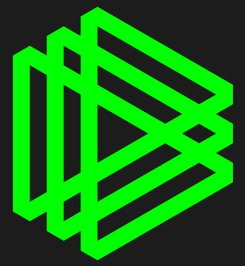

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Web3 Landscape, Part I

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Some Disclosures

- Paradigm is invested in many of the projects we'll discuss today.
- But this talk is about the entrepreneur's perspective, not the investor's.
- Nothing in this talk is investment or legal advice.
- Only representing my own views, not those of Paradigm or our investments.
- Case studies are meant to demonstrate principles of entrepreneurship; specific examples have been simplified.

Web3 Landscape

- Layer 1 Platforms (L1)
- Layer 2 Platforms (L2)
- Infrastructure
- Centralized Finance (CeFi)
- Decentralized Finance (DeFi)

Key questions

How do I decide what to build in web3?

Problem	What pain point am I addressing?
Key differentiator	How is my solution different from others?
Customer	Who is this for?
Moat	How do I defend against competitors?
Business model	How does this make money?

Layer 1

Landscape

- Most decentralized Web3 applications are built on one or more blockchains
- Blockchains manage the state and core logic for those applications
- Each blockchain typically has a native cryptocurrency

Layer 1

Landscape

- **Special-purpose chains** (Bitcoin, Stellar, ZCash, Cosmos Hub...)
- **Generally programmable chains**
  - Ethereum Virtual Machine (EVM) chains (Ethereum, Polygon, Avalanche...)
  - Alternative VM chains (Solana, Sui, Aptos...)

Case study

Solana, Polygon, Avalanche

High-throughput proof-of-stake blockchains.

Problem	High transaction fees on smart contract platforms like Ethereum
Key differentiator	Low transaction fees
Customer	Crypto applications and users
Moat	Network effect of applications and users
Business model	Transaction fees

Layer 1

Open Problems

- **Scaling**: more transactions with lower fees
- **Privacy**: lower public visibility into transactions
- **Programmability**: better languages and virtual machines
- **Interoperability**: easier portability of assets or applications

Layer 2

Landscape

- One solution to scaling is to move some logic from the Layer 1 (L1) chain to a "Layer 2" (L2)
- L2s depend on (and ideally inherit) the security of the L1
- L2s can be specific applications or general-purpose platforms

Layer 2

Landscape

- One popular L2 architecture is a "rollup"
- Rollups post their raw data to the L1, but prove the results of execution more efficiently:
  - **Optimistic rollups**: execution proven via challenge-response game
  - **ZK rollups**: execution proven via fancy cryptography

Case study

Optimism, Arbitrum, Specular

EVM-equivalent smart contract platforms built as an optimistic rollup on Ethereum

Problem	High transaction fees on Ethereum price out many applications and users
Key differentiator	Portability of existing applications and tooling
Customer	Ethereum applications and users
Moat	Network effects of applications and users
Business model	Transaction fees

Layer 2

Open Problems

- **Efficiency**: further reducing transaction costs
- **Programmability**: making ZK rollups as easily programmable as L1s
- **Interoperability**: making it easy to move assets between L2s, or between L2s and L1s

Infrastructure

Landscape

- **Wallets** (Metamask, Phantom, Argent...)
- **Block explorers** (Etherscan, Blockscout...)
- **Node infrastructure** (Alchemy, Infura...)
- **Data indexers** (Dune Analytics, The Graph, nxyz...)
- **Developer tooling** (Tenderly, Foundry, Hardhat...)
- **Custody and key management** (Fireblocks, Anchorage...)
- **Mempool and block building infrastructure** (Flashbots, bloXroute, Blocknative...)

Case study

Fireblocks

Digital asset custody, transfer, and settlement platform.

Problem	Securing private keys is difficult for institutional users
Key differentiator	Supports complex operations like DeFi interactions
Customer	Institutional crypto users
Moat	Trust; settlement network
Business model	SaaS (monthly fees)

Infrastructure

Open Problems

- **User experience**: making web3 as painless as web2
- **Decentralization**: avoiding single points of failure in off-chain infrastructure
- **Monetization**: capturing value from tools (especially open-source)

Centralized Finance

Landscape

- **Exchanges** (Coinbase, FTX, Binance...)
- **On- and off-ramps** (Moonpay, Stripe, Ramp...)
- **Custodians** (Coinbase, Anchorage)

Case study

Coinbase, FTX, Binance

Platforms for buying, selling, transferring, and storing cryptocurrency.

Problem	Crypto on-ramps and exchanges used to be really sketchy
Key differentiator	Simple way to buy and sell crypto and not get hacked
Customer	Crypto holders and traders
Moat	Trust and compliance
Business model	Trading fees

Centralized Finance

Open Problems

- **Institutional adoption**: getting institutions comfortable using crypto
- **Interoperability**: interacting seamlessly with both traditional finance and DeFi
- **Regulatory compliance**: supporting more products in more jurisdictions

Decentralized Finance

Landscape

- **Decentralized exchange** (Uniswap, SushiSwap, Curve...)
- **Stablecoins** (DAI, USDC, USDT...)
- **Lending** (Compound, Aave, Yield...)
- **NFT marketplaces** (OpenSea, Magic Eden...)
- **Yield aggregators** (Yearn...)
- **Insurance** (Nexus Mutual, Risk Harbor...)

Case study

Uniswap, Curve, SushiSwap

Decentralized crypto trading protocols.

Problem	Trading crypto on centralized exchanges requires deposit
Key differentiator	Trade or provide liquidity without giving up custody of assets
Customer	Crypto traders
Moat	Feedback loop between volume and liquidity
Business model	Trading fees

Decentralized Finance

Open Problems

- **User experience**: making non-custodial finance *easier* than custodial
- **Efficiency**: reducing transaction costs
- **Security**: avoiding exploits and bugs as DeFi applications get more complex
- **Regulatory clarity**: determining how DeFi should be regulated

Questions?

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