



P2P / Blockchain / Web3

The Good Parts & Real Use Cases

No speculation • Just what works



Why Web2 is broken



The alternatives



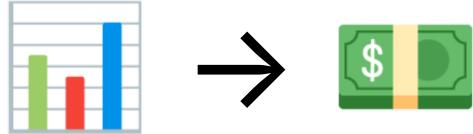
Real use cases today

Web1 (1990s)

- **Read-only** static pages

Web2 (2000s - now)

- **Interactive** platforms
- User-generated content



Data == Money

- Free software → Low barrier to adoption
- Companies sell **your data** to advertisers and investors
- **Example:** Target predicted a teen's pregnancy before her father knew

The Problems

- **Hyper-centralization** — few control everything
- **Attention economy** — apps steal your time
- **Algorithms** — optimize for engagement, not value

Real Consequences

-  **Cambridge Analytica** — election manipulation
-  **Myanmar** — Facebook accused of enabling genocide
-  **Data breaches** — billions of records leaked



Centralized

One actor controls all



P2P

Nodes share directly



Blockchain

Shared ledger, no owner



It's about **who you trust**



Permissioned

- Controlled access
- Known participants
- **Example:** Private company blockchain



Permissionless

- Anyone can join
- No gatekeepers
- **Example:** Bitcoin, TOR

FOSS Alternatives

- Free & Open Source Software
- Auditable code
- **Self-host** or use ethical providers

Blockchain (when appropriate)

- Public, verifiable data
- Resilience & reproducibility
-  Not for confidential data



Examples: Matrix, ActivityPub, IPFS, Ethereum



Nextcloud

Self-hosted cloud



Proton

Encrypted email & VPN



Signal

Encrypted messaging



Stablecoins

Venezuela, Zimbabwe — alternative to broken currencies



Whistleblowers

Tor Network — anonymous, P2P communication



IPFS Wikipedia

Censorship-resistant Wikipedia in restricted countries



Remittances

Lightning Network — cheaper cross-border transfers vs Western Union

 **Zero-Knowledge Proofs:** Prove your age without showing your ID

**7 days →
2.2s**

Walmart supply chain
tracing

1.4 billion

Unbanked adults
worldwide

99.95%

Ethereum energy
reduction (PoS)

The Failures

- **FTX, Luna/Terra** — centralized entities pretending to be decentralized
- **NFT bubble** — speculation ≠ technology value
- **Rug pulls** — permissionless can be exploited

The Lesson

Decentralization theater vs actual decentralization

Always ask: *Who really controls this?*

 Critique

 Counter-argument

 Energy consumption

Proof of Stake uses **99.9% less** energy

 Used for crime

Blockchain is **traceable**; cash preferred by criminals

 Too complex

UX improving; like early internet

 Just speculation

Real production systems exist (Walmart, Signal, etc.)

 Try FOSS alternatives

 Learn to self-host

 Understand before investing

 Build on open protocols



Always ask: Who controls my data?

The Problem

- Web2 exploits your data
- Hyper-centralization is dangerous
- Attention economy harms society

The Solution

- FOSS alternatives exist
- P2P & blockchain for resilience
- **You choose who to trust**



We're still in the early days of Web3

The infrastructure is being built right now



Let's discuss!

Statistics

- **Walmart supply chain:** Blockchain in the food supply chain - What does the future look like? (2021)
- **1.4B unbanked:** World Bank Global Findex Database (2021)
- **Ethereum energy:** Ethereum Foundation - The Merge (2022)
- **Cambridge Analytica:** The Guardian investigations (2018)

Further Reading

- Ethereum.org use cases
- IBM Blockchain case studies
- "Mastering Bitcoin" - Andreas Antonopoulos
- Chainalysis Crypto Crime Reports
- World Economic Forum - Blockchain reports