logistics blockchain. It will continue to be the front end and the customer's point of access to this new world order. We envision a world whereby shippers will use BDP Smart® to digitally sign their blockchain bills of lading over to designated consignees. Carriers will be offered transparency to key data elements through public and private keys to improve on-time performance and ultimately lower their cost to serve as well.

> **"As blockchain technology seeks to establish itself as the new standard, BDP, and most importantly, its customers, are poised to reap the future benefits in our quest to deliver best-in-class solutions for the global logistics industry."**
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> Mike Andaloro, President & COO

BDP's team of experts continues to monitor the latest developments of blockchain. Should you have any questions, please contact us.

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