Blockchain Platform Comparison

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	~15–30 TPS (Base Layer)	Yes (Solidity, Vyper)	Yes (ETH)	Decentralized applications (DApps)	Large developer community, EVM compatibility
Hyperledger Fabric	Private	Pluggable (Raft, Kafka)	Permissioned	1000+ TPS (depending on setup)	Yes (Go, JavaScript)	No	Enterprise supply chain, internal systems	Modular architecture, private channels
R3 Corda	Consortium	Notary-based (Raft/BFT)	Permissioned	~170 TPS (typical setup)	Yes (Kotlin, Java)	No	Financial services, interbank operations	UTXO model, transaction privacy

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Short Report

The three blockchains—**Ethereum**, **Hyperledger Fabric**, and **R3 Corda**—serve distinct purposes based on their architecture and permission models. **Ethereum**, a public blockchain, supports open access, smart contracts in Solidity, and has a robust token economy. Its global decentralization ensures trustlessness but limits throughput (15–30 TPS), making it ideal for public decentralized applications.

In contrast, **Hyperledger Fabric** is a private, enterprise-focused blockchain with high performance (~1000+ TPS) and modularity. It supports private channels and pluggable consensus, making it well-suited for supply chain solutions among trusted participants.

R3 Corda, a consortium blockchain, is optimized for financial institutions. It offers strong privacy, no global broadcast of transactions, and smart contract support in familiar languages like Java/Kotlin. Its notary-based consensus ensures transaction finality and regulatory compliance.

- For a **decentralized app**, I'd choose **Ethereum** due to its open nature, token support, and established developer ecosystem.

- For a **supply chain network among known partners**, **Hyperledger Fabric** is ideal for its permissioned model, high throughput, and privacy features.

- For an **inter-bank financial application**, **R3 Corda** is best, offering strong privacy, compliance support, and a financial transaction model.

Each platform is best suited for scenarios aligned with its technical strengths.