Product

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I am speaking in my personal capacity, not on behalf of Electric Capital. Nothing in this presentation should be construed as financial advice.

Hello

Avichal Garg
Co-founder
ELECTRIC⚡CAPITAL
$1.5B AUM (± $1.5B)

Started & Sold 2 companies

facebook   Google

Invested in companies worth $100B

Figma   Airtable   deel.   Dapper

BOOM   Notion   cruise   OpenSea

kraken   ANCHORAGE DIGITAL   dYdX   MAGIC EDEN

Agenda

Definitions

Observations & Frameworks

Understanding "Why Now"

Why Web3 Products are Interesting (and different from Web2)

Unique characteristics of great web3 products

Definitions

- **Needs** – the fundamental human drivers, aka the seven deadly sins
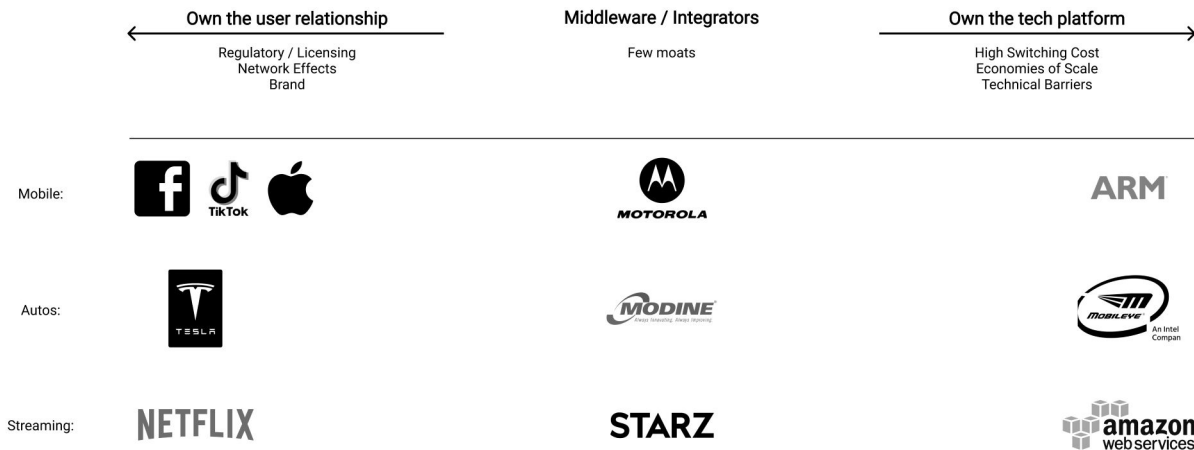
Vice ⬍	Latin ⬍	Italian ⬍	Virtue ⬍	Latin ⬍	Italian ⬍
Lust	*Luxuria*	*Lussuria*	Chastity	*Castitas*	*Castità*
Gluttony	*Gula*	*Gola*	Temperance	*Moderatio*	*Temperanza*
Greed	*Avaritia*	*Avarizia*	Charity (or, sometimes, Generosity)	*Caritas (Liberalitas)*	*Generosità*
Sloth	*Acedia*	*Accidia*	Diligence	*Industria*	*Diligenza*
Wrath	*Ira*	*Ira*	Patience	*Patientia*	*Pazienza*
Envy	*Invidia*	*Invidia*	Gratitude (or Kindness)	*Gratia (Humanitas)*	*Gratitudine*
Pride	*Superbia*	*Superbia*	Humility	*Humilitas*	*Umiltà*

- **Product** – a tool or utility that meets (solves) a need
- **User** – the entity for whom you are solving a problem
- **Market** – the group of users that can sustain the builders of the product
- **Product–Market Fit** – a product that the market so demands that the builders of the product will succeed despite their best efforts to fail
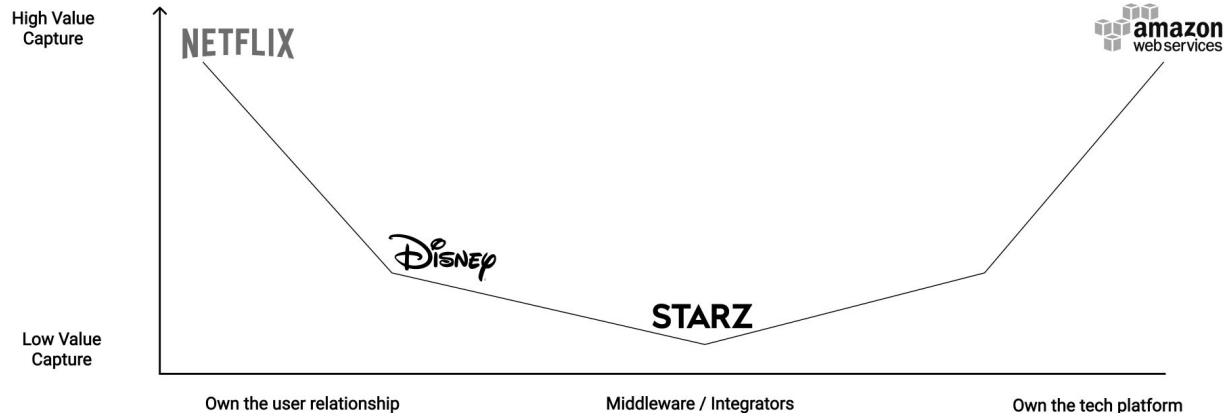
A few observations

- **Needs** – the fundamental human drivers do not change
- **Product** – you should be able to distill a product in market down to the fundamental need it actually addresses (not what it claims to address)
- **User** – a BIG part of being the best product is acquiring users
- **Market** – markets are dynamic; companies use non–product advantages

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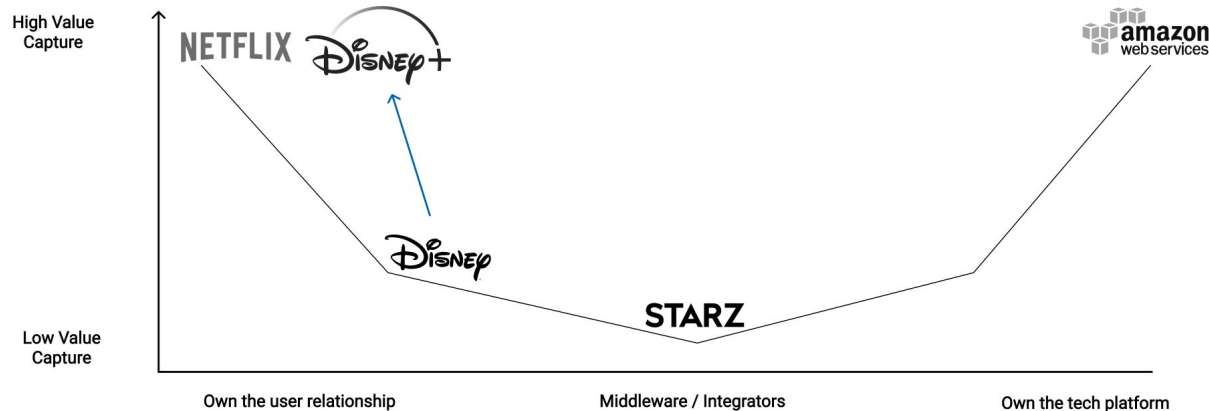
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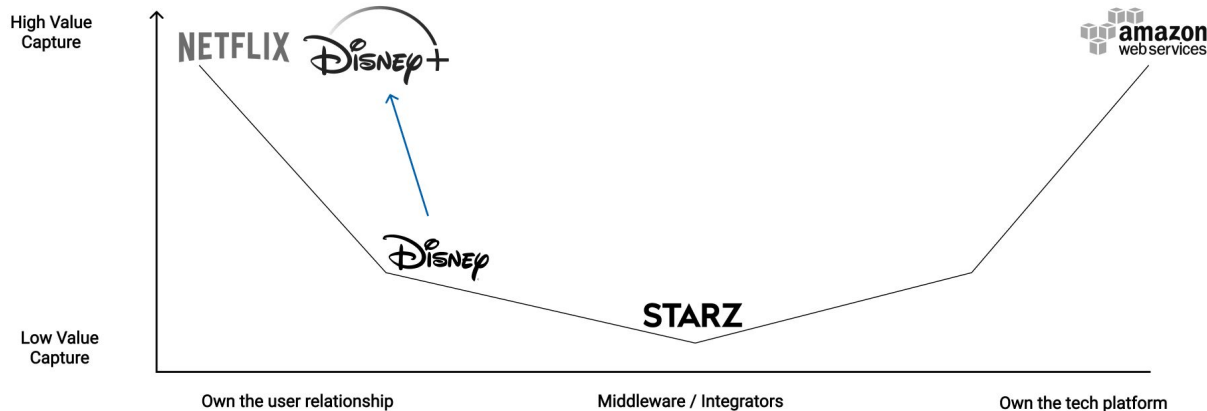- **Market** – markets are dynamic; companies use non-product advantages
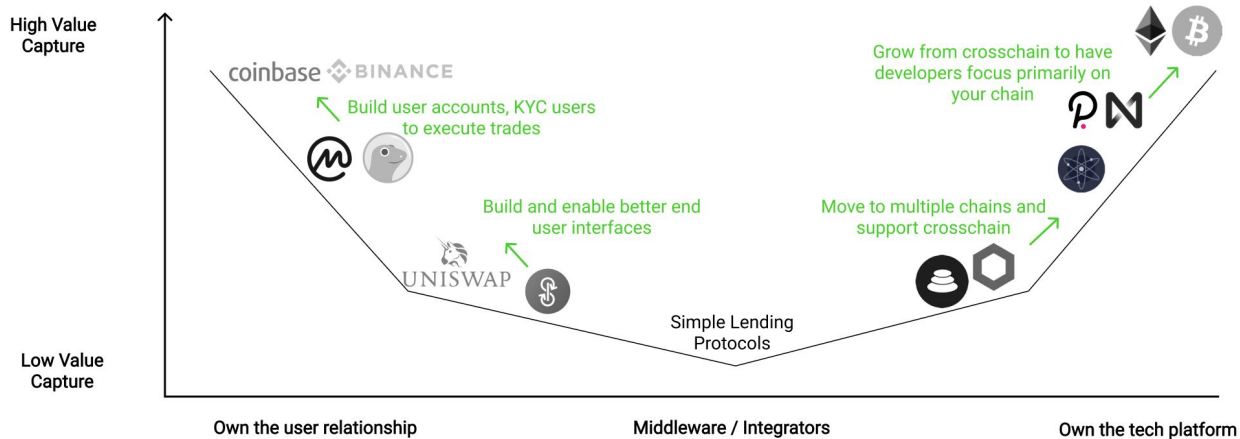
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High Value Capture

coinbase ◆ BINANCE

Build user accounts, KYC users to execute trades

Grow from crosschain to have developers focus primarily on your chain

Build and enable better end user interfaces

Move to multiple chains and support crosschain

UNISWAP

Simple Lending Protocols

Low Value Capture

Own the user relationship   Middleware / Integrators   Own the tech platform
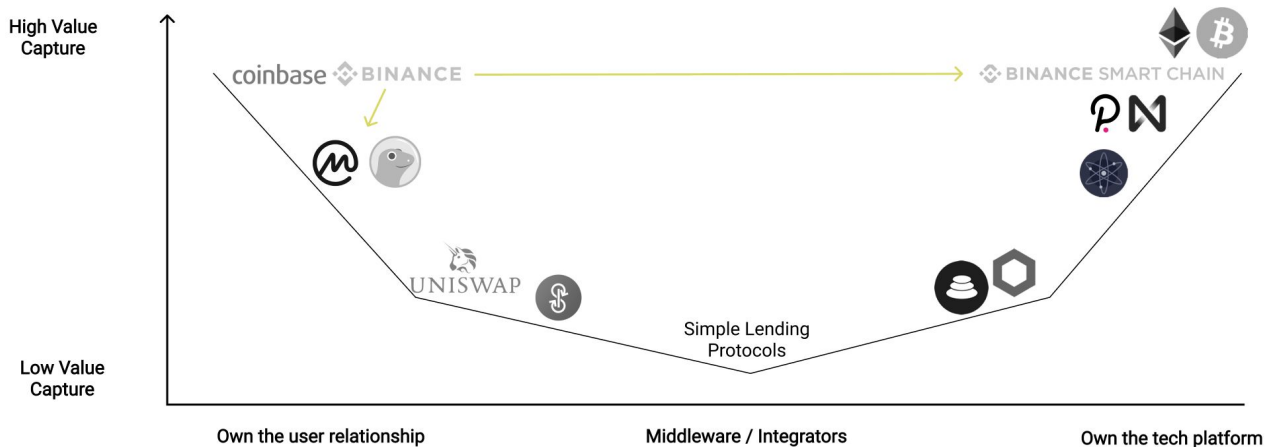
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Why Now? Is the most important question

The 5 "Why Now" answers

1. **New technology** allows products that simply weren't possible before, e.g. battery tech and electric cars
2. **New user acquisition channels**, e.g. search/SEO, tokeneconomics
3. **New business model**, e.g. advertising could support free content online
4. **Customer behavior has shifted**, e.g. a desire for ephemerality once people understood the consequences of searchable, permanent identity
5. **New regulation**, e.g. Obamacare

Reference: https://avichal.com/2017/11/27/why-now/

Why Now? Is the most important question

<u>Web3/Crypto hits on at least 4 of the 5!</u>

1. **New technology**
2. **New user acquisition channels**
3. **New business model**
4. **Customer behavior has shifted**
5. **New regulation**

1. New technology that enables entirely new products

Crypto makes the opposite trade-offs as Web2

	WEB3/CRYPTO	WEB2
Throughput	Low	High
Ease of Use	Low	High
Developer Ease	Low	High
Distribution / Reach	Low	High
Platform Independence	High	Low
Data Immutability	High	Low
Seizure Resistance	High	Low
Privacy	High	Low

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Where do these trade-offs make sense? Money.

	WEB3/CRYPTO	WEB2
Throughput	Low	High
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Programmable Money: Software is eating money

Cash & Cash Equivalents →

Store of Value →

Programmable Money is eating capital markets

Derivatives Markets	CME Group	dYdX
Public Equities	Nasdaq	
Private Equities	KKR	THE LAO
Business & Consumer Lending		
Cash & Cash Equivalents		
Store of Value		

We have kicked off a flywheel of investment into infrastructure

01 INFRASTRUCTURE

02 KILLER APPS

03 USER GROWTH

04 CAPITAL & FOUNDERS
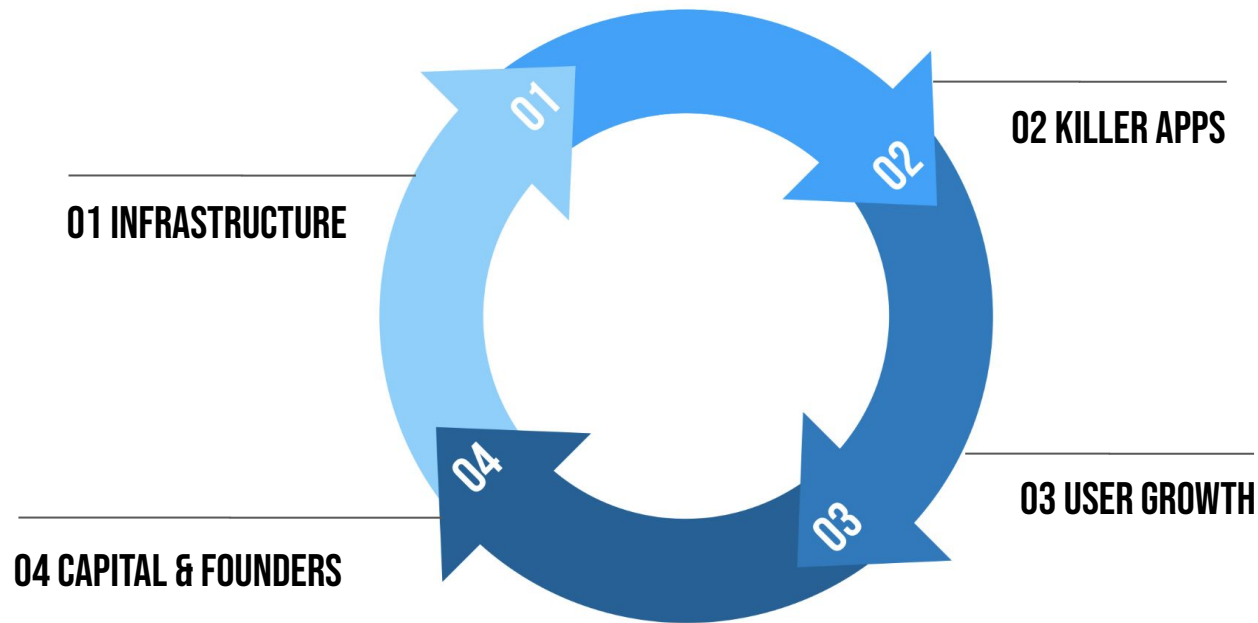
Crypto is the next phase of the Internet

	WEB3 IN 2030	INTERNET
Throughput	High	High
Ease of Use	High	High
Developer Ease	High	High
Distribution / Reach	High	High
Platform Independence	High	Low
Data Immutability	High	Low
Seizure Resistance	High	Low
Privacy	High	Low

Crypto markets will eat the world

Social

Creator Economies

Open Source Dev Infrastructure

Decentralized Computing

Financial Services · DeFI

Proof of Stake

Proof of Work Networks

Early Crypto ┈┈┈┈┈┈┈┈┈┈┈┈┈> **Today** ──────────────> **Future**
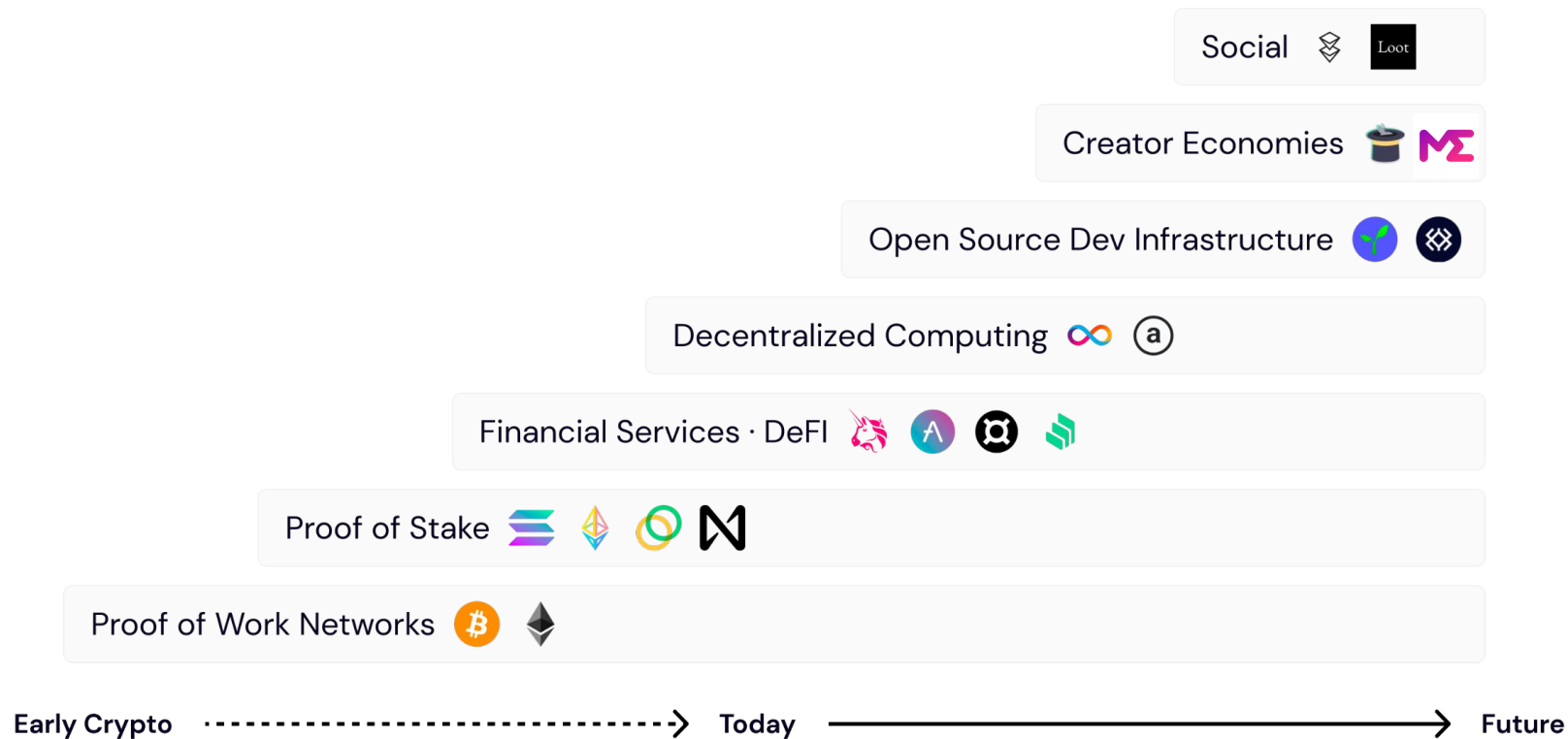
Why is this good for startups and entrepreneurs?

	WEB3/CRYPTO	WEB2
Throughput	Low	High
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Seizure Resistance	High	Low
Privacy	High	Low

Legacy companies lose to software startups. Why?

Retail

Amazon
$1.24T

Automotive

Tesla
$901B

Media

Facebook
$560B

Hospitality

Airbnb
$107B

Walmart
$386B

GM
$32B

FOX
$21B

Marriott
$54B
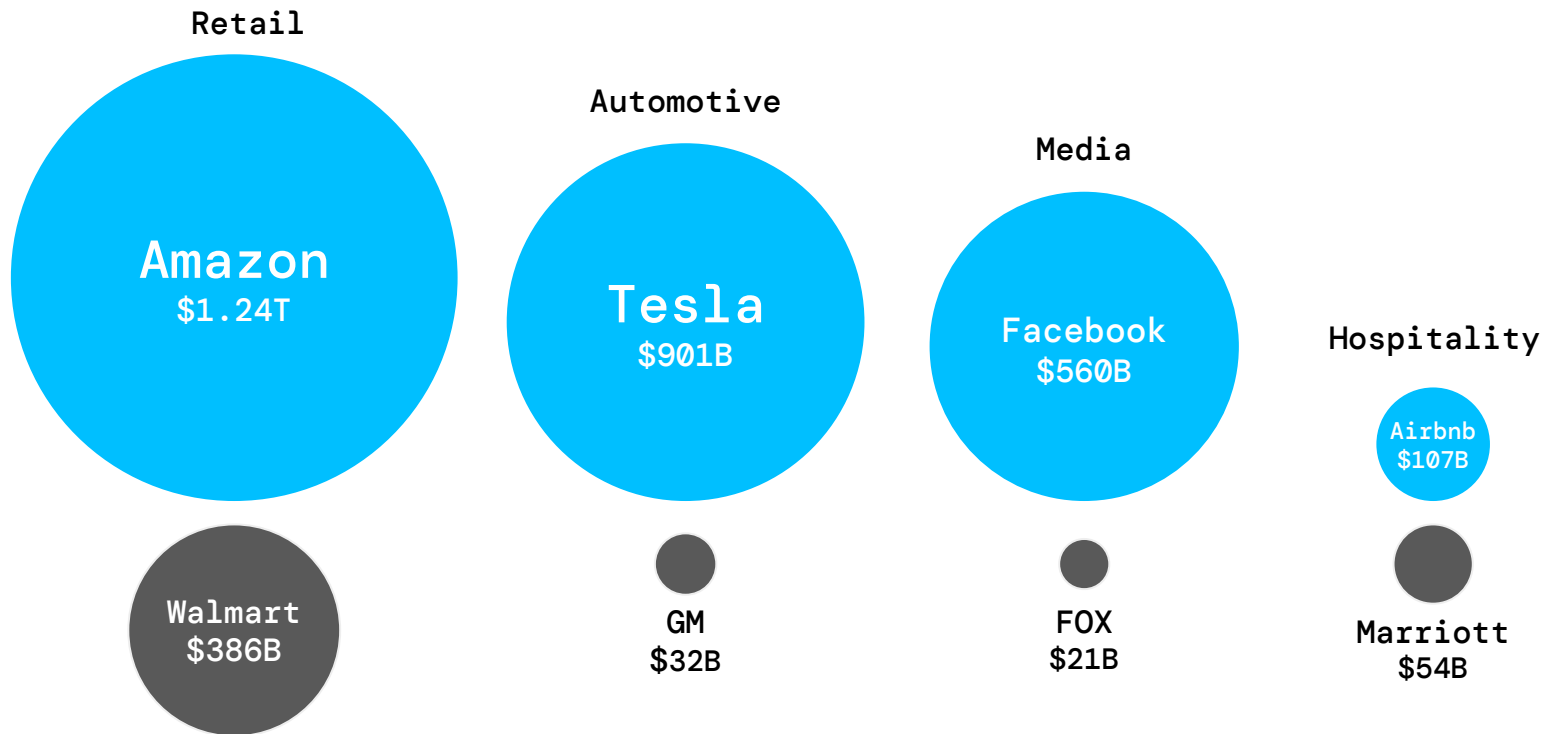
Source: Market cap as of 12/31/2021. Data from Yahoo Finance.

Avichal - Electric ⚡ Capital
@avichal

One important but under-appreciated corollary to "software is eating the world" is "software engineers are running the world"
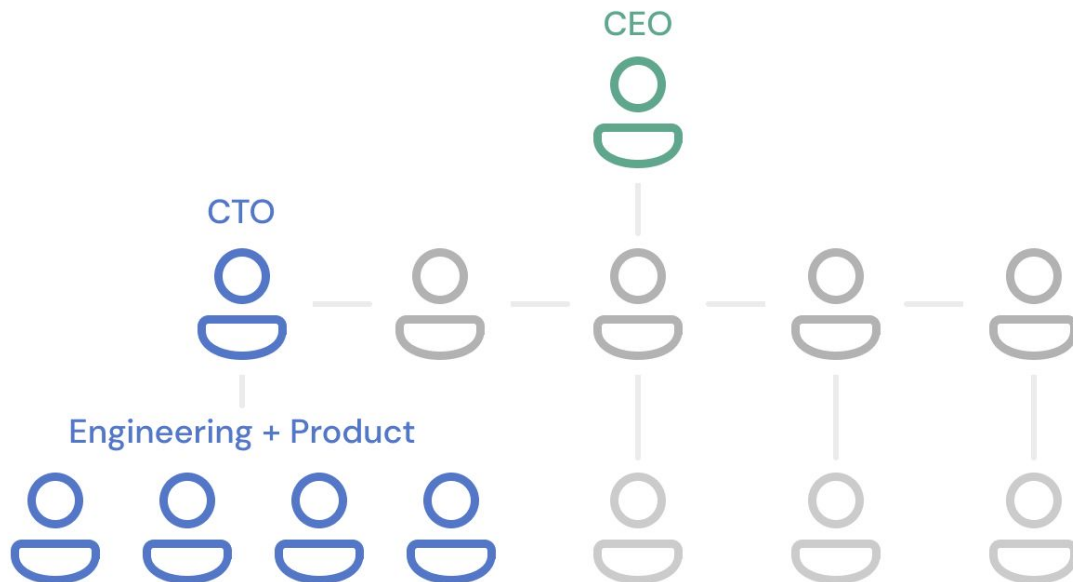
It's just a matter of time till all public and private institutions are run by engineers.

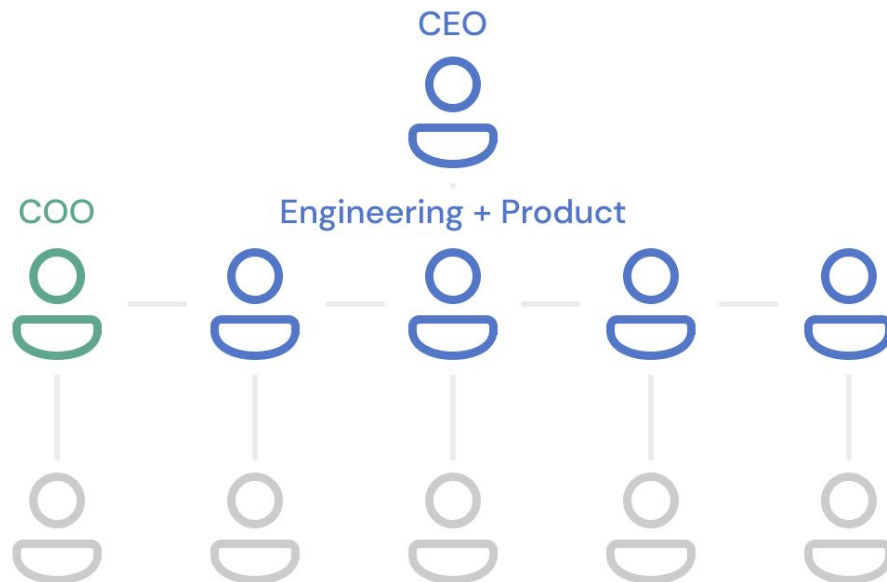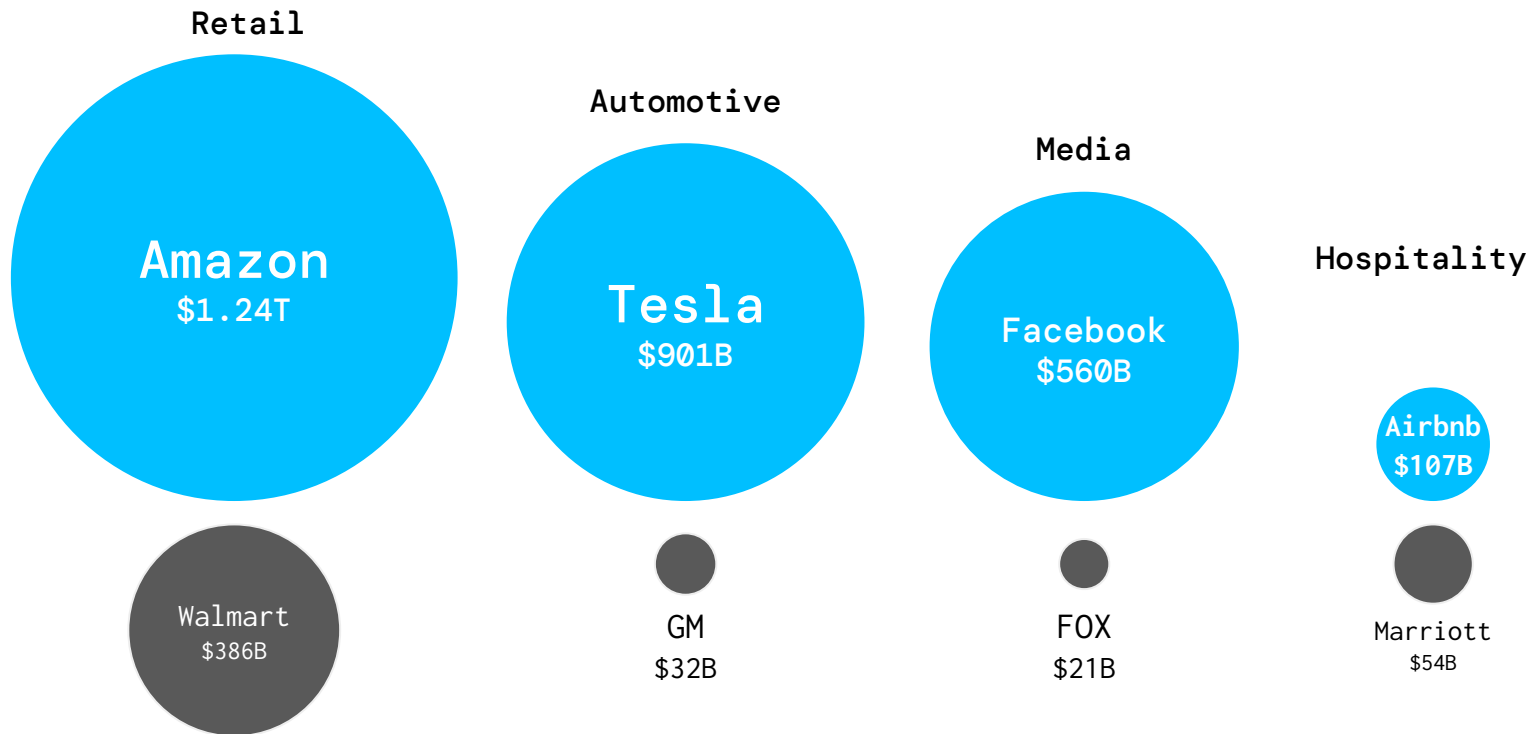12:56 PM · Mar 20, 2019 · Twitter Web Client

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To compete, legacy companies would have to upend their org charts

CEO

CTO

Engineering + Product

To compete, legacy companies would have to upend their org charts

CEO

COO   Engineering + Product

Retail

Amazon
$1.24T

Walmart
$386B

Automotive

Tesla
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GM
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Media

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Source: Market cap as of 12/31/2021. Data from Yahoo Finance.

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2. New user acquisition channel

The Internet made things free

Cost (y-axis) plotted against Pre-Internet, Web1, Web2 (x-axis), showing a declining line.
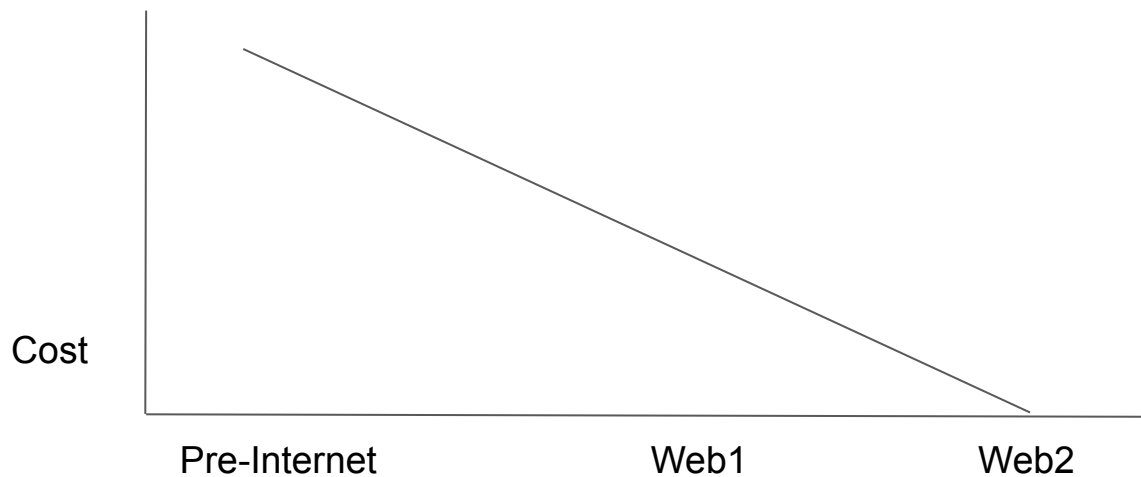
What's better than free? Getting paid

Cost

$0

} Pay users to use your product!

Pre-Internet   Web1   Web2   Web3
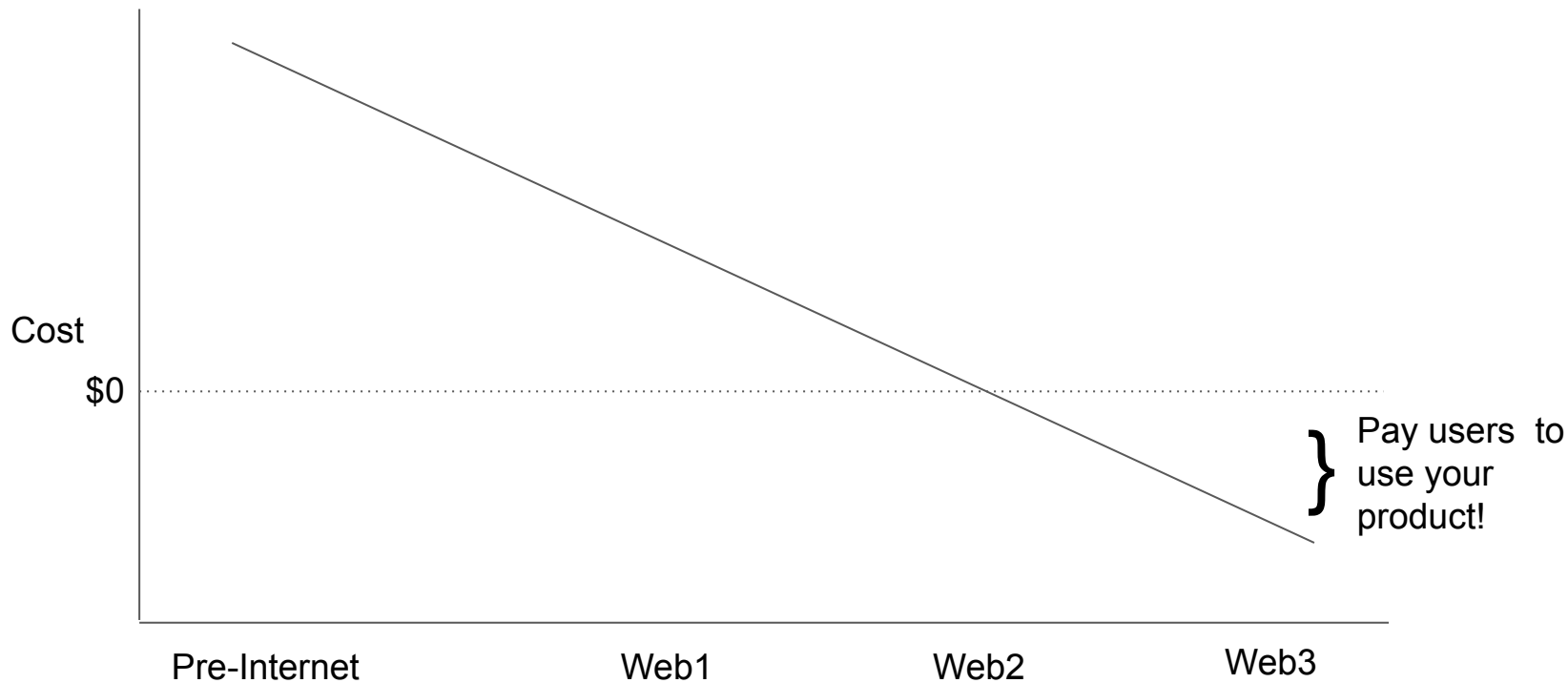
Tokens are better than cash at aligning incentives

Reference: https://medium.com/@cdixon/crypto-tokens-a-breakthrough-in-open-network-design-e600975be2ef
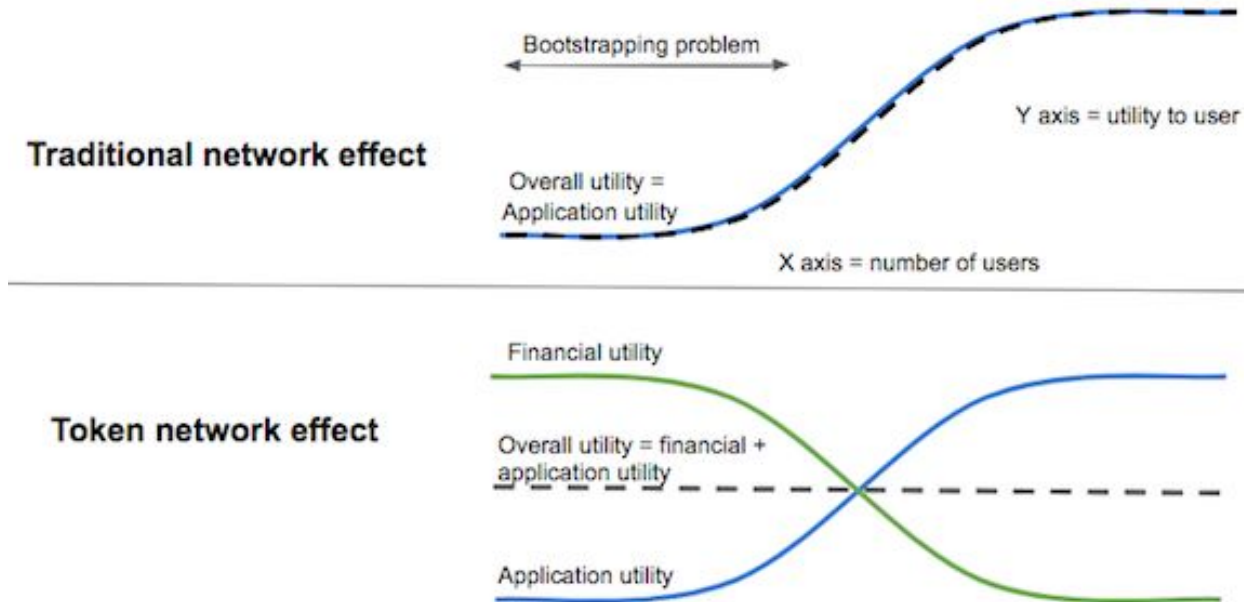
Tokens are NOT a business model – they are a marketing tool

"A well-designed token network carefully manages the distribution of tokens across all five groups of network participants (users, core developers, third-party developers, investors, service providers) to <mark>maximize the growth of the network</mark>."

Reference: https://medium.com/@cdixon/crypto-tokens-a-breakthrough-in-open-network-design-e600975be2ef

3. New business model

Permissionless digital assets & networks = new biz models

1. **Permissionless P2P payments** - I don't have to pay a bank or credit card company a high fee (or risk getting shut off)
2. **Borderless networks** - I can transact in any geography with a counterparty
3. **Smart contracts** - a smart contract can be a counterparty to a transaction or an intermediary in a transaction
4. **NFTs** - people can buy (via p2p) and own digital assets
5. **Zero-knowledge** - products with privacy baked in (that perhaps people will pay for?) allow disruption of data-monetized based businesses
6. **DAOs** - on-chain collaboration and capital formation to organize human output.

4. User behavior has changed

We have lost trust in the institutions that made society work

Caveat: This is old data from a 2017 presentation I made.

It may be obvious to everyone now.
It was obvious 6 years ago if you looked at the data.

ONLY 20% OF AMERICANS TRUST WASHINGTON

% who trust the govt in Washington always or most of the time

Moving average — Individual polls

32% OF AMERICANS TRUST THE MEDIA

Americans' Trust in the Mass Media

In general, how much trust and confidence do you have in the mass media -- such as newspapers, TV and radio -- when it comes to reporting the news fully, accurately and fairly -- a great deal, a fair amount, not very much or none at all?

% Great deal/Fair amount
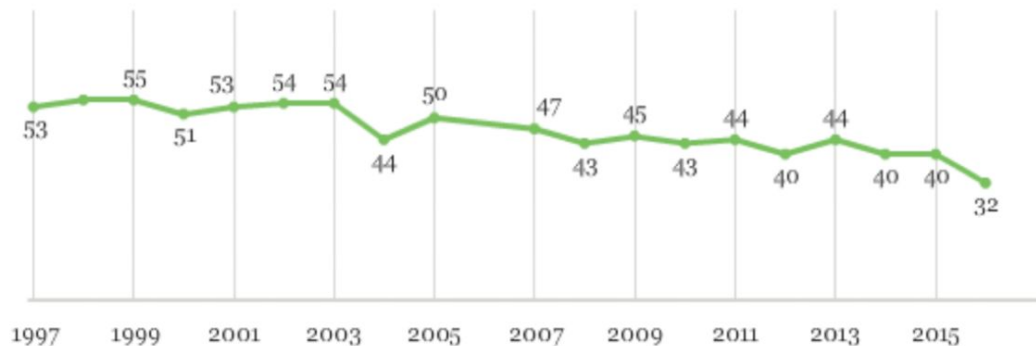
GALLUP

29% OF AMERICANS TRUST PUBLIC SCHOOLS

Confidence in the Public Schools
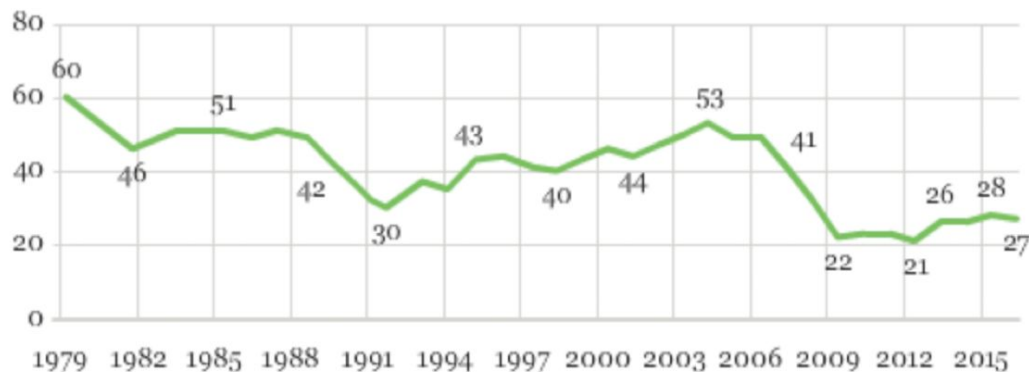
■ % Great deal/Quite a lot

GALLUP

27% OF AMERICANS TRUST BANKS

Americans' Confidence in Banks, 1979-2016 Trend

Now I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one -- a great deal, quite a lot, some or very little.
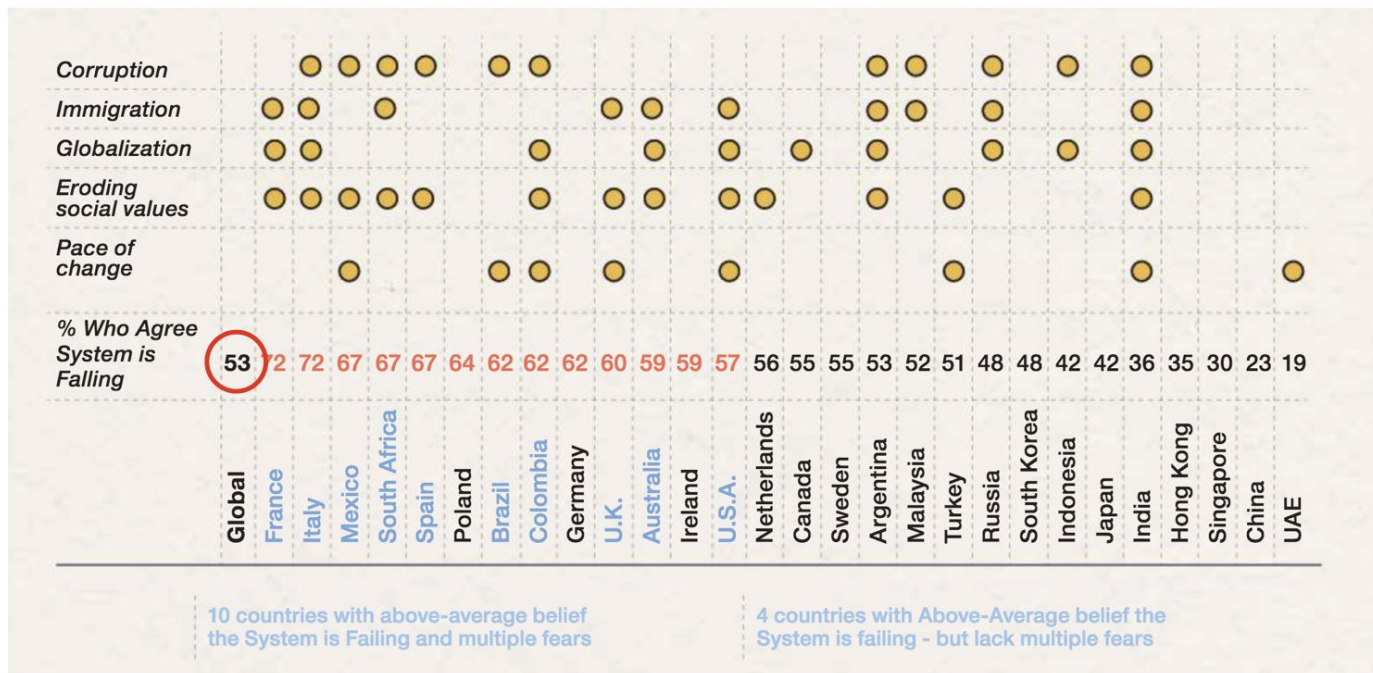
■ % A great deal/Quite a lot

GALLUP

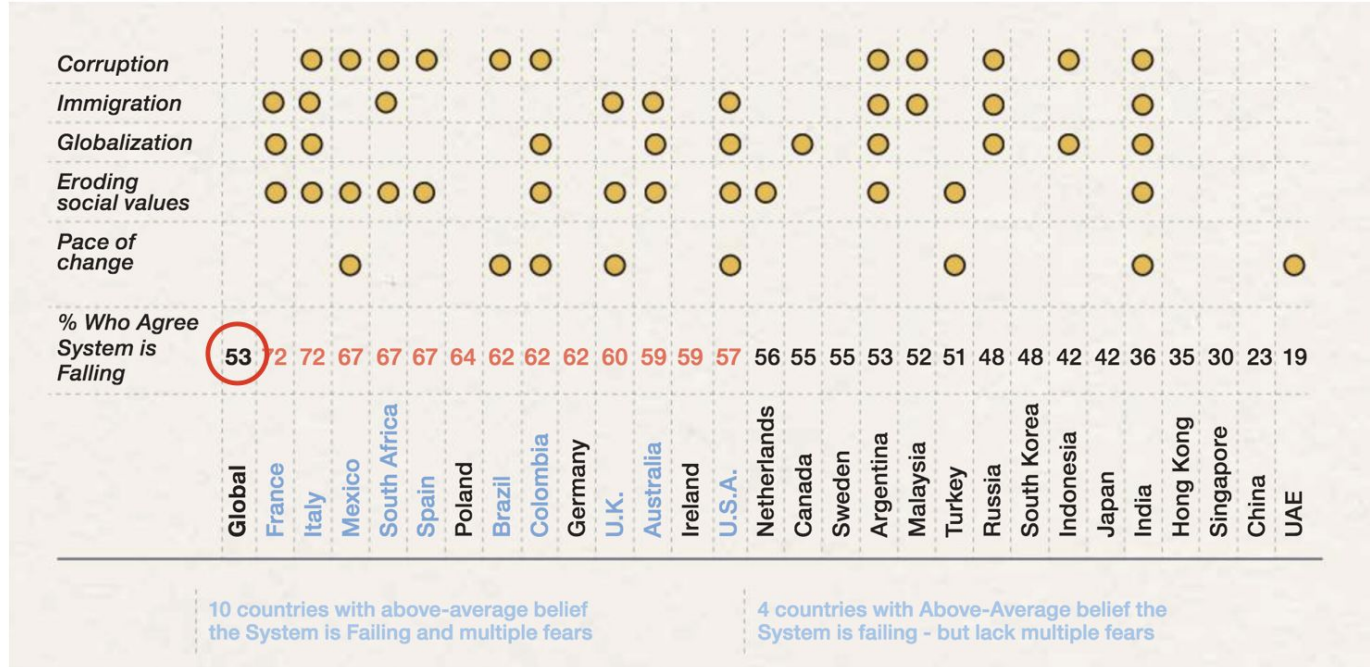# LACK OF TRUST IS MANIFESTING ACROSS THE WORLD

GLOBALLY 53% SAY "SYSTEM IS FAILING"

	Global	France	Italy	Mexico	South Africa	Spain	Poland	Brazil	Colombia	Germany	U.K.	Australia	Ireland	U.S.A.	Netherlands	Canada	Sweden	Argentina	Malaysia	Turkey	Russia	South Korea	Indonesia	Japan	India	Hong Kong	Singapore	China	UAE
Corruption		●	●	●	●		●	●								●	●		●		●		●						
Immigration		●	●		●						●	●		●		●	●		●		●				●				
Globalization		●	●					●			●		●		●		●		●			●		●					
Eroding social values		●	●	●	●			●			●		●			●			●				●						
Pace of change			●				●	●		●		●						●					●						●
% Who Agree System is Falling	53	72	72	67	67	67	64	62	62	62	60	59	59	57	56	55	55	53	52	51	48	48	42	42	36	35	30	23	19

10 countries with above-average belief the System is Failing and multiple fears

4 countries with Above-Average belief the System is failing - but lack multiple fears

Web3 technologies solve trust problems

NEW TECHNOLOGY	DESCRIPTION	USE CASE	EXAMPLES
Blockchain	Structured data is written to an distributed ledger	Seizure resistant claims of ownership	Home title + Lines of Credit
Cryptocurrency	A digital representation of value that can be transferred peer-to-peer	Peer to Peer Payments	Cross-border Settlement
Non-fungible Token	A unique digital representation that can be transferred between people	Unique digital collectibles	Ticketing for concerts
Zero-Knowledge Proof	A way to prove facts about the world without leaking information about why that fact is true	Private transactions	Private healthcare payments
Smart Contract	Computer code that can own and transfer digital tokens / money	Transfer value between people or computers in programmable ways	Escrows, Trusts, Derivatives

Why Now? Is the most important question

Web3/Crypto hits on at least 4 of the 5!

1. **New technology**
2. **New user acquisition channels**
3. **New business model**
4. **Customer behavior has shifted**
5. **New regulation (maybe green one day soon?)**

What will a great Web3 product do?

0. Meet a fundamental human need
1. Use the unique trade-offs of crypto technologies (it's ok to be slow if you are seizure resitant)
2. Use tokens for customer acquisition (in a way that maintains unit economics)
3. Enable stakeholder ownership of the product/protocol
4. Operate in a transparent, trust-minimized way
5. Be compliant with key regulations

How do you go from this "checklist" to product validation?
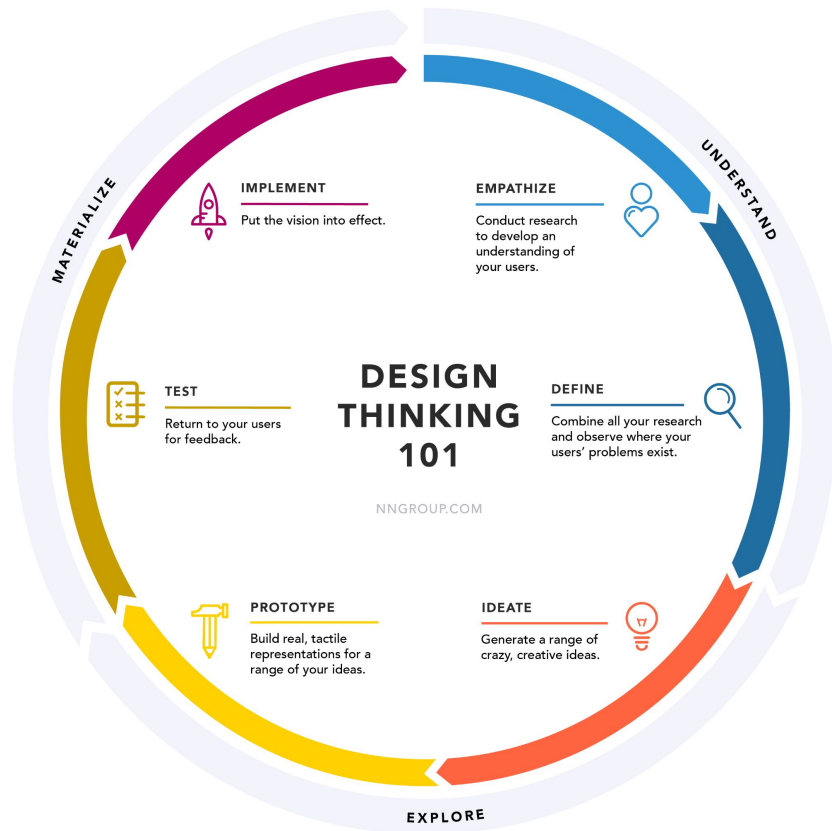
There is lots of prior art on this.

Tl;dr:
1. Deeply understand your market.
2. Deeply understand your user / human need.
3. Learn (aka fail) as quickly as possible. Velocity relative to competition determines who wins.
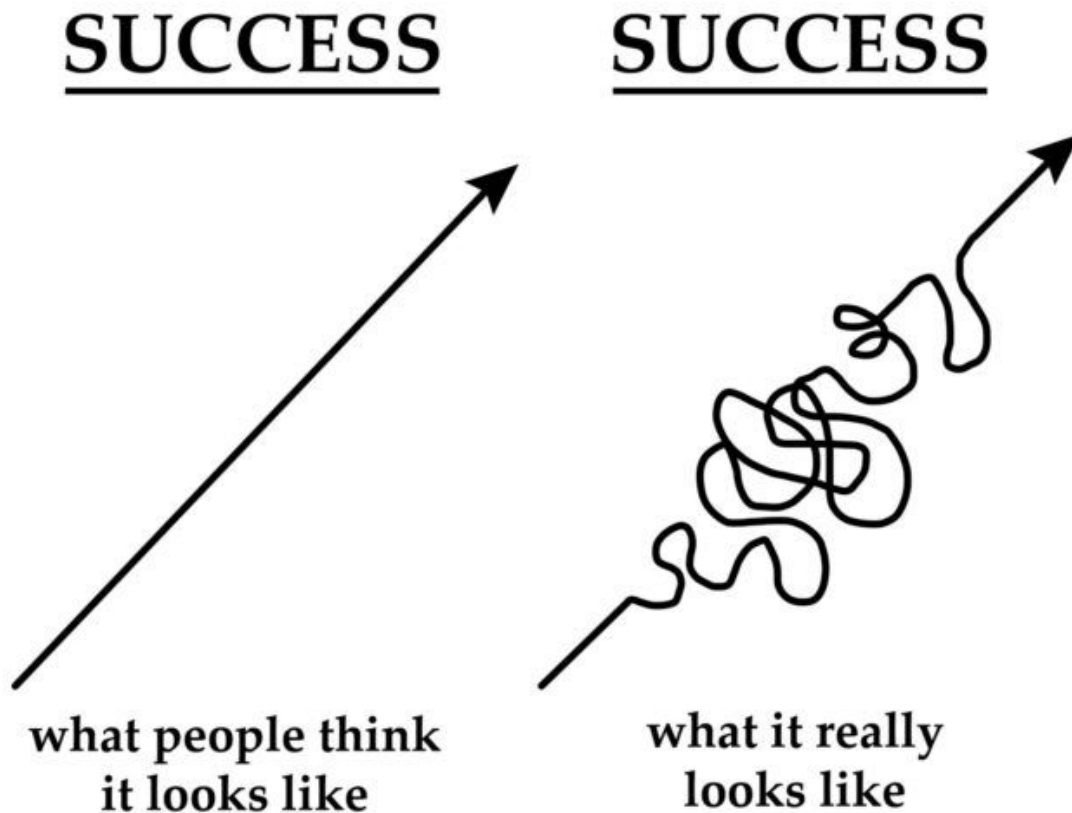
Resources:
- [Avichal's from -1 to 0 Syllabus](#)
- https://designthinking.ideo.com/

Velocity wins: iterate through this loop as fast as you can

MATERIALIZE

UNDERSTAND

EXPLORE

IMPLEMENT
Put the vision into effect.

EMPATHIZE
Conduct research to develop an understanding of your users.

TEST
Return to your users for feedback.

DEFINE
Combine all your research and observe where your users' problems exist.

DESIGN THINKING 101

NNGROUP.COM

PROTOTYPE
Build real, tactile representations for a range of your ideas.

IDEATE
Generate a range of crazy, creative ideas.

Note: It feels terrible

SUCCESS

SUCCESS

what people think
it looks like

what it really
looks like

Thus, you have to believe in something more than success

Founder-Product and Founder-Market Fit is just as important as Product-Market Fit.

The best products are created by people who are obsessed with the problem, with the solution, with the market - not by the outcome.

Of the millions of people who could build this, why are you the one who will win?
Of the millions of products you could build, what is the one you were put on Earth to create?

Some concrete ideas for products

DAOs

- **Merit-based systems to onboard new members** — DAOs will become organizations that attract talent on par with the best companies. Many people join DAOs through a token purchase, but this cannot ensure that the most talented or most prolific contributors join. Mechanisms that allow more people to onboard onto DAOs based on merit will be strategically valuable.
- **Governance aggregators** — People have trouble tracking and prioritizing new proposals, especially across multiple DAOs. Platforms that aggregate and surface proposals in a way that allows members to participate more easily will be used by all DAOs (of which there may be millions).
- **Mechanisms to improve distributed decision-making** — Today many decisions are made by those with the greatest number of tokens. We need mechanisms to not only increase the number of participants, the level of engagement, but the ability to solicit engagement from the right people.
- **Compensation mechanisms —** DAO contributors need fair and transparent compensation. One effective way to compensate contributors for their work today is through DAO-issued bounties on platforms like Layer3. Contribution to DAOs can be on-chain, off-chain, one time, or recurring. As DAOs grow in complexity, these contribution types will also grow and evolve. We want to fund projects that allow DAOs to distribute compensation fairly and openly for all types of contributors.

Some concrete ideas for products

DAOs

- **DAO discovery platforms** — The rate of DAO creation is growing exponentially. The largest DAOs control a treasury of billions in value, give out grants, and employ large teams. In contrast, the smallest DAOs can be a small group who have pooled resources to purchase an NFT. We need platforms that allow more users to discover and explore DAOs that fit their needs and interests.
- **Recruiting platforms** — DAOs need the ability to tap into talent networks and expertise. Platforms like Rabbithole enable users to start earning credentials that DAOs can use to verify talent, just as we use diplomas and certifications to ascertain expertise and experience.
- **Treasury management** — Today, DAOs can have complex treasuries that include a mix of different types of tokens and stablecoins. DAOs have the challenge of effectively managing their treasuries with distributed decision-making. Organizations like LlamaDAO are experts in creating proposals and helping DAOs walk through treasury decisions. There will be many more tools that empower DAOs to effectively grow and leverage their treasuries.

Some concrete ideas for products

NFTs

- **Pricing mechanisms for NFTs** — Accurately pricing NFTs is a challenge. The lack of pricing creates two problems: (1) most NFTs do not have liquidity, and (2) financial derivatives cannot form on top of NFTs. Projects that enable us to accurately price NFTs will unlock new use cases and greater adoption.
- **Infrastructure to support NFTs as productive assets** — Currently there are two mechanisms of capital generation through NFTs: (1) generating yield through rental, lending, etc., or (2) revenue sharing through royalties and splits. Both these mechanisms are in their infancy. As this space matures, we expect to see music NFTs that split royalties with fans, Hollywood movies that share revenue back to NFT-based characters, and the ability to lend or rent the cash flow on these NFTs. We believe verticalized infrastructure to support these types of productive NFTs will be some of the most important platforms in Web3.
- **Discovery platforms** — It is difficult to discover NFT collections or find out about new mints. Effective discovery platforms will increase the adoption of NFTs and allow more people to find their niche. How these platforms operate may be very different than centralized web2 companies.

Some concrete ideas for products

NFTs

- **NFT financial derivatives** — Like assets in the real world, we believe NFTs will have futures markets, options for hedging, insurance, and other types of financial derivatives. Financial products built on top of NFTs will make NFTs more useful.
- **Creator guilds** — We believe creators will leverage NFTs for monetization and use them to mobilize their fans. Today, however, there is a lack of best practices and infrastructure for creators to use NFTs. Creator guilds may allow creators to share resources like community managers, playbooks, and fan bases.
- **Verticalized secondary marketplaces** — When NFTs can represent anything from music to metaverse land to credentials, new marketplaces will emerge to support the specific needs of each type of NFT.
- **Physical to digital bridges** — NFTs can be digital representations of the physical world. We believe we will see more generalized mechanisms to get a physical asset by burning a digital one, event ticketing systems that leverage NFTs, NFTs as immutable storage of medical records, course attendance, identification, and more.

Some concrete ideas for products

DeFi

- **Growing DeFi on non-Ethereum chains** — Ethereum presents a unique set of tradeoffs between security, speed, and decentralization. Non-Ethereum chains may be a more affordable onramp for the next wave of users into DeFi.
- **Bridging yield opportunities across chains** — As more users onboard onto alternative chains, they will want to access potential yield opportunities on other chains. Similarly, Ethereum users will want to access yield opportunities by providing capital onto new chains.
- **Simple exposure to complex strategies** — Platforms like Ribbon simplify complex options strategies. We want to fund platforms that give users simple exposure to strategies like delta-neutral yield farming, leveraged market making, downside protected lending, and others.
- **Novel mechanics to bootstrap protocol owned liquidity** — As more protocols launch and grow, the need for bootstrapping mechanisms will increase. We believe there will be new, innovative bootstrapping mechanisms as new protocols launch.
- **Payment streams and vesting** — Standardization of payment streams in crypto would unlock many use cases: employment contracts, vesting contracts, DAO-to-DAO contracts, and even unsecured lending.

Some concrete ideas for products

Decentralized Infrastructure

- **Verified frontend hosting** – The BadgerDAO hack resulted in $120m lost funds because hackers inserted malicious code into the dApp frontend even though the smart contracts were completely secure. Verified frontend hosting will help ensure that when a user is interacting with a dApp through their web browser, it is the securely built official version.
- **Decentralized computation** — We are seeing the unbundling of computation from those services with specialized networks focused on indexing, running background tasks, storing public/private data, and serving RPC requests. If devs can build a Docker container that express business logic, they could run it on a decentralized network and serve the result of that computation.
- **Zero-knowledge developer tools** — Zero-knowledge technology is not only useful for private payments and rollup validity proofs, but also useful for interesting new use cases like games. Privacy tech like zk-SNARKs and developer tooling around privacy solutions is a prerequisite to building incomplete information games out in the open.
- **Security review on every commit** — Security of assets on chain will become more important because of the immutability and trustlessness of blockchain. Tools that can review security during development rather than only after being code-complete will be critical.

Some concrete ideas for products

Broadening Access to Crypto

- **Crypto-enabled games with an interoperable backend** — Crypto-enabled games have the potential to create user experiences superior to that of traditional digital games. With a fully interoperable backend, anyone can easily build plugins or mods into the game or be able to trustlessly fork the game, thus evolving game experiences quickly.
- **Mobile DeFi experiences** — Most DeFi apps are optimized for desktop experiences today, leaving out user bases who operate on mobile. The verification and research necessary to participate in DeFi today limits it to primarily desktop browsing experiences. Mobile app developers are also beholden to centralized app stores, which may block DeFi experiences. However, as complex DeFi strategies become more simply packaged and as security and verification processes get better for wallet connections, DeFi experiences that can be accessible to more users become important.

Some concrete ideas for products

Broadening Access to Crypto

- **Multichain wallets that verify contracts** — As crypto evolves, new challenges emerge. For example, the rise of multiple types of Layer 1s has created new usability challenges, such as difficulties in moving assets between chains or accessing multiple chains with a unified wallet. We want to fund wallets with infrastructure to provide smooth user experiences, like verifying contracts before connecting or integrating with multiple Layer 1s.
- **Earning crypto** — Fiat onramps have two key issues that exclude important user bases from accessing crypto: (1) many people do not have money to put into crypto, and (2) centralized exchanges will not support fiat from every country. Bounty protocols, task platforms, play-to-earn, and merit-based on-ramping mechanisms will make crypto accessible to everyone.

Summary

- Human needs tend to not change
- Markets are not free or fair
- Products need to have a good answer to "Why Now"
- Web3 has multiple good answers to "Why Now"
- Great Web3 products will
  a. Meet a fundamental human need
  b. Use the unique trade-offs of crypto technologies (it's ok to be slow if you are seizure resitant)
  c. Use tokens for customer acquisition (in a way that maintains unit economics)
  d. Enable stakeholder ownership of the product/protocol
  e. Operate in a transparent, trust-minimized way
  f. Be compliant with key regulations
- There are lots of good resources on how to go from idea to product. They all basically converge to "the team that learns the fastest, wins"

Q&A