Corda for Supply Chain Management •

Blockchain technology has proven critical in driving digital supply chain transformation, enabling greater transparency, sustainability, and agility. This reduces costs and helps operators to capture more gains from existing technology stacks.

Supply chain processes are hindered by pain points in data management and operational risk. With an increase in data volumes, existing systems are unable to cope, resulting in errors and slow turnarounds. The COVID-19 pandemic has led to significant adjustments in supply chain services with knock-on effects for consumers and retailers, spurring an urgent re-evaluation of operational risk procedures.

At **R3**, we operate at the center of a growing ecosystem of over 350 of the world's leading institutions, corporates and technology firms applying blockchain technology to transform global trade. Businesses, software companies and consortia choose Corda for its unique approach to privacy and ease of development. Whether facilitating faster payments or gaining visibility into where your goods are, it provides the platform for new applications to solve transparency and business process challenges across the supply chain.

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The only blockchain for business

Corda enables businesses to build transformational applications that bring various counterparties into sync, in real-time, over shared facts. It enables the seamless, immutable and secure transfer of assets and value between counterparties, while maintaining the highest levels of privacy and security.

Corda Enterprise, the commercial distribution of Corda, provides additional enterprise support, security features, fine-tuned performance and high resilience for production environments.

Corda was designed with privacy, scalability and strong governance at its core—making it the perfect fit for businesses operating in global markets. Corda's consensus mechanism ensures transaction finality—one reason why it is the only platform deemed acceptable by leading security standards agencies such as the US Department of Commerce's National Institute of Standards and Technology.

> " Using Blockchain for Procure to Pay (Digital Ventures application built on Corda) has helped our suppliers reduce their processing times by 50%, from 70 minutes to 35 minutes per purchase order. It has also sped up invoice issuance and verification, so the procurement cycle for 1,600 items has come down to one day, from 39 days in the past.

Thammasak Sethaudom, Vice President for Finance and Investment, Siam Cement Group

Why Corda for Supply Chain?

Privacy
Peer-to-peer supply chain transactions and reporting means that each entity only sees information related to the part of the transaction that they participate in.

Immutable origin
The origin and movement of goods can be securely recorded as a single source of truth to simplify reporting, i.e. for certificates of origin, preferential tariffs, social or product certification, and phytosanitary issues. Complete visibility into the supplier network enables buyers to quickly target faulty suppliers.

Interoperability
Corda applications connect supply chain participants in a shared network, as well as allowing different networks to interact, enabling secure and transparent transactions. Track and trace applications on Corda can interoperate with **Trade Finance**, **KYC**, **Payments**, **Capital Markets** and **Insurance** applications to reduce supplier risks, bring visibility to the physical supply chain and open-up new ways to finance and de-risk the financial supply chain.

R3's ecosystem
R3's large network of trade participants provides access to an ecosystem of banks, digitization platforms, carriers, freight forwarders, inspection agents, chambers of commerce, global buyers, and other trade facilitators.

Smart trade contracts
Legal representation of trade documents in the form of smart contracts are used to automate processes to execute global trade transactions faster and without discrepancies.
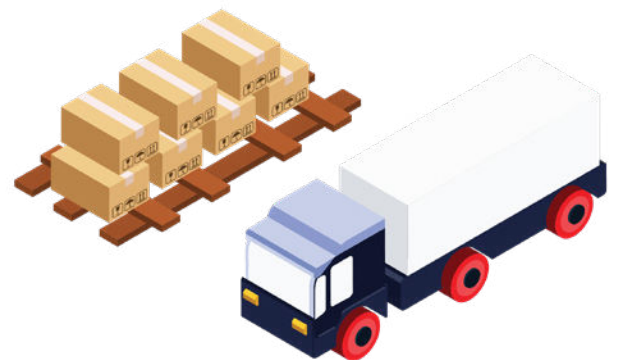
Consensus
Corda reduces costs and disputes linked to reconciliation with a trusted shared ledger. No document is committed unless all involved parties agree that it is correct.

Learn More

> R3's high quality market proven and well supported Corda Enterprise solution plays an important role in our Bullion Integrity Ledger™ application. The state-of-the-art blockchain technology enabled us to build the unique combination of product traceability, data integrity and members confidentiality for our solution to the bullion market.

**Urs Röösli,
CEO, aXedras Ltd.**

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Supply Chain use cases

From government and aviation, to agriculture and auto, multiple sectors are using Corda for applications that enhance supply chain visibility and efficiency. Major corporates like Daimler and KLM, as well as **government bodies**, have been working on diverse use cases from intra-company reconciliation, to inventory management and demand forecasting. Others are using Corda to address sustainability objectives that require proof of origin, visibility into physical supply chains or more streamlined process for faster payments and settlement.

Global component tracking

Corda provides auditability of the provenance of goods, whether parts or perishables. This can be essential for product recalls, certification, customs reporting, regulatory compliance and operational efficiency. Tracking goods on ledger simplifies reporting and error tracking, and facilitates dynamic inventory management. Often, Corda is combined with IoT integrations. **Aerotrax** is creating a CorDapp for maintenance and repair tracking in aviation; each physical aircraft part is represented as a digital asset to streamline data coordination and easily monitor any asset's lifecycle.
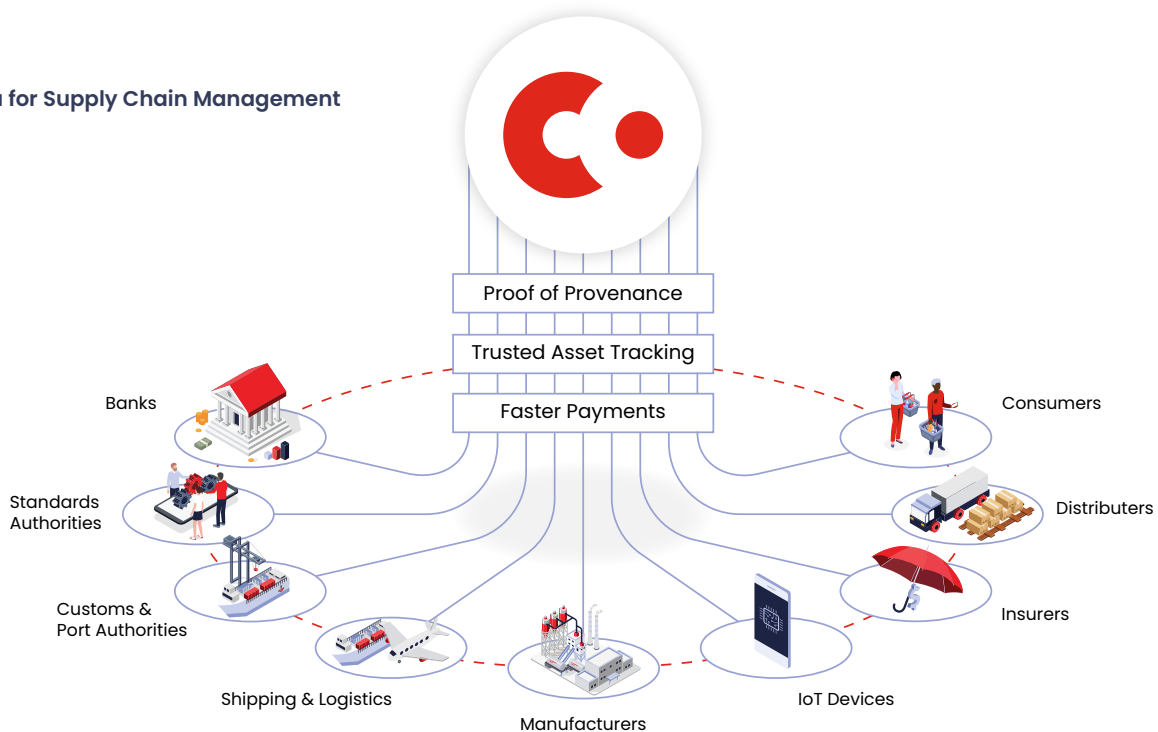
Fleet management & vehicle identity

Consistent identity management for parts and suppliers is critical in Supply Chain Management and finance. To use **MOBI's VID standard**, major automotive companies are combining Corda with data from telematics and IoT devices. These new applications provide predictive analytics to trade information on drivers' behaviour, auto meters and equipment. **Infosys** is also using Corda with IoT monitoring for the risk management of corporate fleets.

Deep tier supply chain finance

Extending finance to the long-tail of suppliers remains risky and costly, as SMEs are faced with high borrowing rates. Corda applications enable new levels of transparency into SME cash flows, goods, payments and identities. Streamlined KYC and onboarding improves profitability and frees up capital. Accounts Payables can be turned into digital assets that program ownership and the flow of cash into transferable tokens that can either pay the holder at maturity, be sold on at a discount, or be passed on down the supply chain to extend financing options to smaller suppliers. Organizations like **Mphasis** are producing deep tier financing applications to facilitate transparency between different tiers of the supply chain on a need to know basis, protecting sensitive data.

Fig. 1: Corda for Supply Chain Management

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Contact

Discover why Corda is the only software platform that delivers on the promise of blockchain for business. Visit r3.com or contact supplychain@r3.com.

About R3

R3 is an enterprise software firm that is pioneering digital industry transformation. We deliver purpose-built blockchain technology for all types of businesses in all industries.

Developed in collaboration with our ecosystem, our enterprise blockchain platform Corda is transforming entire industries by digitalizing the processes and systems that firms rely on to connect and transact with each other. Our blockchain ecosystem is the largest in the world with more than 350 institutions deploying and building on Corda and Corda Enterprise. Our customers and partners have access to a network of leading systems integrators, cloud providers, technology firms, software vendors, corporates and banks.

To ensure our customers derive the greatest value from their investment, we provide services and support to shorten time-to-market, as well as guidance on implementation, integration and building ecosystems based on a blockchain platform. Learn more at www.r3.com and www.corda.net.