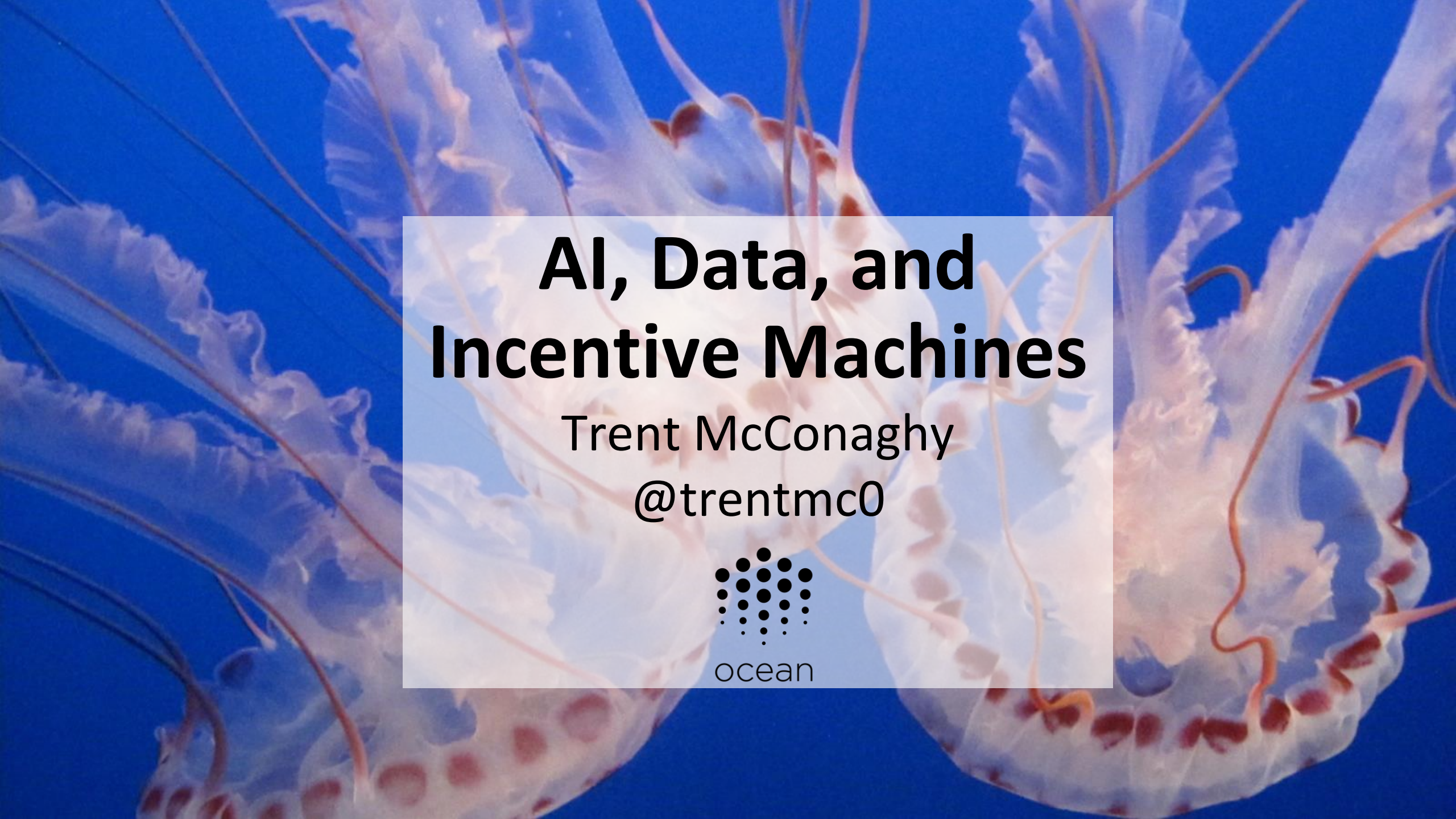

AI, Data, and Incentive Machines

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#Data
#Incentives

Audio radar

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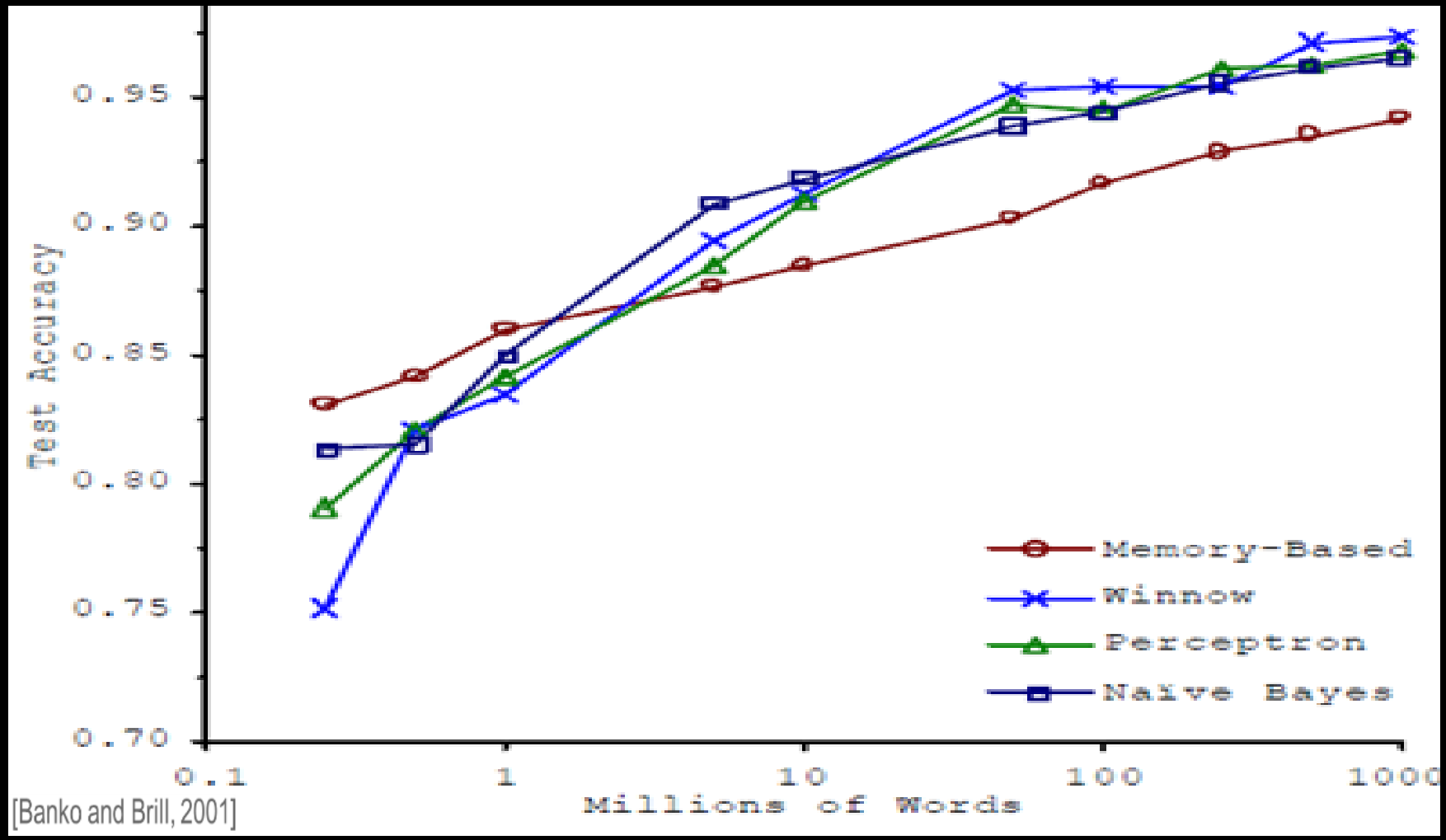
The Unreasonable Effectiveness of Data



1000% less error!

1000x *more* data

Silo mo' data

↓

Mo' accuracy

↓

Mo' $

Default incentive: hoard the data

“Show me the incentive
and I will show you the outcome.”

-Charlie Munger

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FB's Schelling point is data silos. No amount of apologies or promises, or even data governance boards, will change that. You need to change the core of FB: the incentives, the Schelling point.

Change the incentives!

~~Silo~~ *Pool* mo' data

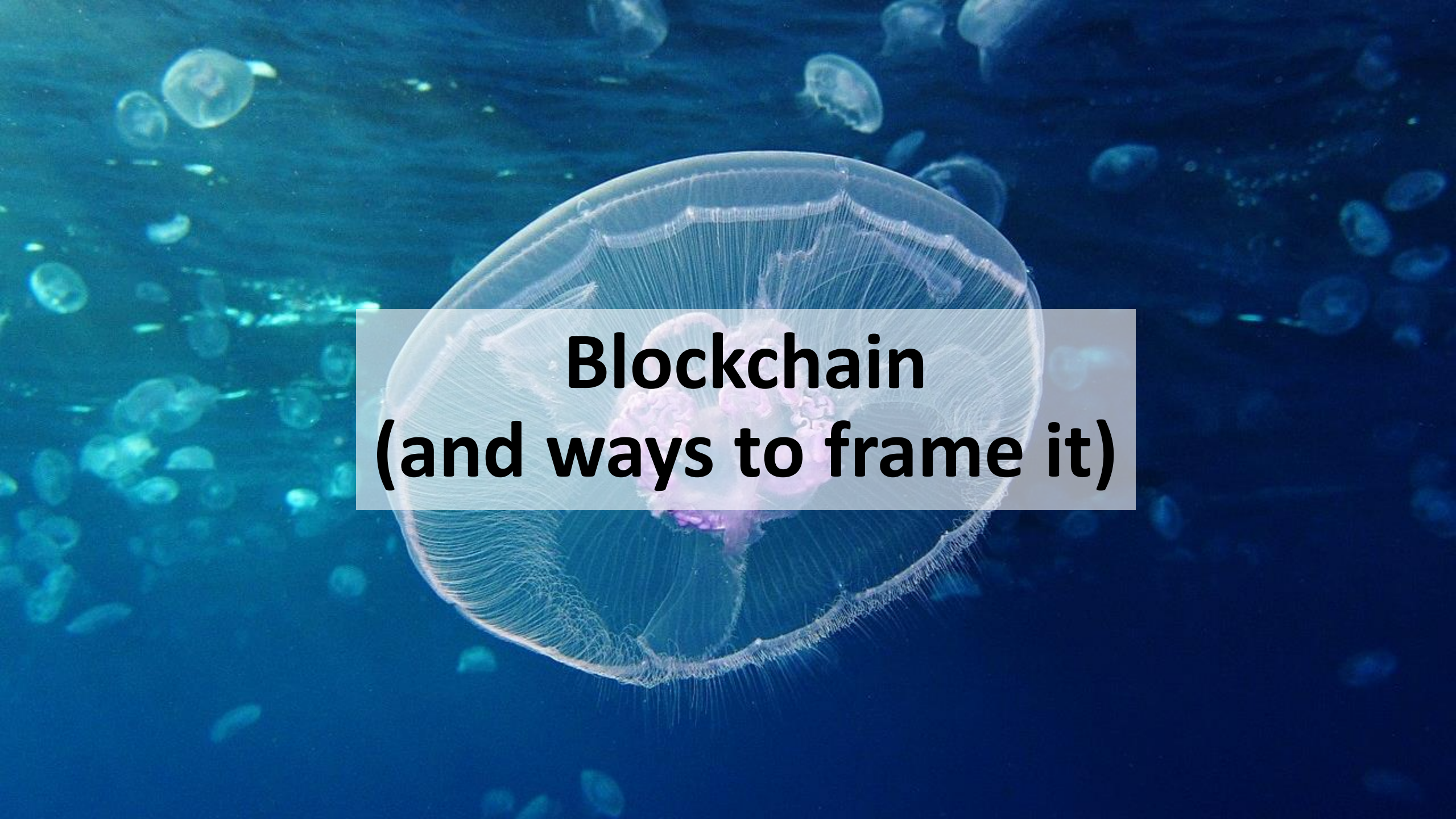
⬇

Mo' accuracy

⬇

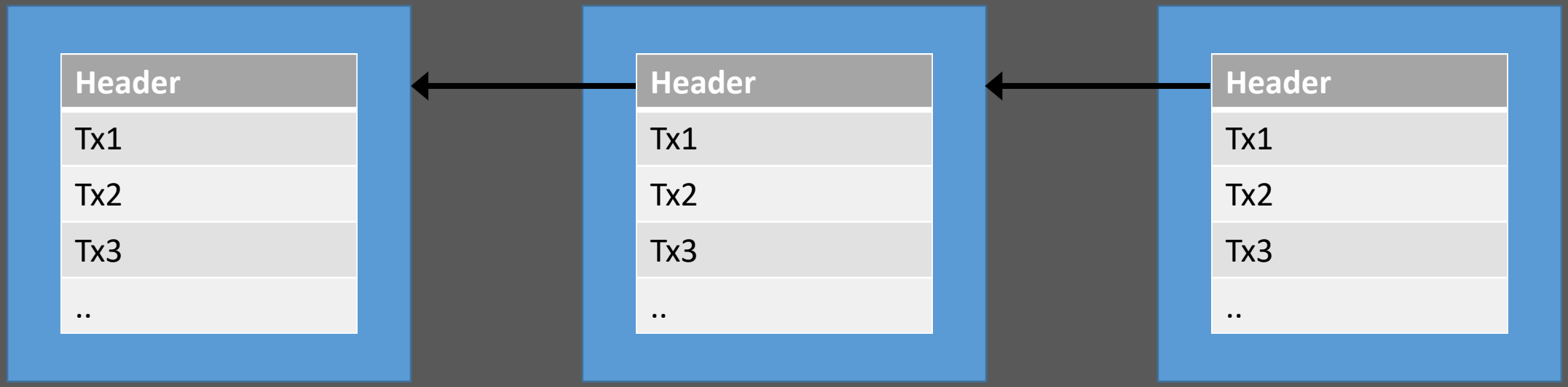
Mo' $

So how do we change the incentives?


Blockchain
(and ways to frame it)

“A Chain of Blocks”

-Block = list of transactions, where tx = “create asset” or “transfer asset” action, digitally signed
-Chain = linked list, where links are hashes



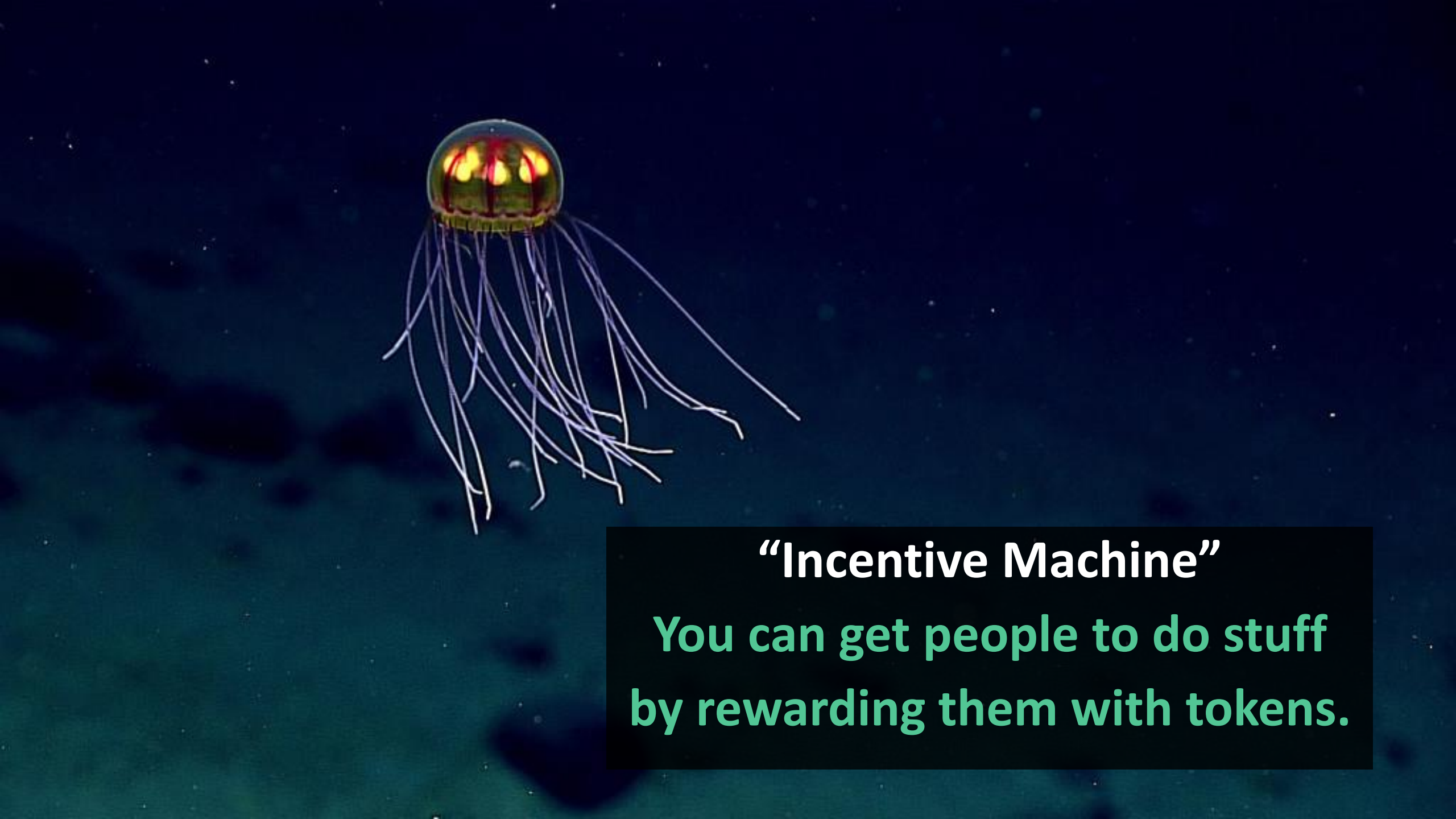
“Database with blue ocean benefits”

- Decentralized
- Immutable
- Assets

"Trust machine" because it **minimizes trust** needed to operate.

It's more *socially scalable*. (Ref Szabos)


“Public Utility Network”
Self-sustaining, anti-fragile


“Incentive Machine”
You can get people to do stuff
by rewarding them with tokens.

Bitcoin objective function

Objective: Maximize security of network

- **Where "security" = compute power**
- **Therefore, super expensive to roll back changes to the transaction log**

$$E(R_i) \ \alpha \ H_i * T$$

E() = expected value

block rewards

hash power of actor = contribution to "security"

 # tokens (BTC) dispensed each block

Result of Bitcoin's objective function:

People are maximizing security! = Maximizing electricity

More power than USA by mid 2019


“Incentive Machine”
You can get people to do stuff
by rewarding them with tokens.
This is a superpower.

Change the incentives!

Using incentive machines

~~Silo~~ *Pool* mo’ data

↓

Mo’ accuracy

↓

Mo’ $

Objective: maximize supply of relevant data

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- **Reward curating data (staking on it) + making it available**
- **New pattern: Proofed Curation Market**

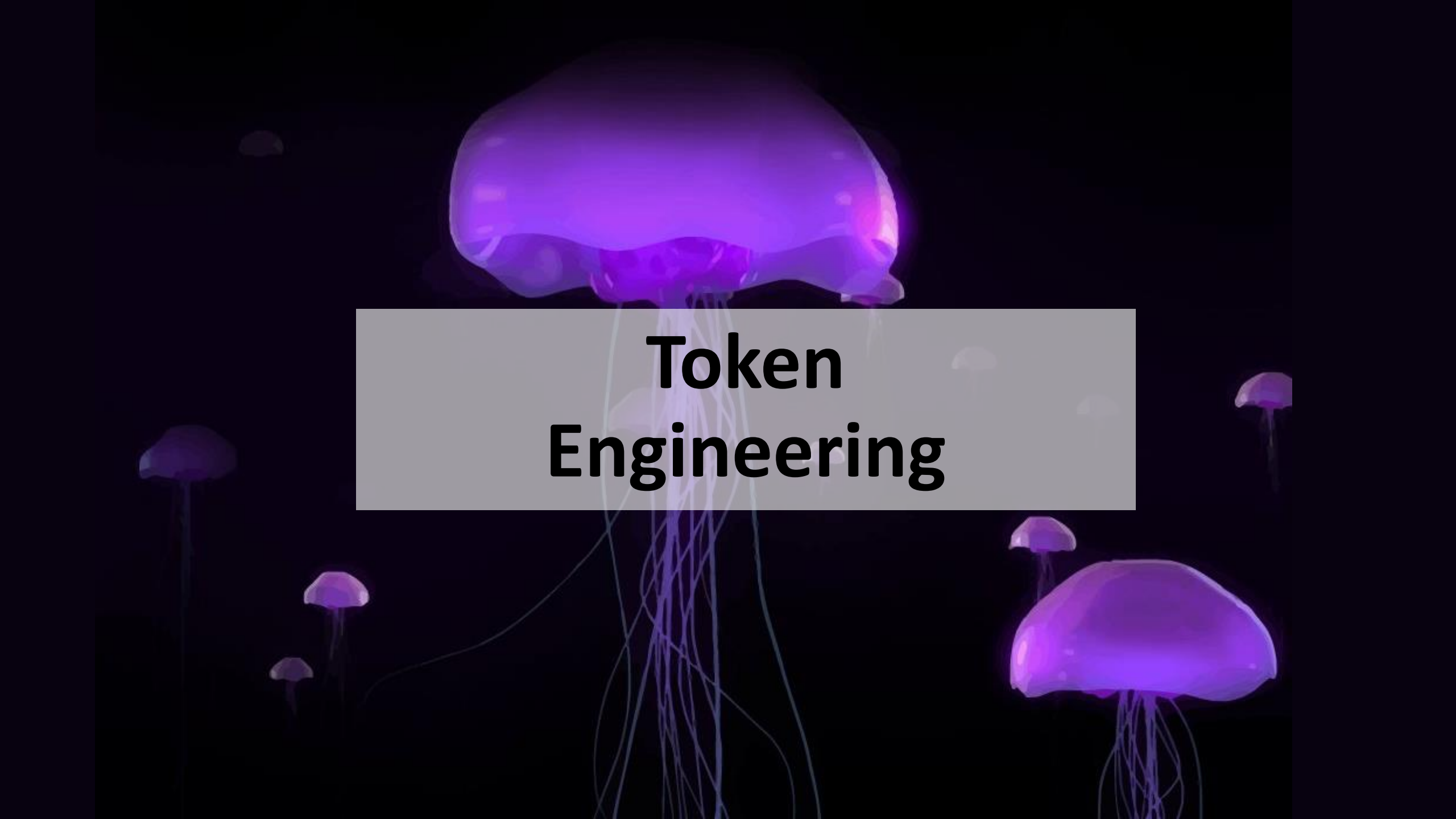
$$E(R_{ij}) \alpha \ \log10(S_{ij}) * \log10(D_j) * T * R_i$$

Expected reward for user *i* on dataset *j*

S_{ij} = predicted popularity = user's curation market stake in dataset *j*

D_j = proofed popularity = # times made dataset available

 # tokens during interval


Token
Engineering

General recipe

- Ask: what do you want? Eg what are you trying to maximize
- Philosophy. Simple block reward at the core, emergent complexity.

Examples:

- Block rewards to secure a chain of fin. txs: rewire financial system
- Block rewards to supply & curate data: erode data silos. Global data commons. Democratize AI. Compensate creators. Transparent govt data.
- Block rewards to supply electricity: drives cost of energy down
- Block rewards to move person from A→B: rewire public + private transit from ground up

Conclusion

Blockchains are Incentive Machines

- We can shape incentives!
- We can design & deploy these for societal benefit
- Rewire financial system, erode data silos, rewire power grid, rewire transit, ***more***.

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