

The
Commons
Stack

**REALIGNING
INCENTIVES AROUND
PUBLIC GOODS**

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WHAT ARE THE COMMONS?

“The cultural and natural resources **accessible to all members of a society**, including natural materials such as air, water, and a habitable earth. These resources are held in common, not owned privately.”

“LES COMMUNS” = PUBLIC GOODS



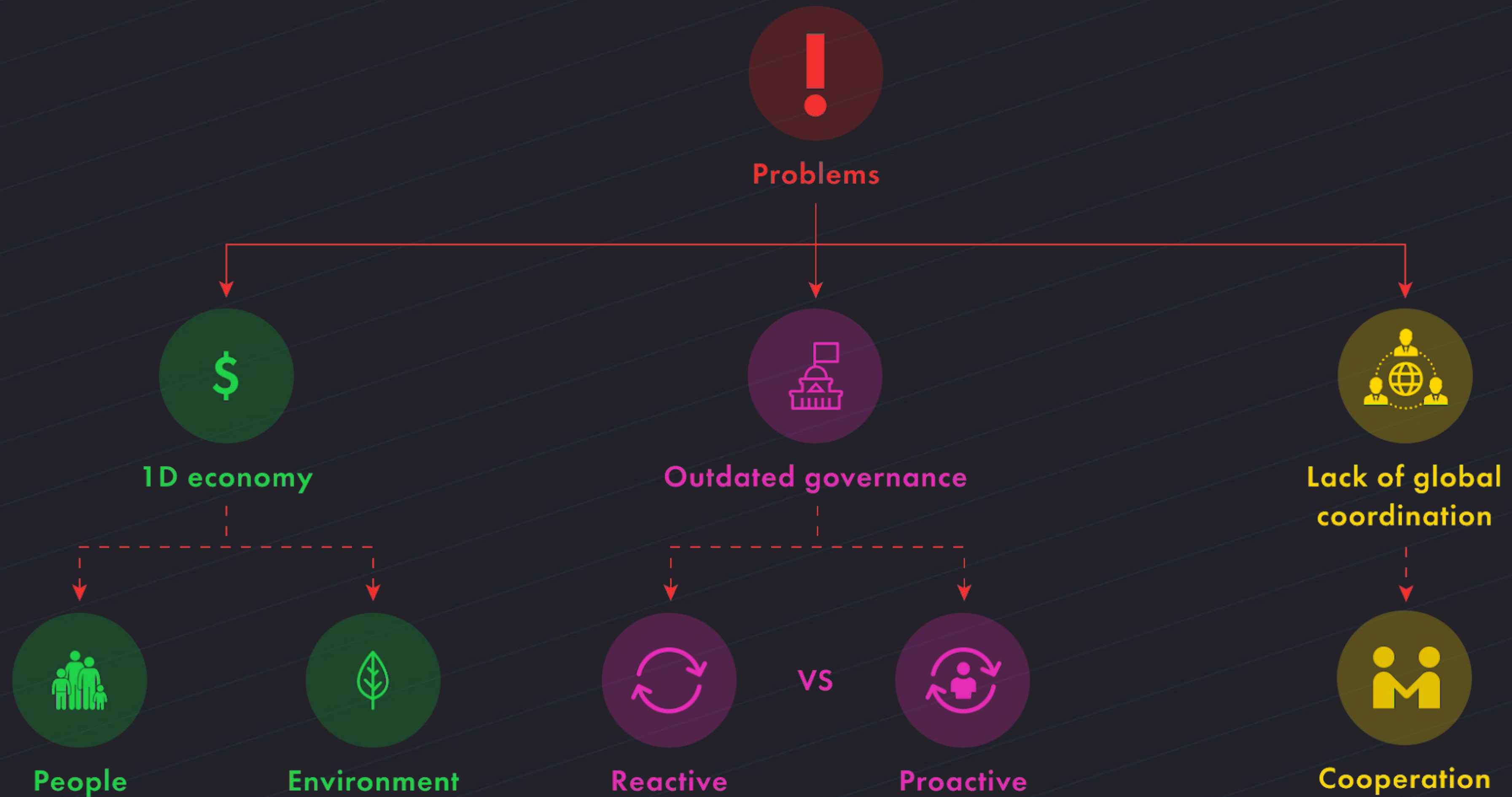
TYPES OF COMMONS



URBAN COMMONS



WE NEED TO SUPPORT PUBLIC GOODS

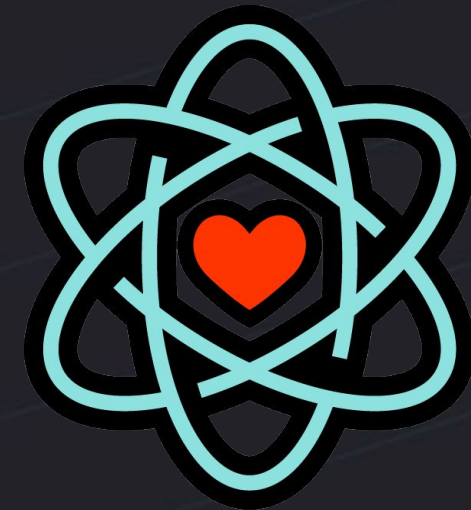


NONPROFITS CARE BUT WHO CARES FOR THEM?



NONPROFITS

- Rely on **self-sacrifice**
 - Donors
 - Volunteers
 - Common Good
- Produce value for a **community**
- Fall prey to free-rider problem & **tragedy of the commons**



FOR-PROFITS

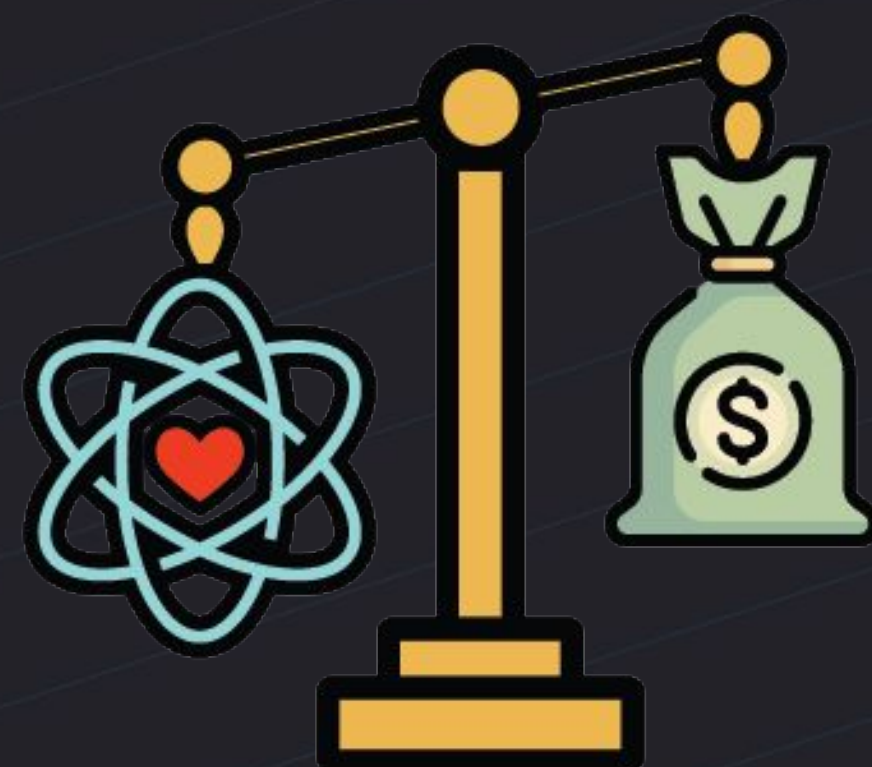
- Rely on **self-interest**
 - Investors
 - Fair market wages
 - Customers
- Produce value for **stakeholders (!)**
- Value extractive: Incentivized to evade taxes & exploit externalities





INCENTIVES ARE MISALIGNED

- Rely on funding from grants and donors
- Contributors are overworked & underpaid
- Pushed to sacrifice values for sustainability





OUR MISSION







Commons Stack = a technical & cultural stack of components for the Commons

Support communities in using our components to create circular, purpose-driven economies powered by continuous funding streams and transparent decision making.



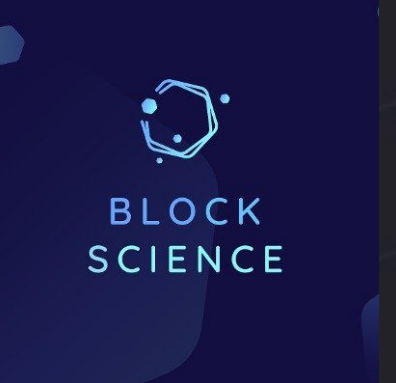
BLOCKCHAINS CAN SOLVE THE TRAGEDY OF THE COMMONS

COMPUTING POWER FOCUSED

-  **Bitcoin** = Open Global Payment System Commons
-  **Monero** = Anonymous Fungible Open Global Payment Commons
-  **Namecoin** = Censorship Resistant DNS Commons
-  **Primecoin** = Prime Number Research Commons
-  **Ethereum** = World Computer Commons
-  **Curecoin/FoldingCoin** = Fold Proteins For Cancer Research Commons



COMPLEX SYSTEM DESIGN



math

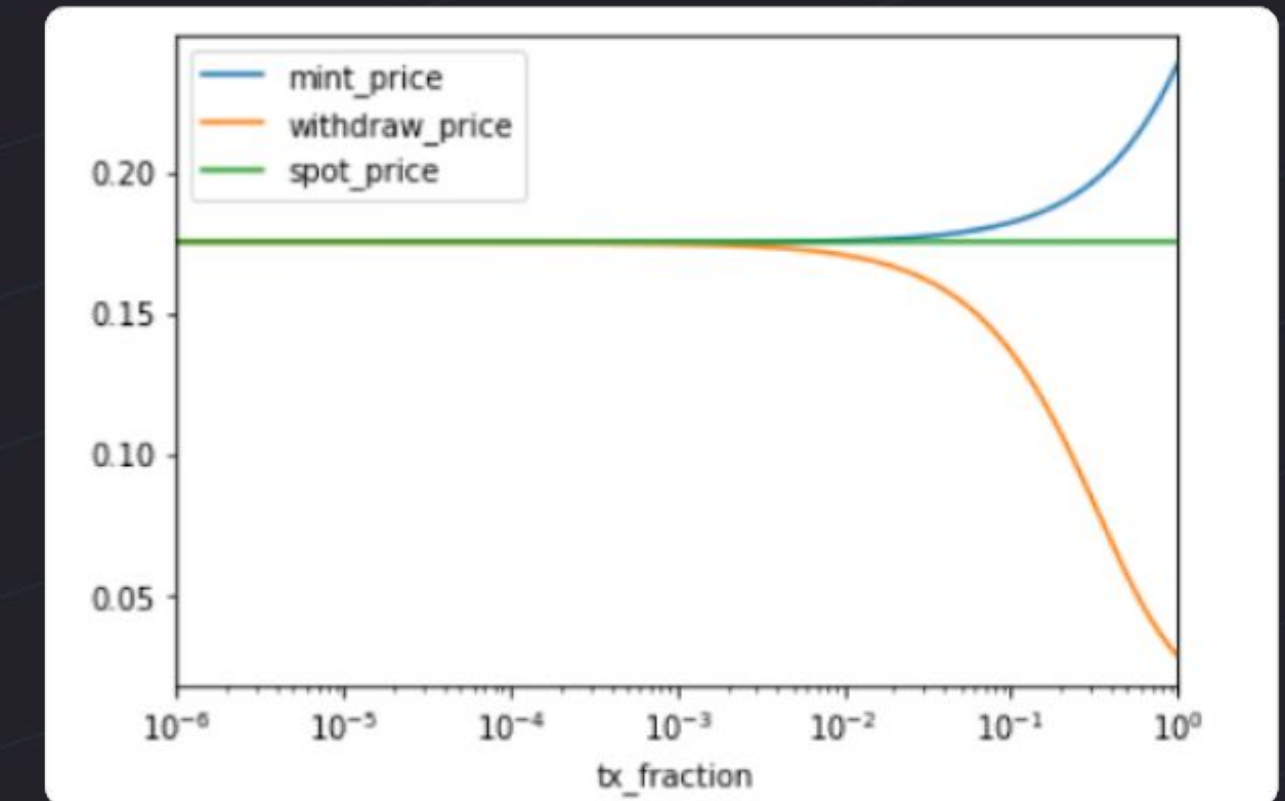
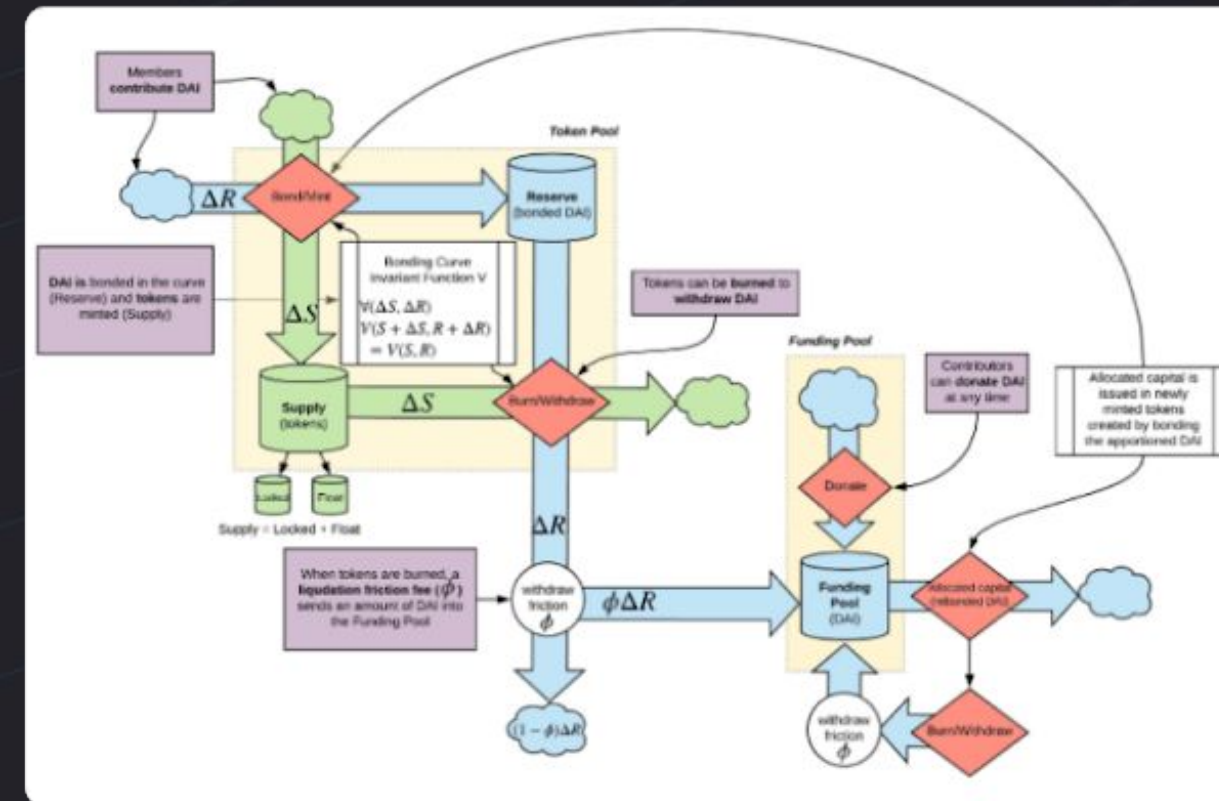
model

simulate

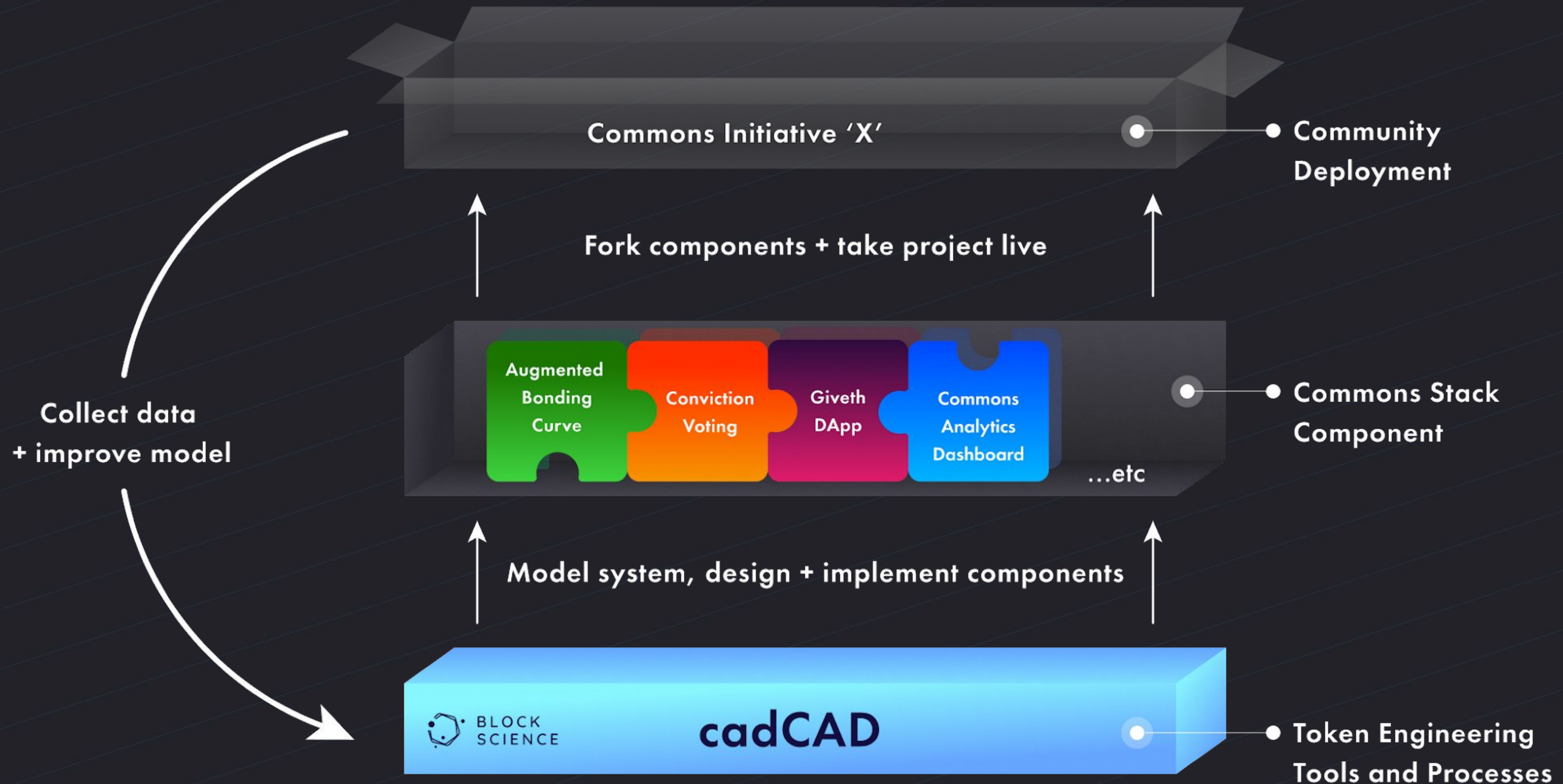
Invariant Preserving Deposit-to-Mint

- Deposit ΔR x dai
- Conservation equation: $V(R + \Delta R, S + \Delta S) = \frac{(S + \Delta S)^\kappa}{R + \Delta R} = V_0$
- Derived Mint equation: $\Delta S = \text{mint}(\Delta R; (R, S)) = \sqrt[\kappa]{V_0(R + \Delta R)} - S$
- Realized Price is: $\bar{P}(\Delta R) = \frac{\Delta R}{\Delta S} = \frac{\Delta R}{\sqrt[\kappa]{V_0(R + \Delta R)} - \sqrt[\kappa]{V_0(R)}} \rightarrow \left(\frac{\partial S(R)}{\partial R}\right)^{-1}$ as $\Delta R \rightarrow 0$
- The limiting price is the spot price:

$$\lim_{\Delta R \rightarrow 0} \bar{P}(\Delta R) = \left(\frac{\partial S(R)}{\partial R}\right)^{-1} = \left(\frac{V_0^{1/\kappa} \cdot R^{1/\kappa - 1}}{\kappa}\right)^{-1} = \frac{\kappa R^{1-1/\kappa}}{V_0^{1/\kappa}} = \frac{\kappa R^{(\kappa-1)/\kappa}}{V_0^{1/\kappa}} = P(R)$$



A TOKEN ENGINEERING FOUNDATION





TOWARDS A 'MINIMUM VIABLE COMMONS'





A STACK FOR THE COMMONS

Conviction Voting Quadratic Voting Futarchy ...etc

Governance tools

Augmented Bonding Curve C-orgs Harberger Tax ...etc

Funding tools

Giveth DApp Bounties Network Gitcoin ...etc

Proposal tools

Commons Analytics Dashboard Source Cred OS Block Explorers ...etc

Analytics tools

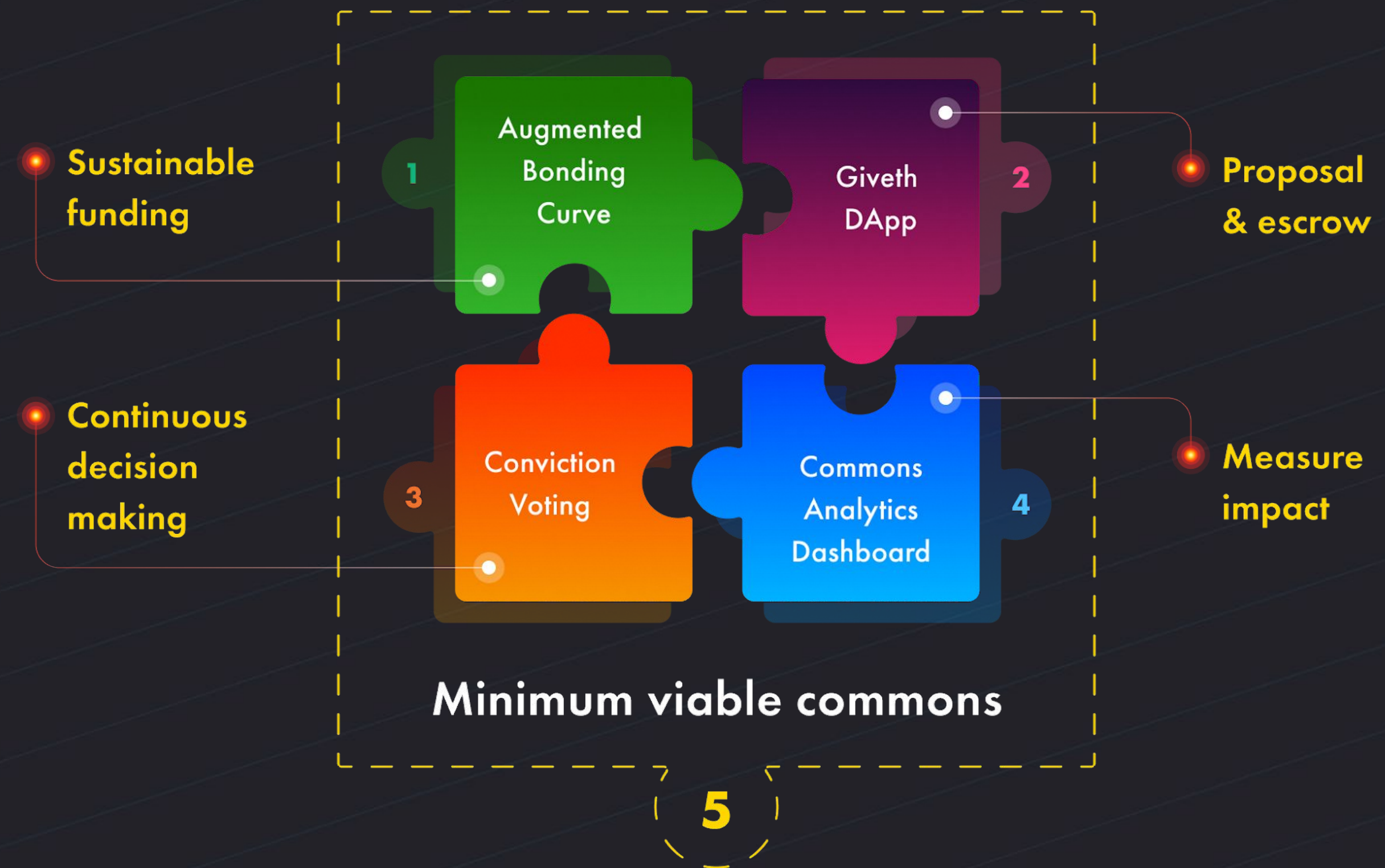
cadCAD Trusted Seed

Initialization tools



AUGMENTED BONDING CURVE

- Incentive Layer
- Accountability Layer
- Governance Layer
- Monitoring Layer



AUGMENTED BONDING CURVE (ABC)

1. The Trusted Seed

Successful decentralized networks grow out of a **Trusted Seed**, a core group of aligned individuals that care more about the long term value provided by the network than short term profits

Bitcoin

- Satoshi, the benevolent trusted whale

Ethereum

- Ethereum Foundation

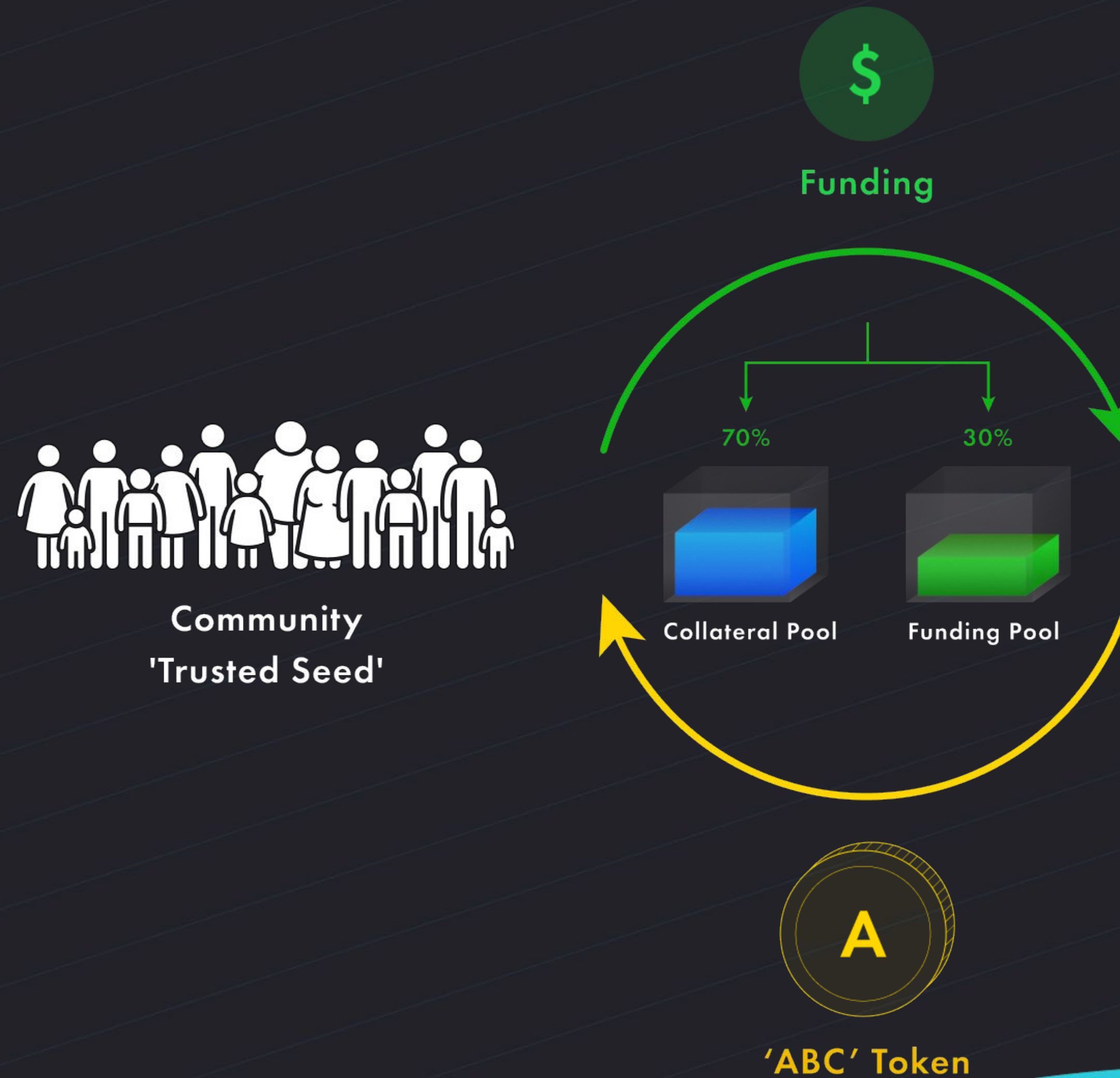
Countless failed sh!tcoin

- ...Profit-seeking founders



AUGMENTED BONDING CURVE (ABC)

2. The Hatch



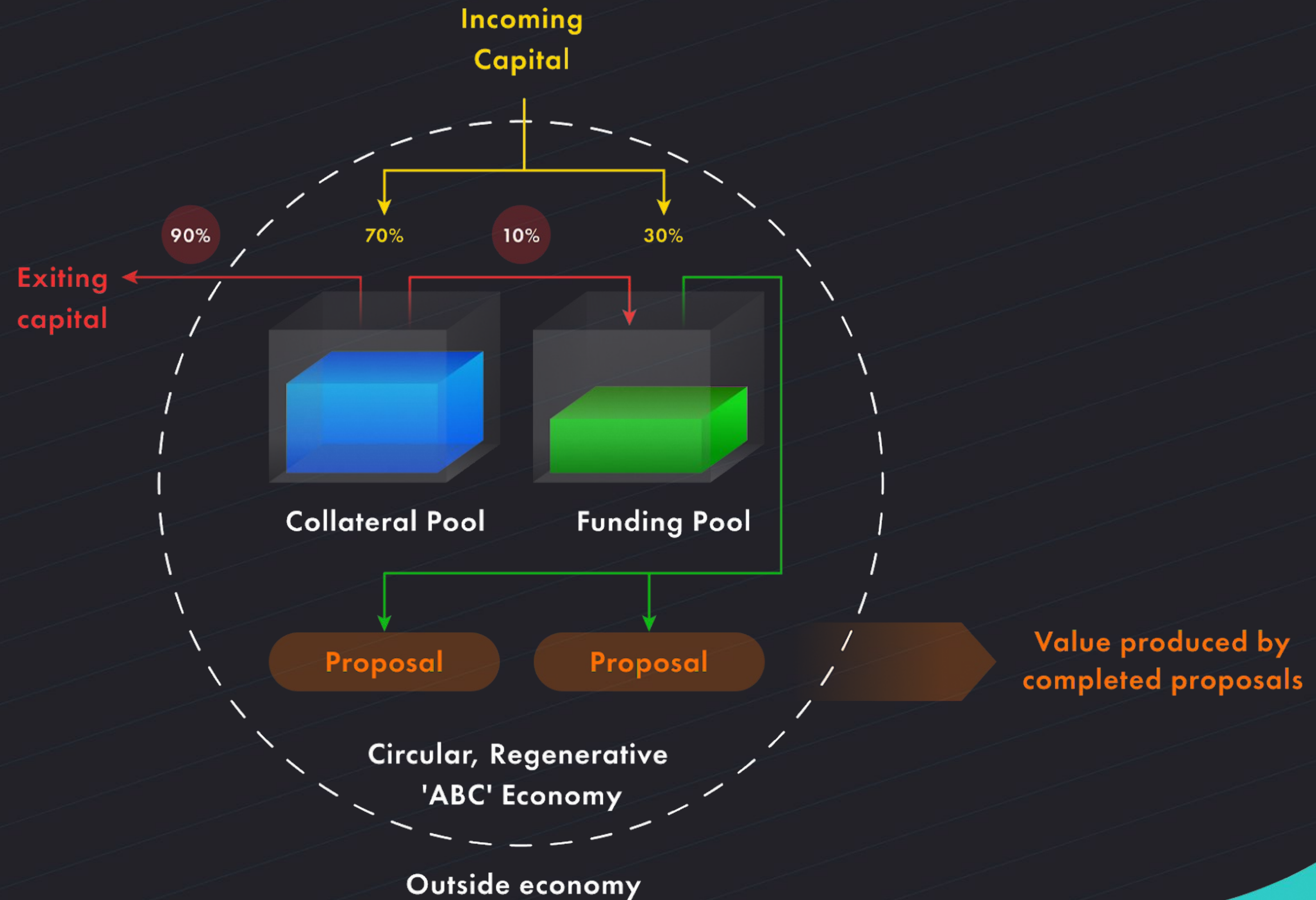


AUGMENTED BONDING CURVE (ABC)

3. The Open Phase



ABC: CIRCULAR, REGENERATIVE ECONOMIES





ABC DEMO SIMULATION

Curve Design ?

Hatch Raise % to funding pool 35%

Hatch price (DAI/token) 0.1

Post-Hatch price (DAI/token) 0.3

Exit tribute 5%

Vesting half-life (weeks) 17

Preview ?



Hatch Raise ?

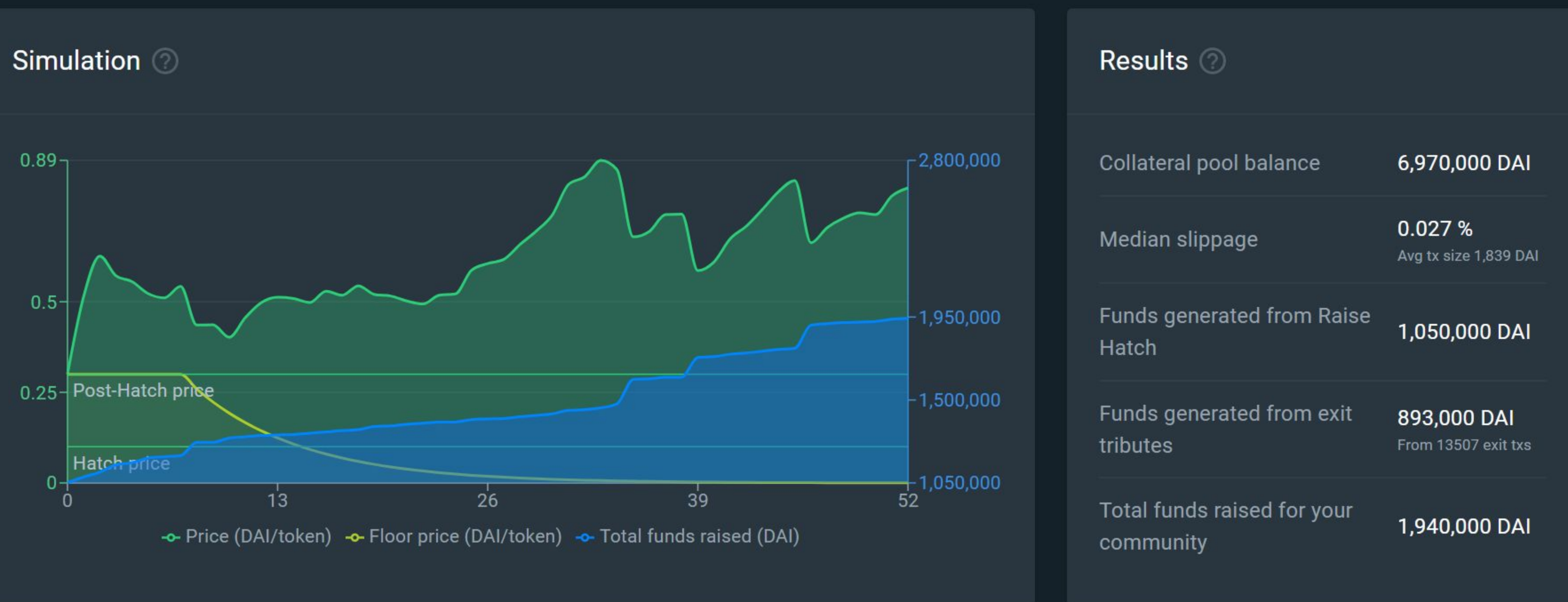
3M



RUN SIMULATION



ABC DEMO SIMULATION



commonsstack.org/abc



TEAM



Griff Green



Michael Zargham



Bernd Lapp



Jeff Emmett



Max Semenchuk



Stefaan Ponnet



Lorelei Loie



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ADVISORS



Simon de la Rouviere



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Jordi Baylina



Trent McConaghy



Luke Duncan



Patrick Storchenegger



Raphael Bauman



Abbey Titcomb

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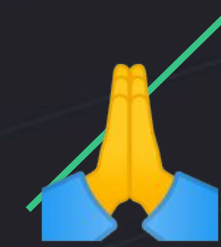
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- Check out our GitHub: [Commons-Stack](https://github.com/COMMONS-STACK)

JOIN US





THANK YOU



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CULTURAL REFERENCES

Research in the Commons Space

- Elinor Ostrom
- Michel Bauwens
- Flat Organizational structures, e.g.
 - Holacracy
 - Sociocracy

Research Inside Blockchain Space!

- Blockchain DAOs: DASH, Decred, Pivx, Horizen, etc
- DAO Failures: TheDAO, Aragon Coop, etc
- DAO Successes: Moloch, Aragon, DAOStack, etc

