1. Create a comparison table or markdown sheet with the following columns for each platform:

Blockchain Platform Comparison Table

Blockchai n Name	Туре	Consensu s Mechanis m Used	Permission Model	Speed / Throughp ut (TPS)	Smart Contract Support	Token Suppo rt	Typical Use Case	Notable Technical Feature
Ethereum	Public	Proof of Stake (Ethereu m 2.0)	Open	~30 TPS (Layer 1)	Yes (Solidity, Vyper)	Native (ETH)	Decentraliz ed apps (dApps), DeFi	EVM support & large developer base
Hyperledg er Fabric	Private	Pluggable (default: RAFT, PBFT)	Permission ed	~3000+ TPS	Yes (Chainco de in Go, Java)	No native token	Enterprise supply chains, private apps	Channel- based privacy model
R3 Corda	Consortiu m	Notary- based consensu s	Permission ed	~200–300 TPS	Yes (JVM- based smart contracts)	No native	Inter-bank settlements , legal contracts	

Short Report (Technical Comparison & Use Case Fit)

Ethereum, a public blockchain, offers robust smart contract support and decentralization via its Proof-of-Stake consensus. However, its base layer throughput (~30 TPS) is relatively low, requiring Layer 2 scaling for high-volume applications. Ethereum is ideal for open decentralized applications (dApps) and boasts the most mature ecosystem and developer tooling.

Hyperledger Fabric, a private blockchain, provides high throughput (~3000+ TPS) and fine-grained access control through a modular, permissioned architecture. Its smart contracts (chaincode) run in containerized environments and support mainstream languages like Go and Java. It is particularly suited for enterprise-level supply chain networks that require privacy, performance, and interoperability.

R3 Corda, while often categorized as a consortium blockchain, is distinct for its notary-based consensus and focus on legal/financial applications. With point-to-point communication and strict permissioning, it allows only intended participants to see transactions. Though it lacks a native token, its JVM-based smart contract support makes it ideal for regulated environments like banking.

Choice Justification:

For a decentralized app: Ethereum, due to openness, smart contract maturity, and broad adoption.

- For a **supply chain network**: **Hyperledger Fabric**, for its high throughput, privacy, and enterprise-grade modularity.
- For an **inter-bank financial application**: **R3 Corda**, given its privacy-preserving features and financial sector alignment.