

Leveraging blockchain to reimagine dispute management

The impact of blockchain on the dispute management process within the order-to-cash domain.

A point of view by **Sreerag Narayanan**

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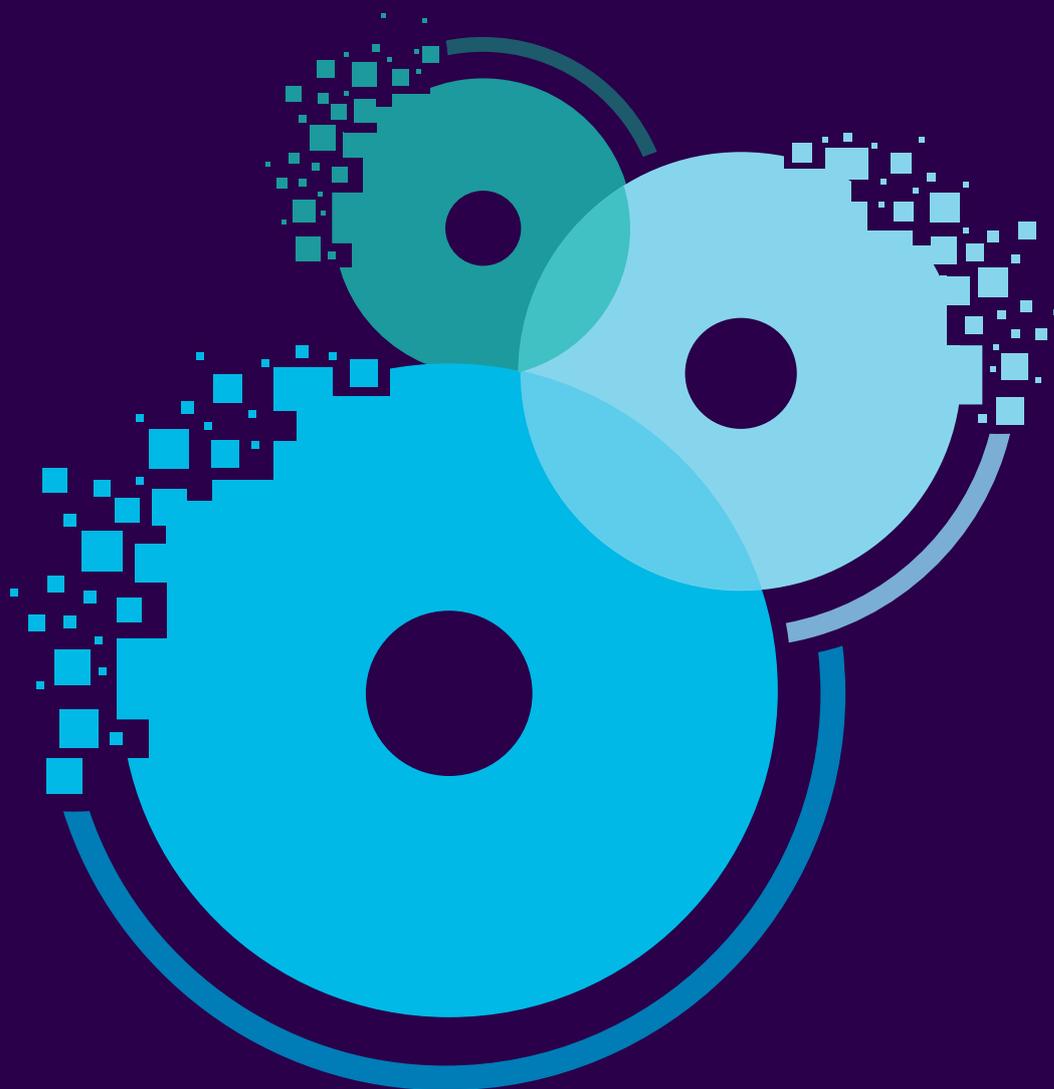
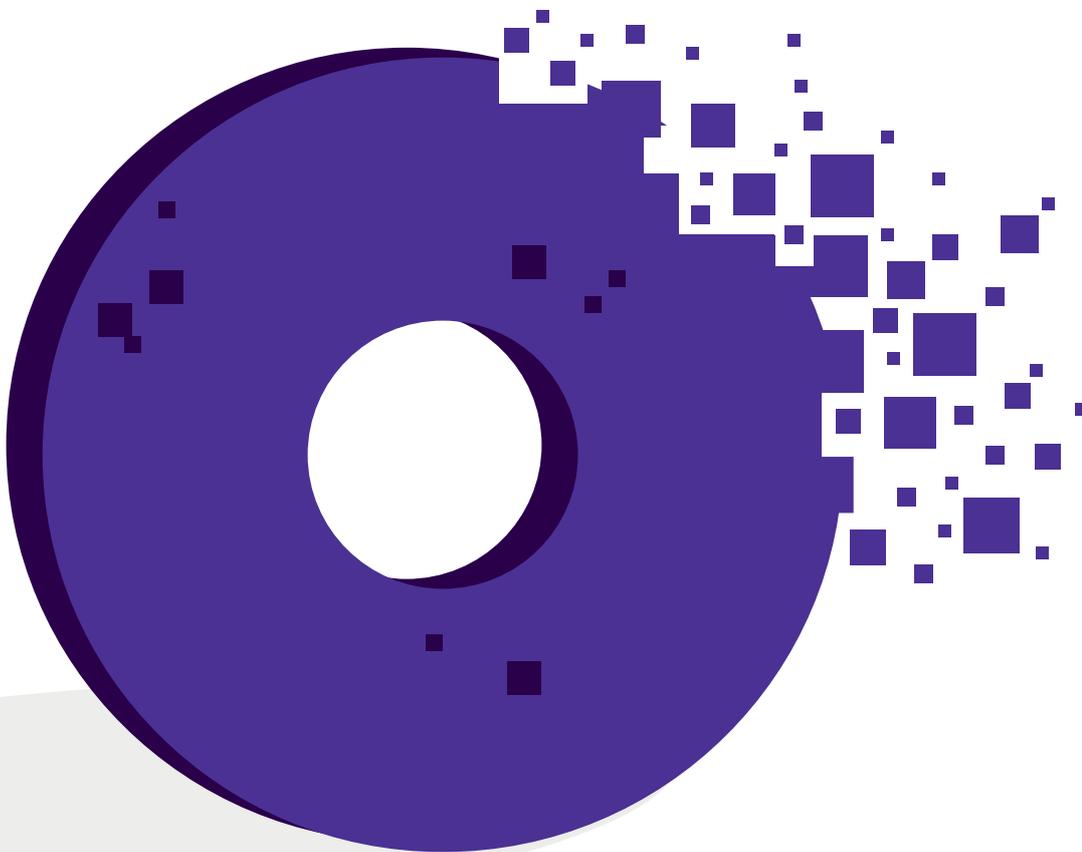


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An introduction to blockchain



Blockchain operates on a virtual and decentralized ledger that records everything in a secure and transparent manner across an ecosystem of computers or nodes. This eliminates the dependency on a middleman for each transaction, which is verified using a smart contract and synced with every node on the blockchain ecosystem.

To put it simply, it's like a notebook – each sheet is a transaction/block on which data cannot be changed, and therefore blockchain immutable (see Figure 1).

Blockchain has rapidly evolved from overused buzzword to high-value technology with real-world applications in business. But now the hype has died down and the technology has matured, how can organizations leverage blockchain to drive value across their finance and accounting (F&A) function?

By enabling transacting parties to interact seamlessly on a frictionless, tamper-proof global ecosystem, blockchain has the potential to eliminate recordkeeping activities across procure-to-pay (P2P), order-to-cash (O2C), and record-to-report (R2R), thereby transforming the entire F&A department, and helping to create the Frictionless Enterprise.

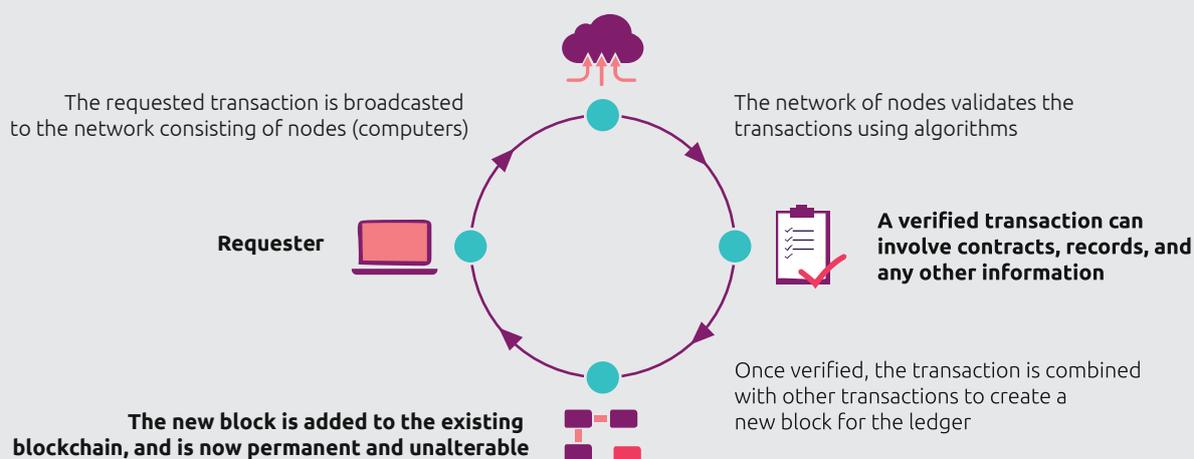


Figure 1. The concept of blockchain

The Frictionless Enterprise

The Frictionless Enterprise seamlessly connects processes and people, intelligently, as and when needed. It dynamically adapts to your organization's circumstances to address each and every point of friction in your business operations.

At Capgemini, we have applied the Frictionless Enterprise to enhance cohesion across our entire suite of products and services. This enables us to respond rapidly to your changing requirements and deliver specific business outcomes in a value-focused way.

We implement new ways to detect, prevent, and overcome frictions – leveraging our latest thinking, organizational design, and intelligent solutions to achieve effortless operations.

1,000-years of decentralized ledgers

Around 700–1,000 years ago on the island of Yap in the Western Pacific, the Yapese people would use large stones called “**rai stones**” as a mode of payment for goods or services.

As these stones were huge in size and weight – and therefore difficult to move – they were cut into pieces and exchanged each time a transaction was made. This transaction was announced to the entire tribe, and every member would have to keep a mental log – or ledger – about who owned which piece.

In today's world, this would be called a “distributed ledger,” where every group connected to the ecosystem would be made aware of every transaction made. This is a key feature of blockchain technology.

The hype behind blockchain

The word “internet” seemed a little elusive 20 years ago – something you might not have thought would impact on your daily life. In the age of fintech startups and with digital transformation at its peak, consumers now look for the most sophisticated, innovative, and transparent ways of doing business.

We have now reached the stage where technology is able to give us real-time information and data at the touch of a button on our mobile device – when we want it, where we want it, and how we want it.



With blockchain, organizations can set up a distributed peer-to-peer network in which parties can interact with each other without an intermediary, in a verifiable manner.”

Sreerag Narayanan
Business Transformation Consultant,
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But is that the case for everything that we use in our lives? For example, we have apps that tell us in real time about the food we have ordered, but not the source of the ingredients used to make the food. Where did the rice, grain, or meat come from? What if technology could actually give us this level of information?

Enter blockchain – let the hype begin!

Smart contracts

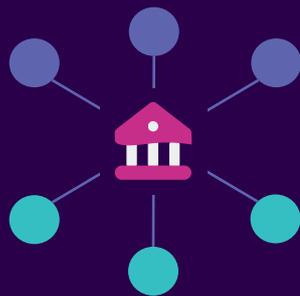
Large organizations deal with multiple suppliers, especially in manufacturing. Traditional contract management involves a long, drawn-out process of negotiation, authoring, execution, payment, and renewal. These activities need to be coordinated across multiple organizations – and multiple departments within those organizations – making the entire management process cumbersome.

Blockchain technology can make these contracts smart by programming them to execute themselves when certain events happen. Smart contracts are embedded with rules, based on which a transaction occurs within a blockchain ecosystem once the rules are met between the two nodes/parties. In a typical F&A scenario, these would be accounting and business rules that are set within the groups in the blockchain ecosystem. Any transaction that does not meet the rules of the smart contract would automatically be pushed out of the ecosystem to be manually handled.

With blockchain, organizations can set up a distributed peer-to-peer network in which parties can interact with each other without an intermediary, in a frictionless, verifiable manner.¹ As there is a trusted platform, the stakeholders can agree to exchange data and authorize transactions without the need for intermediaries (see Figure 2).

This improves speed of execution, and enables faster and frictionless dispute resolution and a faster payment mechanism for the suppliers involved. For example, a proof of delivery from a supplier can trigger an automatic quality inspection of the materials. If the inspection is satisfactory, a digital payment is triggered, which helps reduce suppliers’ working capital requirements.

Traditional transaction model



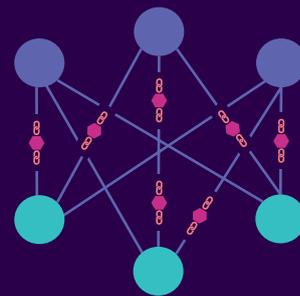
- Transactions rely on a central authority (e.g., banks, exchanges) for verification
- Transaction data is primarily stored by the central authority

● Member group 1 (e.g., OEM)

● Member group 2 (e.g., supplier)

● Central authority (e.g., bank)

Blockchain transaction model



- Transactions are carried out directly between two parties resulting in faster and frictionless execution
- All transactions are stored on an encrypted distributed ledger that substitutes an intermediary

● Encrypted blockchain

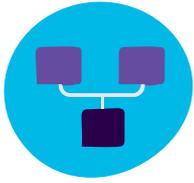
Figure 2. A blockchain network enables shorter payment cycles and faster dispute resolutions

* Figure illustrates a simplified blockchain transaction model

Source: Capgemini Research Institute, “Does blockchain hold the key to a new age of supply chain transparency and trust?” October 2018

1 Konstantinos Christidis, Michael Devetsikiotis, “Blockchains and Smart Contracts for the Internet of Things,” Access IEEE, vol. 4, pp. 2169–3536, 2016

Blockchain-as-a-Solution



In a blockchain ecosystem, systems are connected to each other, giving the client real-time status and visibility of the entire transaction at every stage of the order."

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Within the O2C domain, dispute management always stands out as being a process that has huge dependencies on other departments, more complexities, and a major pain area for most clients. For dispute management analysts, the most common areas of dispute are around quality, quantity, logistics, and pricing.

In today's business environment, dispute management process is an integral part of the after-sales service. This requires the dispute process to be highly customer centric and is strongly dependent on multiple teams for verification and validation. However, most dispute resolution activities are slowed down due to:

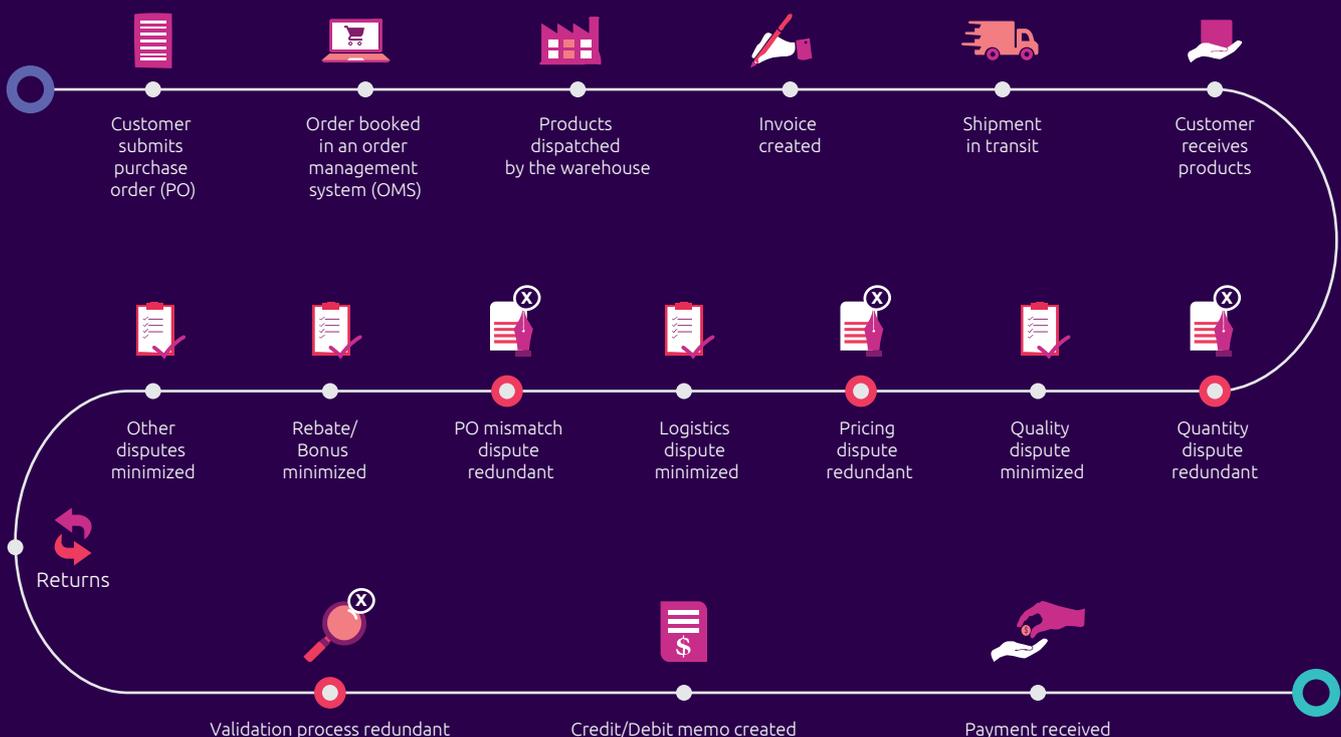
- Limited visibility on root cause due to fragmented operations
- Manual effort and time for collaborating within departments
- Technological inefficiencies.

Studies conducted on the above tell us that these challenges can result in:

- **High volumes of disputes** – Large volumes of disputes are either invalid or inaccurate with unclear information, which can consume 25–35% of FTE effort
- **Extended research time** – dependencies on inter-departments leads to longer dispute resolution cycles, with an average of 63 days
- **DSO impact** – 55% of clients hold up the entire invoice if a dispute is raised against it, which often results in a delay in cash realization
- **High costs** – the manpower cost to manage the volumes and 5% disputes are always unresolved and written off, which leads to revenue leakage
- **Customer dissatisfaction** – locked up customer credit can result in delayed orders. This can lead to the risk of losing customers to competitors and have a negative impact on the financial health of the company.

How does a blockchain ecosystem work?

In a blockchain ecosystem, systems are connected to each other, giving the client real-time status and visibility of the entire transaction at every stage of the order. From the time an order is placed, the client knows the pricing that was quoted against what has been invoiced, the quantity that was ordered vs. shipped, and the quality of the material during manufacturing and packing against the delivery, etc. This reduces to a minimum or even eliminates the possibility of the client disputing an invoice or product, as can be shown in Figure 3.



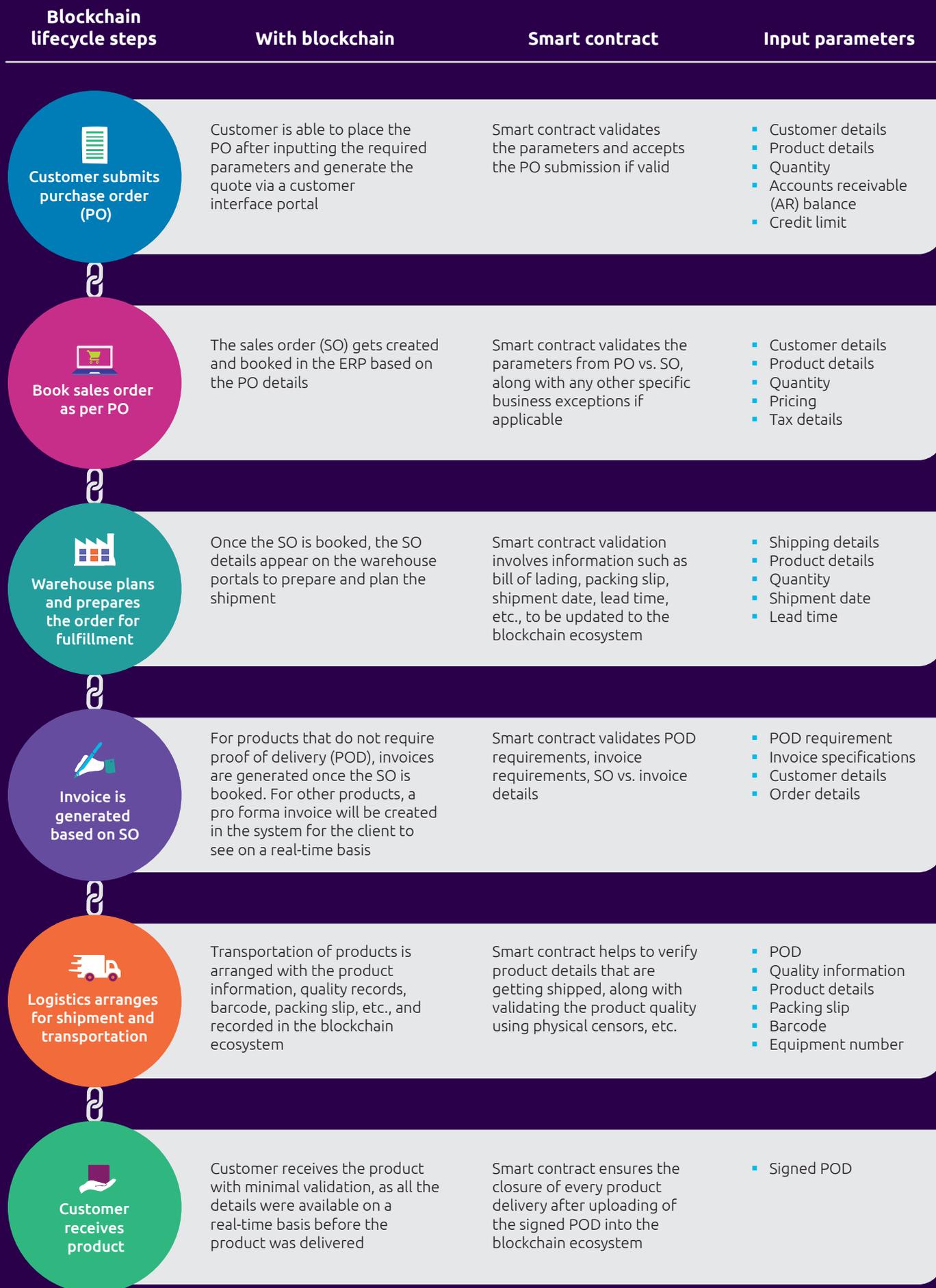


Figure 3. How blockchain works to deliver transaction visibility through the smart contract

Is blockchain the best solution for dispute management?



Blockchain can certainly be regarded as a disruptive technology due to its enhanced security features enabled with the decentralized ledger that ensures frictionless, tamper-proof transactions. It also encompasses next-generation technologies such as machine learning, the Internet of Things, and artificial intelligence (AI) to reshape the way organizations function in the future.

One key advantage is the traceability feature that enables the end-user to track status changes in real time. Finally, blockchain helps to maintain an error-free and touchless process within the wider blockchain ecosystem.

From the other perspective, blockchain is still relatively new and requires both huge investment and extensive change management across the organization. Implementing a blockchain solution involves calculated business risk that might affect an organization's existing vendors, customer, partners, and other stakeholders.

The pros

- **Enhanced security** – leveraging a virtual and decentralized ledger enables organizations to enjoy efficient and tamperproof transactions
- **Improved technology** – leveraging best-in-class, next-generation technology helps organizations reshape the way their business functions in the future
- **Improved traceability and quality** – blockchain provides the ability to track the movement of goods from their origin (see Figure 4)
- **Increased accountability** – eliminates human error, prevents malpractice and fraud, and guarantees accuracy
- **Frictionless operations** – redesigning a business operations model often means an organization must not only re-engineer and streamline their internal processes, but also those that involve their business vendors, customers, and partners.

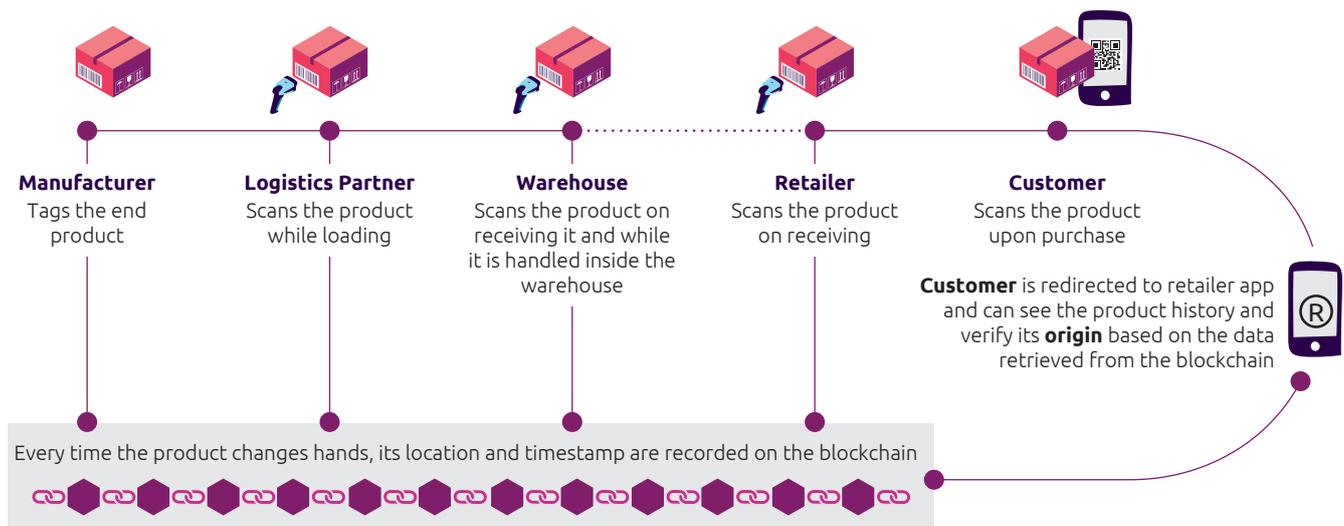


Figure 4. Simplified process for tracking products using blockchain

Source: Capgemini Research Institute, "Does blockchain hold the key to a new age of supply chain transparency and trust?" October 2018

The cons

- **The need for change** – as blockchain is still relatively new, it requires an extensive organizational change management strategy both in preparation of implementation and once the technology is in place
- **Increased cost of technology** – implementing blockchain often incurs a certain level of cost due to the incorporation of machine learning, artificial intelligence (AI), the Internet of Things
- **Enhanced risk** – implementing a blockchain solution involves calculated business risks that might affect an organization's existing vendors, customers, and partners. In addition, mistakes made during implementation might be irreversible, potentially bringing significant losses to the business.

Conclusion



With the speed at which next-generation technologies are being tested and deployed, blockchain is a leading contender to become a viable solution across a range of business challenges. The impact and potential outcomes are huge. In short, blockchain could help organizations to:

- Focus employee time and effort in providing other value-added services
- Dramatically increase cash flow and working capital
- Significantly reduce infrastructure costs
- Implement new structure and job requirements.

Organizations should consider the opportunity that innovative and disruptive technologies such as blockchain represent in overcoming their business challenges – both now and in the future.

About the author



Sreerag Narayanan is a transformation consultant for Capgemini's APAC FPIA Consulting team. With over nine years of experience with functional knowledge of order-to-cash processes, Sreerag has participated and individually led [Digital Global Enterprise Model \(D-GEM\)](#) assessments and other ESOAR workshops for various clients.

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