

Blockchain Platforms Comparison Table

Blockchain Name	Type	Consensus Mechanism	Permission Model	Speed / Throughput	Smart Contract Support	Token Support	Typical Use Case	Notable Technical Feature
Ethereum	Public	Proof of Stake (PoS)	Open	~30 TPS (Post-Merge)	Yes (Solidity, Vyper)	Native (ETH)	Decentralized apps (dApps)	EVM, Wide Developer Adoption
Hyperledger Fabric	Private	Pluggable (e.g., Raft)	Permissioned	1000+ TPS	Yes (Chaincode - Go, Java)	No native token	Supply chain, enterprise solutions	Modular, Channels for data privacy
R3 Corda	Consortium	Notary-based	Permissioned	~170 TPS (w/ tuning)	Yes (JVM, Kotlin, Java)	No native token	Inter-bank transactions, legal systems	Point-to-point transactions

Short Technical Comparison Report

Each blockchain platform excels in different contexts. **Ethereum**, as a public blockchain, supports a truly decentralized environment with wide smart contract capabilities using Solidity. It is ideal for dApps where open access and trustlessness are essential. However, it suffers from lower throughput (~30 TPS), making it less suitable for enterprise-grade performance.

Hyperledger Fabric, being a private and modular framework, enables high throughput (1000+ TPS) and strict permissioned access. It supports pluggable consensus and confidential data channels, making it perfect for use cases like **supply chain management** among known stakeholders where data privacy and scalability are paramount.

R3 Corda, though often categorized under private/consortium blockchains, uniquely features peer-to-peer data flow rather than global broadcasting. It is built for the financial sector, supporting JVM-based smart contracts and ensuring data is shared only with intended parties. It's particularly strong in **inter-bank or legal workflows** where privacy and legal compliance are critical.

Platform Recommendations:

- **Decentralized App** → *Ethereum* (open, decentralized, smart contract-rich)
- **Supply Chain Network Among Known Partners** → *Hyperledger Fabric* (private, high TPS, modular)
- **Inter-bank Financial Application** → *R3 Corda* (privacy-focused, legal and financial sector-ready)