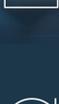


# Watson IoT and Blockchain: Disruptor and game changer

Build trust, reduce costs and accelerate transactions

## What is IBM Blockchain?



A private blockchain infrastructure of distributed peers that replicates the device data and validates the transaction through smart contracts



A **permissioned** blockchain that makes it possible to define who can join — allowing participants in a business network to see only what they've been given rights to see on the blockchain



A blockchain infrastructure that helps establish trust, accountability and transparency while streamlining business processes and enabling new business models



Learn more about [IBM Blockchain](#)

## IoT and blockchain: Disruptor and innovator converge

The IBM Watson IoT Platform enables IoT devices to send data to private blockchain ledgers for inclusion in shared transactions with distributed records, maintained by consensus, and cryptographically hashed.

Blockchain's distributed replication allows your business partners to access and supply IoT data without the need for central control and management.



**Enhances security**



**Enables inclusion of low-value devices**



**Ensures easier long-term device management**



Blockchain can make device management easier.  
▶ [Learn more](#)



Blockchain can greatly impact network traffic, potentially helping to reduce chatter and optimize IoT.  
▶ [Learn more](#)



Blockchain can change the entire global logistics business.  
▶ [Learn more](#)



Read the study entitled: [Fast forward: Rethinking enterprises, ecosystems and economies with blockchains](#)

## Here's why blockchain is a game changer for IoT

Leveraging blockchain for your IoT data offers new ways to automate business processes among your partners without setting up a complex and expensive centralized IT infrastructure.

**Blockchain's data protection fosters:**

- Stronger working relationship with your partners
- Greater efficiency as partners take advantage of the information provided



Enable IoT devices to participate in blockchain transactions  
▶ [Learn more](#)



Reimagine the world's most fundamental business interactions; open the door to invent new styles of digital interactions



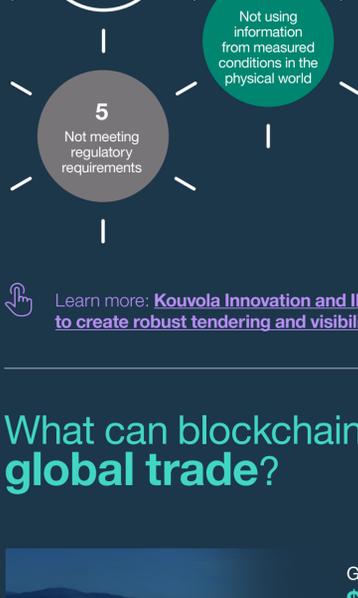
Reduce the cost and complexity of operating sustaining business  
▶ [Learn more](#)



Learn more: [Can the blockchain power industrial IoT?](#)

## Common challenges: building a secure transportation tendering and tracking application

Transactions are becoming inefficient and too costly for companies that transact business across multiple parties or entities in a global network.



"I believe blockchain tech to be one of the truly disruptive and innovative application areas in the world at the moment, and that it will create huge waves across all imaginable business sectors, not just transportation alone."<sup>2</sup>

– *Mika Lammi, Kinno's Head of IoT Business Development, Kouvola Innovation Ltd*



Learn more: [Kouvola Innovation and IBM are exploring blockchain technology to create robust tendering and visibility that can be wholly trusted.](#)

## What can blockchain do for global trade?



Global trade represents an **\$18 trillion** market.<sup>3</sup>

**Global supply chains** rely on a system that locks billions of dollars in a complex network of intermediaries and financiers.



Blockchains change **value transactions** that have come to exploit the need for trust.

"Businesses don't exist in isolation. They are connected to customers, suppliers and partners. They exist in countries around the world and have to comply with regulations. The networks are not static and over time, they morph because of business acquisitions and mergers. Finance, risk management, healthcare, insurance, and the Internet of Things (IoT) are some of the other systems that are poised for dramatic change using blockchain networks."<sup>4</sup>

– *Jerry Cuomo is an IBM Fellow and Vice President of Blockchain Technologies*

## Three key benefits of using blockchain for IoT



**Build trust**

- Build trust between parties and services
- Reduce risk of collusion and tampering



**Reduce costs**

- Reduce costs by removing overhead associated with middlemen and intermediaries



**Accelerate transactions**

- Reduce settlement time from days to near instantaneous



Read the [solution brief](#)

## What difference can blockchain make in the real world of IoT?

**The supply chain of the future** has the instrumentation, interconnectedness and intelligence to predict, if not prevent, disruptions before they occur. It relies on new approaches that use sensor technologies, new analytic capabilities and simulation techniques to not just sense and respond, but anticipate and act.



**Supply Chain / Logistics**

- Requires end-to-end logistics across disparate suppliers, systems and businesses
- Use Watson IoT and blockchain as a shared ledger to provide a record of package/container status, condition, and location.

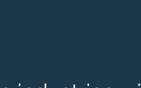
▶ [Learn more](#)



**Log operational maintenance data**

- Requires component tracking to ensure safety and satisfy compliance regulations
- Use IBM Watson IoT and blockchain as a shared ledger to maintain an accurate and indelible history of your critical components.

▶ [Learn more](#)



**Freight**

- Requires ability to manage complex process of moving freight involving different parties with different priorities
- Use IBM Watson IoT and blockchain, to ensure contractual obligations are met all along the road.

▶ [Learn more](#)

"As the reach of blockchain continues to grow, more industries will feel the disruptive impact of this innovation in trust. Other implementations of the technology are currently found in banking, healthcare, notaries, digital rights, provenance and the Internet of Things."<sup>5</sup>

– *Jason Leibowitz, CoinDesk, May 2016*

## IBM is introducing a new blockchain service for IoT



**Enables transaction partners to:**

- Access and supply IoT data without the need for central control and management — all with tamper-resistant records
- Verify every transaction, preventing disputes and ensuring all partners are held accountable



**Allows IoT devices to be used in building blockchain-based solutions to help organizations:**

- Improve operational efficiency
- Transform customer experience
- Adopt new business models in a private and decentralized manner

## Explore Watson IoT with blockchain



Watch the [video](#)



Hear [experienced professionals](#)



Download the [solution brief](#)



Read the [blog](#)

## Make your blockchain experience real

**Connect with IBM** to accelerate the design and development of your blockchain and IoT solutions.



**Technology hands-on**

- Get hands-on experience using and extending a sample application
- Identify the best use case for your organization and how to take advantage of blockchain and Watson IoT together



**First project**

- Participate in a two-day Design Thinking workshop
- Define every transaction, leading to an iterative, agile development of your device, leading to an iterative, agile development of your devices



**Prototype to production**

- Extend your prototype into production and integrate it within your enterprise environment
- Work with us to develop a prototype of your devices connected to the Blockchain fabric



[Register your interest](#)

## Explore Watson IoT with Blockchain



[Learn more](#)