

Problem Statement: Which platform would you choose for:

- A decentralized app?
- A supply chain network among known partners?
- An inter-bank financial application?

Justify your choice based on technical points.

Platform Selection Analysis for Specific Use Cases

Use Case 1: Decentralized App (dApp)

Recommended Platform: **Ethereum**

Why Ethereum:

- **Open Permissionless Access:** Anyone can interact with the dApp without requiring approval, essential for true decentralization
 - **Ethereum Virtual Machine (EVM):** Provides a robust, battle-tested execution environment with extensive tooling and libraries
 - **Smart Contract Maturity:** Solidity ecosystem offers comprehensive frameworks (OpenZeppelin, Hardhat, Truffle) for secure development
 - **Network Effects:** Large user base, wallet integration (MetaMask, WalletConnect), and existing DeFi infrastructure
 - **Compatibility:** dApps can interact with other protocols seamlessly, enabling complex financial products and integrations
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Use Case 2: Supply Chain Network Among Known Partners

Recommended Platform: **Hyperledger Fabric**

Why Hyperledger Fabric:

- **Permissioned Network:** Perfect for known partners who need controlled access and defined roles
- **Private Data Collections:** Sensitive supplier information can be shared selectively using channels and private data features
- **High Throughput:** 3,000-20,000 TPS handles enterprise-scale transaction volumes efficiently
- **Pluggable Consensus:** RAFT consensus provides fast finality suitable for business operations

- **Chaincode Flexibility:** Smart contracts in Go/JavaScript allow complex business logic implementation
 - **No Cryptocurrency Overhead:** Eliminates token volatility and regulatory concerns for enterprise adoption
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Use Case 3: **Inter-Bank Financial Application**

Recommended Platform: **R3 Corda**

Why R3 Corda:

- **Legal Identity Integration:** Built-in support for real-world legal entities and regulatory compliance
- **Privacy by Design:** Point-to-point transactions ensure only relevant parties see transaction details
- **Notary Services:** Prevents double-spending while maintaining transaction privacy
- **UTXO Model:** Similar to traditional banking systems, easier for financial institutions to understand and audit
- **Regulatory Compliance:** Designed specifically for regulated industries with built-in compliance features
- **Integration:** CorDapps can represent real-world financial instruments and contracts