

THE BLOCKCHAIN BENEFIT



Driving freight bill audit and pay savings in oil and gas

Blockchain has demonstrated its value in financial services and now presents a significant opportunity to drive savings in oil and gas—especially for oil and gas companies with substantial transportation expenditures. These companies process thousands of freight transactions each day, and reconciling their shipment invoices against services with proper remittances is both laborious and costly.

Blockchain has the potential to significantly reduce discrepancies in the process by enhancing transparency and improving accuracy in freight rates, shipment routing and invoice generation.

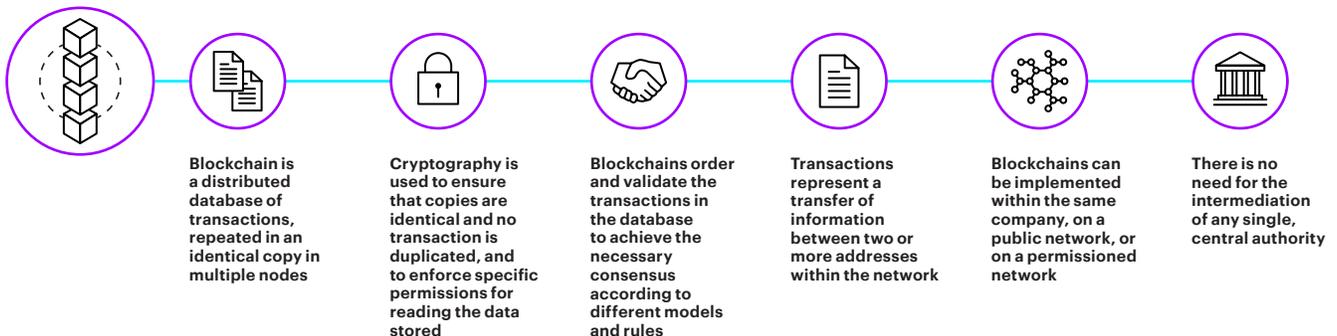
Blockchain is a distributed database technology that allows the secure transmission of information without control by a central authority (see Figure 1). The freight bill audit and pay (FBAP) process encompasses a growing chain of appended transactions that occur between the transportation provider and customer—from freight rate management, to track-and-trace, invoice calculation and payment remittance. Using blockchain to share secure access to these transactions would eliminate the need for costly reconciliations, audits, third parties and payment service providers, as well as reduce the risk of overpayments.

Current complexity

Transportation providers are known as carriers, and customers are called shippers. In the FBAP process, carriers submit freight invoices to the shipper—in this case, the oil and gas (O&G) company. The freight invoice contains not only the price of the freight move, but also ancillary charges, such as fuel surcharges and detention, amongst others, which are known as accessorial. These additional charges are calculated against the circumstances that arise from the freight shipment, such as the number of miles driven or the amount of idle time the driver incurs.

Once invoices are received by the shipper, audits are usually conducted to match the service performed, to the service ordered, to the received invoice. Because FBAP is not perceived as a core competency for many O&G companies, third party audit and payment service providers are often used to reconcile invoices to bills of lading and freight orders, fund payments, and conduct additional audits. Since many invoices are complex and fall outside of standard processes, exceptions arise, taking time and effort to reconcile.

FIGURE 1. HOW BLOCKCHAIN WORKS



The blockchain benefit

Blockchain technology could alleviate many of the above challenges. By using blockchain, every shipment transaction adds to a growing, permission-based, shared digital data flow, which serves as the single source of truth between the carrier and shipper. Starting with the contracted rates as the first block, the distributed database continues to record events from the freight order to the payment submission.

To calculate an invoice, the origin-destination pair from the freight order is matched to the agreed-upon rate, which is embedded into the blockchain using a smart contract, or business logic. Additional track-and-trace capabilities could also be appended onto the blockchain to provide shipment visibility in real time, as well as record the movement to calculate miles driven. Accessorials would be automatically calculated using the business logic and inputs from the miles driven, idle time or other circumstances from the shipment. Invoices and remittances are automated and sent on the same chain that began with the contracted rate.

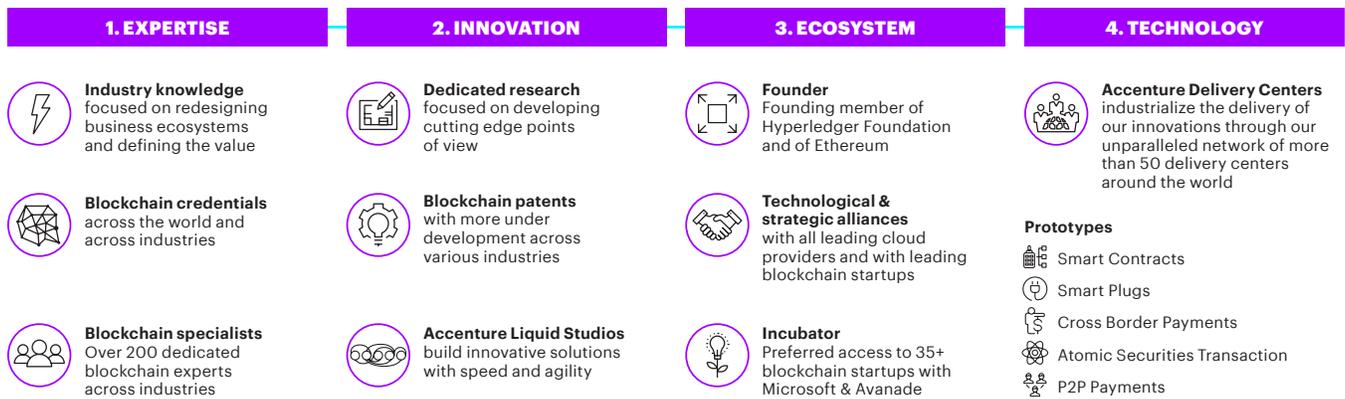
Using such a blockchain process, Accenture estimates that an O&G company could save at least five percent in freight spend through improved invoice accuracy, reduction of overpayments, and disintermediation of third party service providers. For example, a firm with \$10 billion in annual revenue, and \$600 million in freight spend, could see a reduction of five percent in its costs, or \$30 million in savings.

With the current uptick in completed wells, 2018 would be an opportune time to explore blockchain-enabled solutions, which could boost execution speed, provide real-time visibility, reduce the risk of incorrect payments, and enhance accuracy from end-to-end.

Accenture strives to be at the forefront of blockchain innovation and its practical, real-world application. Accenture's blockchain capabilities drive rapid prototyping from idea, to proofs of concept, to implementation (Figure 2). Accenture's blockchain offerings range from blockchain strategy assessment, to solution design, build and implementation.

FIGURE 2. ACCENTURE'S BLOCKCHAIN CAPABILITIES

Accenture is shaping the future of blockchain with the right capabilities



Contact

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