Polkadot Polkadot Blockchain Academy

BLOCKCHAINGOV

Blockchain Governance Module

30.05. – 01.06.2024

Primavera de Filippi, Tara Merk, Felix Beer & Lovisa Björna

Welcome!
Kick-Off Meeting

Agenda

- Meet the faculty
- What is this about?
- Why does it matter?
- Educational goals
- Module overview
- Module logistics
- Q&A

Polkadot Blockchain Academy

Meet the faculty

Primavera de Filippi

Tara Merk

Lovisa Björna

Felix Beer

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EUI

Guest lecturers

Tommi Enenkel
OpenGov.Watch

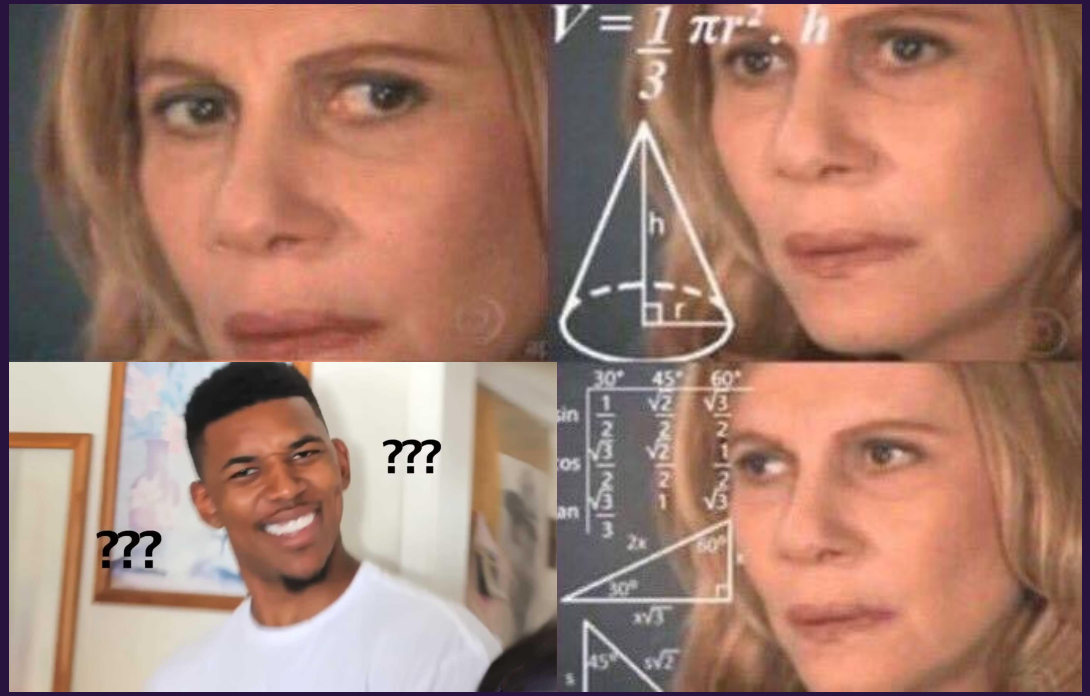
Nathalie Boyke
Web3 Foundation

Kate Beecroft
Centrifuge

Raul Romanutti
JUST Open Source Foundation

Blockchain Governance

What the **** is blockchain governance?



What is blockchain governance?

Describe what concepts, ideas, and topics you associate with this term.

Share your insights on **www.menti.com**

Access code: XYZ

Scan this QR code:

Blockchain governance is ...

- A term associated with many topics, meanings, and interpretations;
- A concept characterised by a lack of a commonly recognised definition;
- A nascent yet rapidly evolving field of research and practice;
- An interdisciplinary discourse including computer science, law, political science, sociology, policy and cybernetics.

What is this about?

What is governance?

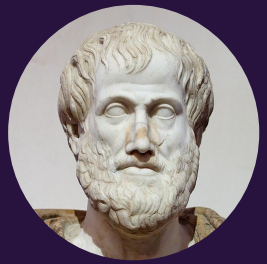
"Governance describes the norms, structures, and processes by which individuals and groups with ongoing relationships bargain about how to make decisions within an organisational formation — such as a community, market or government" (Bevir, 2012).

Bevir, M. (2012). Governance: A Very Short Introduction. Hampshire, UK: Oxford University Press.

Governance shapes political systems

Ancient forms of government

	Ideal / Common Interest	Despotic / Selfish Interest
One Ruler	Monarchy	Tyranny
Few Rulers	Aristocracy	Oligarchy
Many Rulers	Democracy	Mobocracy

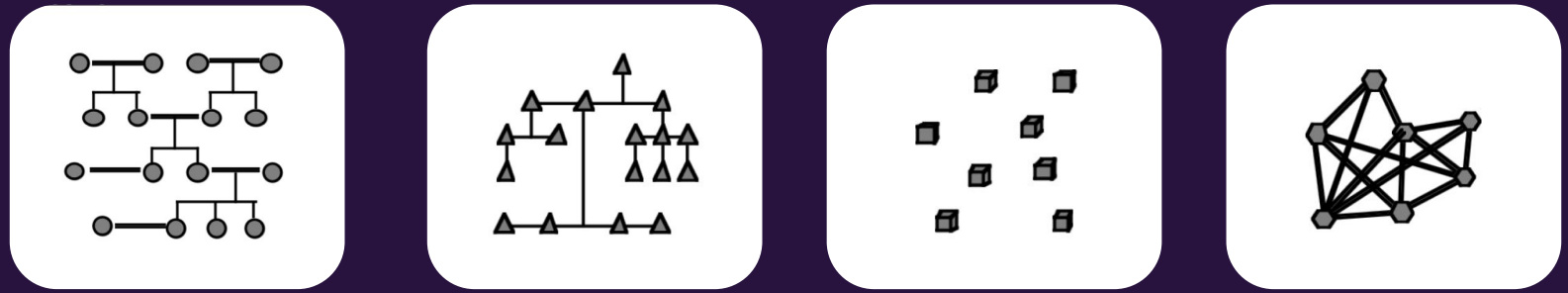


Aristotle
384 - 322 BC

Aristotle (350 BC). Nicomachean Ethics. Hampshire, UK: Oxford University Press.

Governance underpins all forms of societal organization

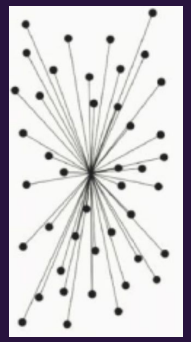
The historical evolution of governance



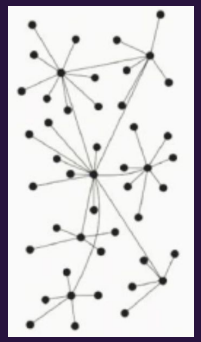
Ronfelt, D. (1996). Tribes, Institutions, Markets, Networks: A Framework for Societal Evolution. Santa Monica, CA: RAND Cooperation.

Governance differs in degrees of power distribution

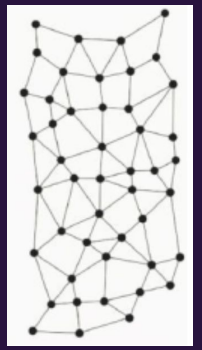
Decentralization is a spectrum, not a label



Centralized



Decentralized



Distributed

Degrees of Power Distribution

Bodo, B., Brekke, J., & Hoepman, J. (2021). Decentralization: A Multidisciplinary Perspective. Internet Policy Review, 10(2).

Governance evolves alongside technology

Technical shifts 🔁 governance shifts

Age	Ancient	Classical	Medieval	Modern	Information
Period	10000 - 1000 BC	1000 BC - 500 AD	500 - 1500 AD	1500 - 2000 AD	Since 2000 AD
Technical Innovation	Irrigation, Agriculture, Writing, Money	Alphabet, Naval Trade	3-Crop Farming, Paper & Printing	Printing Press, Mechanized Labour	Computers, Internet, Blockchains
Political Innovation	River Valley Empires	Roman Empire	Kingdoms & Catholic Church	Nation States	???

Why does it matter?

Blockchain networks require governance

- Governance is an universal feature of all blockchains, whether explicitly designed or not;
- Blockchain networks can be thought of as decentralised decision making systems;
- Effective governance is crucial for aligning and coordinating diverse stakeholders in a blockchain ecosystem;
- Without governance leadership, blockchain networks struggle to succeed.

A preliminary definition

- “**Blockchain Governance** describes the means of achieving the direction, control and coordination of stakeholders within the context of a given blockchain network to which they jointly contribute” – (van Pelt, Jansen, Baars & Overbeek, 2021)

Why should you care?

How do you rate your expertise?

Rate your blockchain governance expertise on a scale from 0 (none) to 3 (expert).

Share your insights on **www.menti.com**

Access code: XYZ

Scan this QR code:

Become a governance expert!

- Governance is often poorly understood yet highly relevant for the success of a blockchain project;
- There is a noticeable lack of technologists trained in blockchain governance;
- Polkadot is a highly decentralized governance system;
- Your governance expertise is a critical asset for your project's long-term impact and viability.

Our educational goal

Promote governance literacy

- Equip blockchain technologists with the necessary competences to design and implement effective governance, both on-chain and off-chain.
- Contribute to the professionalization of blockchain governance as a recognised field of expertise.

Learning outcomes

1. Understand the key governance principles, mechanisms and trade-offs;
2. Develop a strategy for progressive decentralization;
3. Design and implement effective governance innovations;
4. Navigate their political, regulatory and ethical implications;
5. Measure and improve the impact of governance systems.

Q & A

Module overview

Polkadot **Polkadot Blockchain Academy**

TIME	DAY 1	DAY 2	DAY 3
09AM	Kick-Off Presentation	Assignment Review & Sharing Circle	Integration & Learning Circle (Felix & Lovisa)
10AM	Lecture 1: “Blockchain Governance in Theory & Practice” (Primavera)	Presentation of Governance Challenges (Challenge Providers)	Integration & Learning Circle (Felix & Lovisa)
11AM	Lecture 1: “Blockchain Governance in Theory & Practice” (Primavera)	Group Work on Challenges	Fish Bowl “The Future of Governance” (Primavera, Tara, Lovisa, Felix, Nathalie, Tommi)
12AM	Lecture 1: “Blockchain Governance in Theory & Practice” (Primavera)	Group Work on Challenges	Wrap-Up & Feedback Form
01PM	Lunchbreak	Lunchbreak	Lunchbreak
02PM	Lecture 2: “Blockchain Governance Design” (Tara & Felix)	Group Work on Challenges	
03PM	Lecture 2: “Blockchain Governance Design” (Tara & Felix)	Group Work on Challenges	
04PM	Lecture 3: “OpenGov Introduction” (Tommi)	Challenge Presentation & Feedback	
05PM	Wrap-Up, Assignment + Q&A	Challenge Presentation & Feedback	
06PM	Office Hour	Office Hour	

Assignments

Take Home Assignment (DAY 1)

- To be completed by beginning of DAY 2;
- To be presented in class to peers;
- Please a review course material from DAY 1 for completion.

Governance Challenge (DAY 2)

- To be completed by end of DAY 2;
- To be presented in class to faculty and peers;
- Please review your governance challenge briefing and reading recommendations before DAY 2.

Module logistics

Online & on-site participation

Online Students:

- All course materials available in our Discord channel.
- Ask questions throughout in our chatroom and we will see to them at the end of each class.
- Any Q's - write to Remote TA or Lovisa.

On-Site Students:

- All course materials are in the symposium that you have received.
- Also available in our Discord channel.
- Office Hours from 5-6PM.
- Any Q's - talk to faculty or write to Felix.

Get in touch!

Lovisa Björna

Responsible for
Online Students

Email:
lovisa@polkadot.academy

Discord: @loppeflopp

Felix Beer

Responsible for
On-Site Students

Email:
felix@polkadot.academy

Discord: @felixculpa.

Q & A

Thanks & Enjoy!

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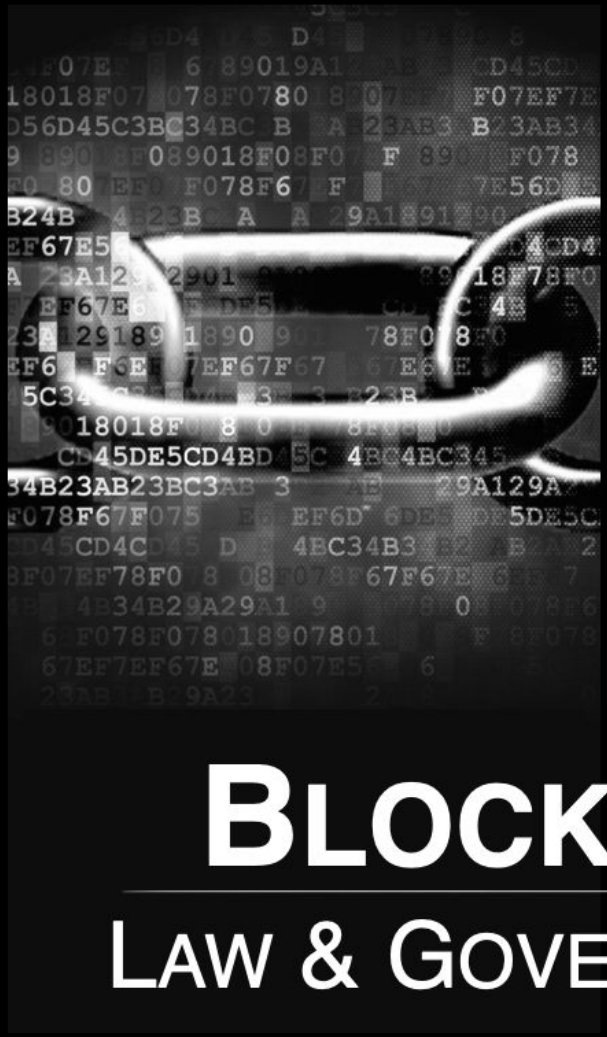
Blockchain Governance in Theory & Practice

Lecture 1, 30.05.

Primavera de Filippi



PRIMAVERA DE FILIPPI

CERSA / CNRS / UNIVERSITÉ PARIS II
HARVARD LAW SCHOOL

@yaoeo

BLOCKCHAIN

LAW & GOVERNANCE

POLKADOT BLOCKCHAIN ACADEMY

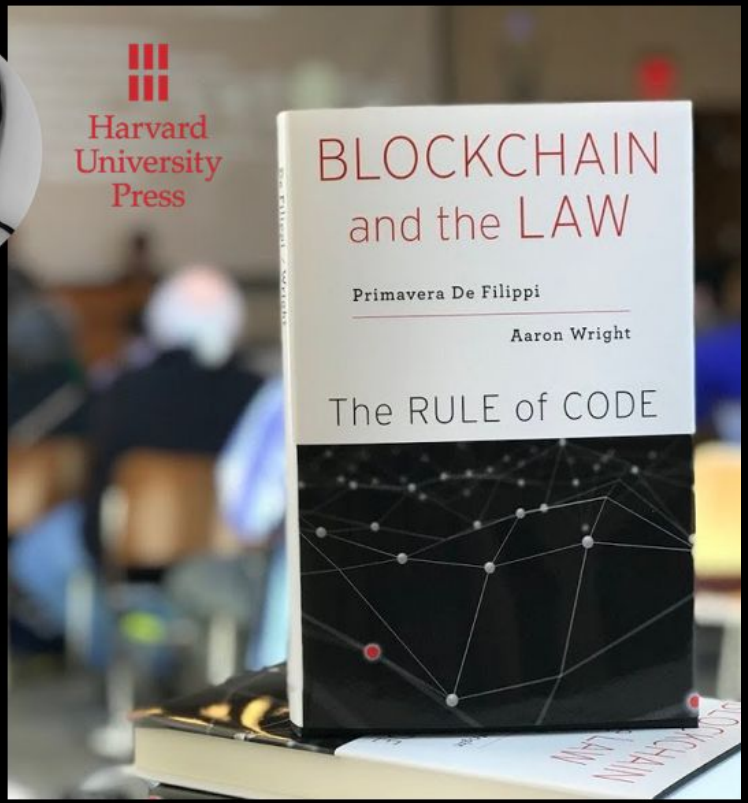
INTRO

PRIMAVERA DE FILIPPI

cnrs · European University Institute · WZB · Berkeley · HARVARD UNIVERSITY · SIMONS INSTITUTE

WORLD ECONOMIC FORUM · IGF Internet Governance Forum · coala COALITION OF AUTOMATED LEGAL APPLICATIONS

BLOCKCHAINGOV · erc European Research Council Established by the European Commission



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WHY IS THIS COURSE IMPORTANT ?

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In a world increasingly governed by technology

those who build and control the technology, govern the world

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Technologists are not politicians:

1. Not elected through democratic mechanisms
2. Not trained to think about politics and governance

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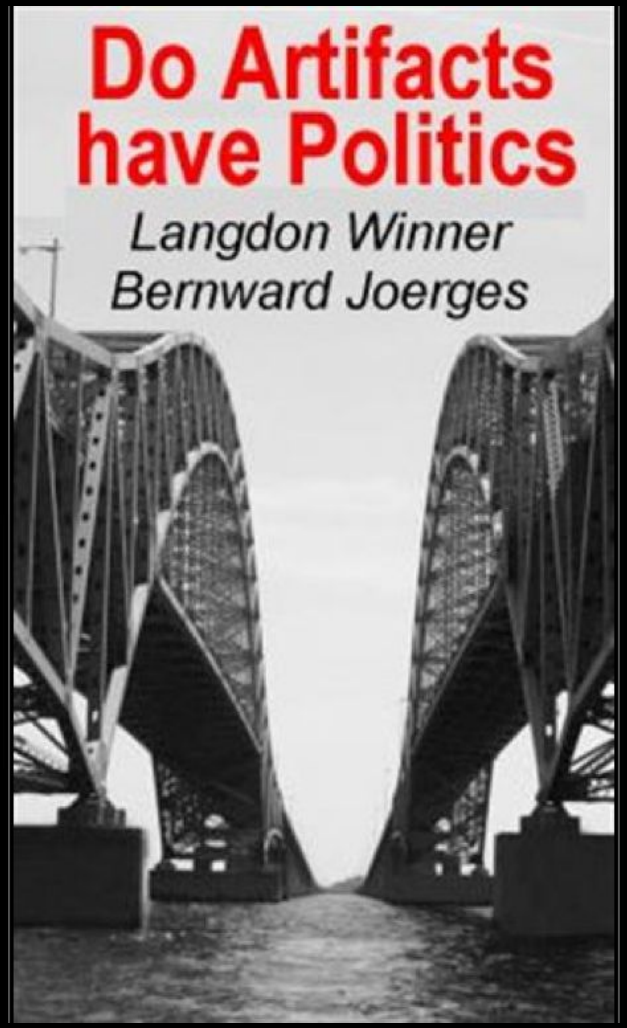
Affordances



Constraints

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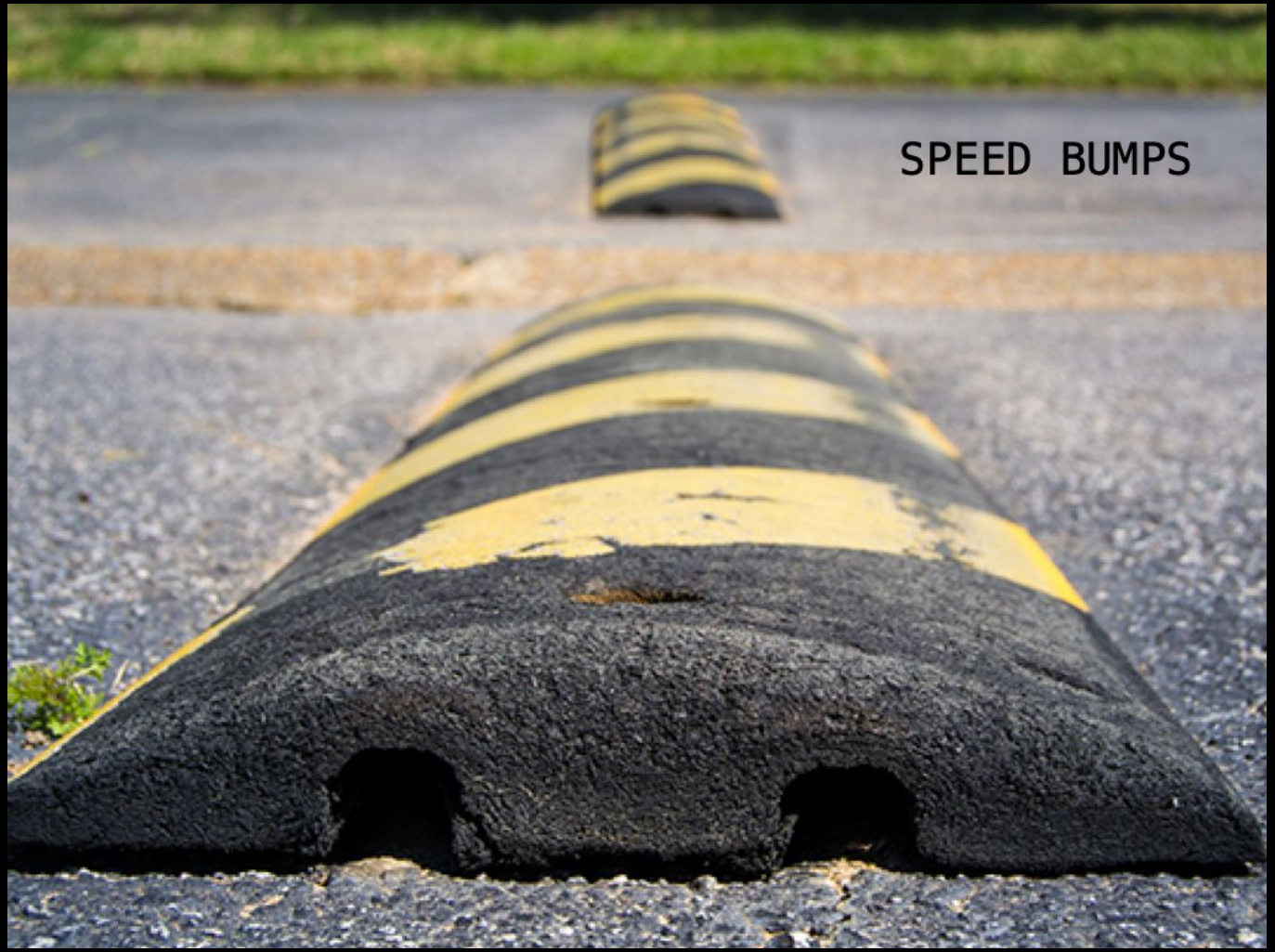

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Digital Artefacts Have Politics

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DIGITAL ARTEFACTS ALSO HAVE POLITICS

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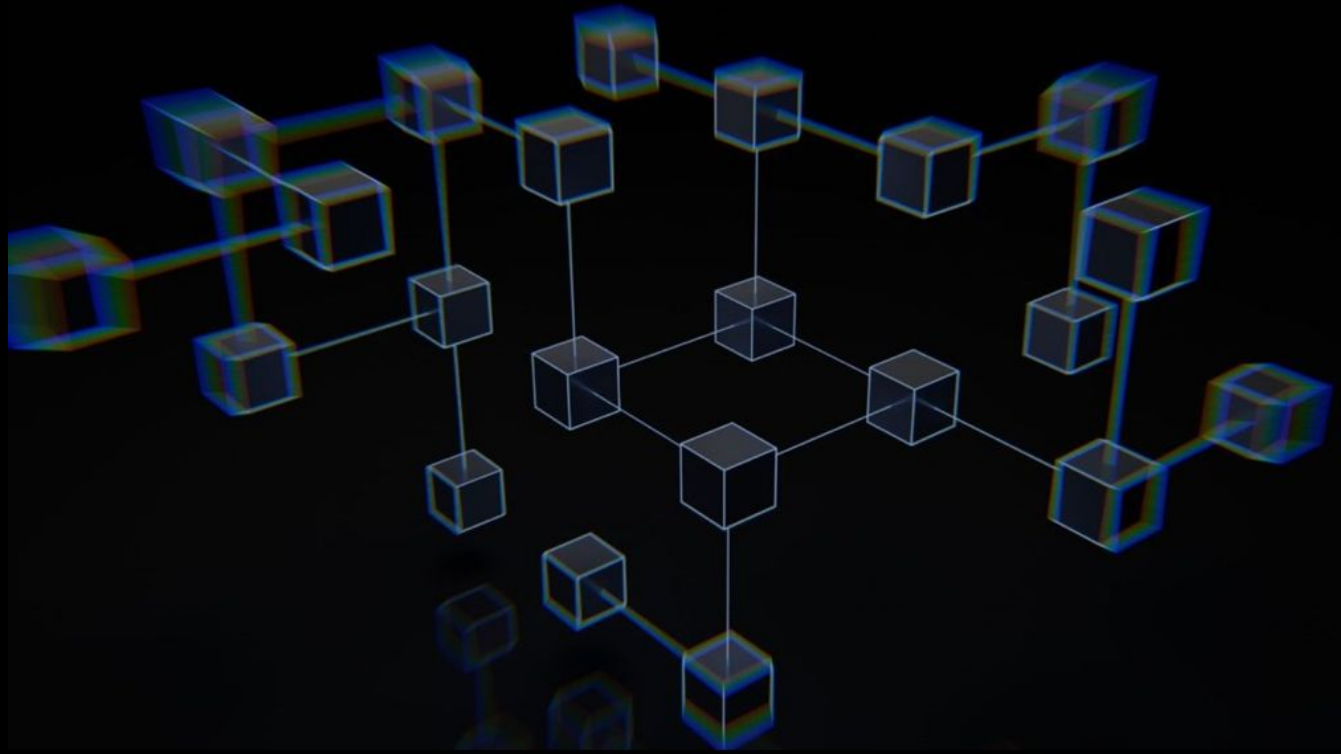

Blockchains Have Politics

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Blockchains Have Politics

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How to engineer blockchain systems

that provide the right mix of affordances and contraints ?

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WHY

WEB 3

Erosion of Trust

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Centralised Intermediaries

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DISINTERMEDIATION

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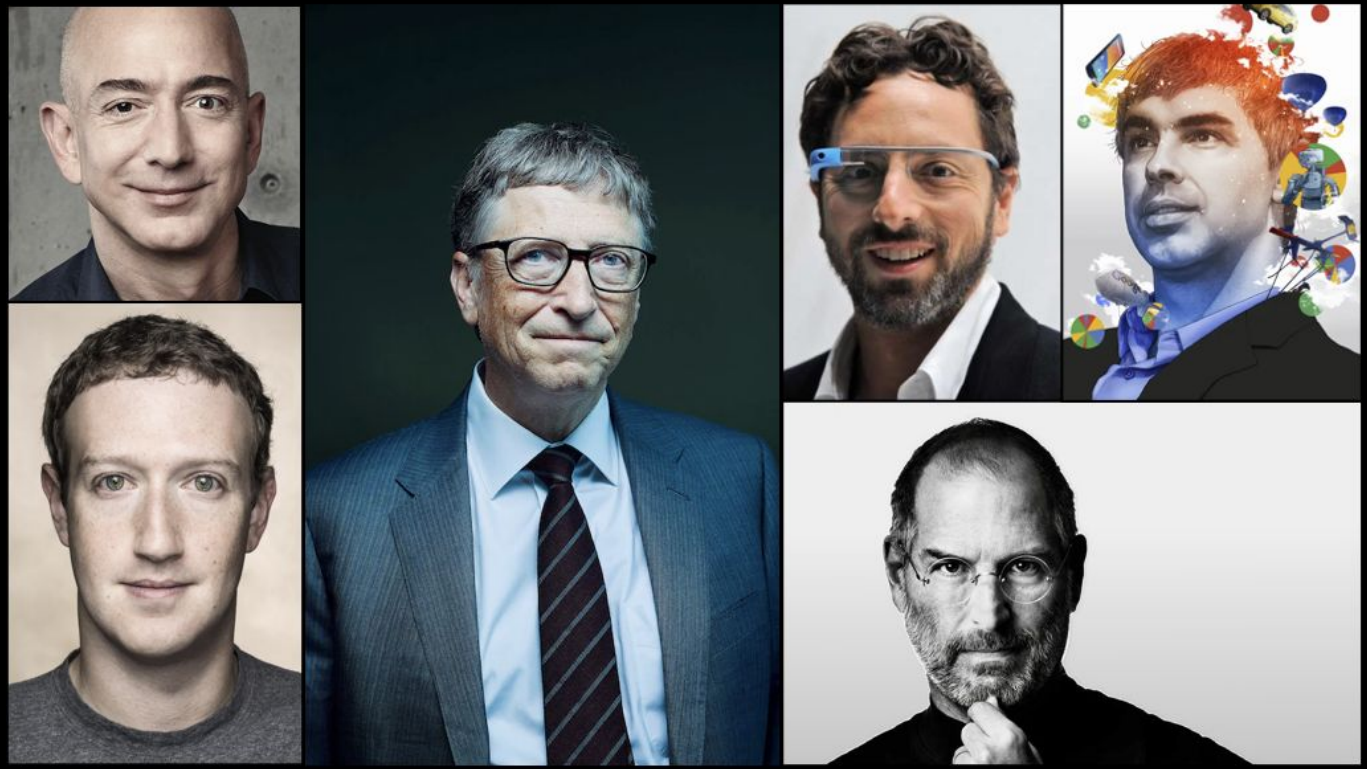
JP Barlow

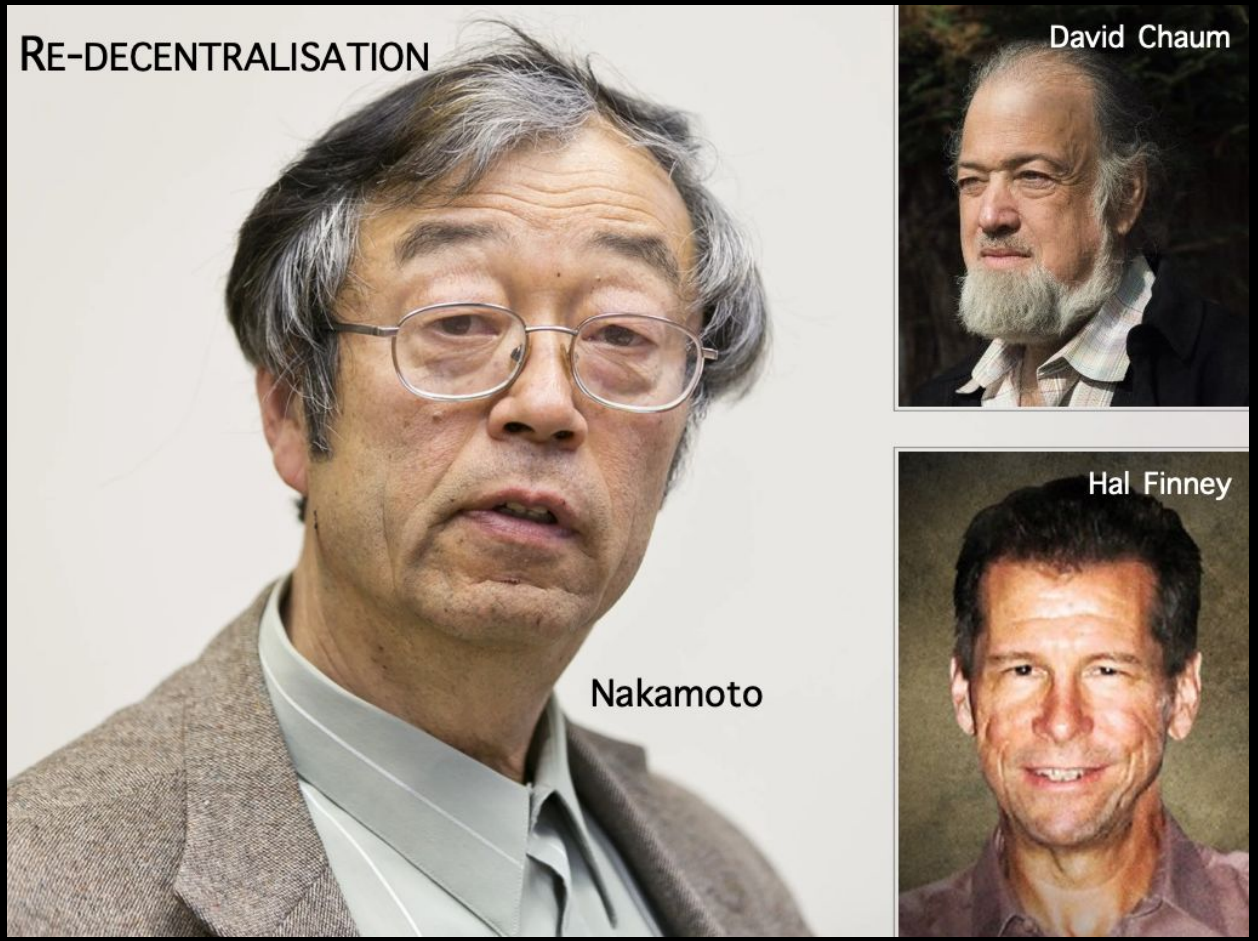
Timothy May

Cyberspace

as an independent space that cannot be Regulated



RE-CONCENTRATION OF POWER IN CENTRALISED OPERATORS



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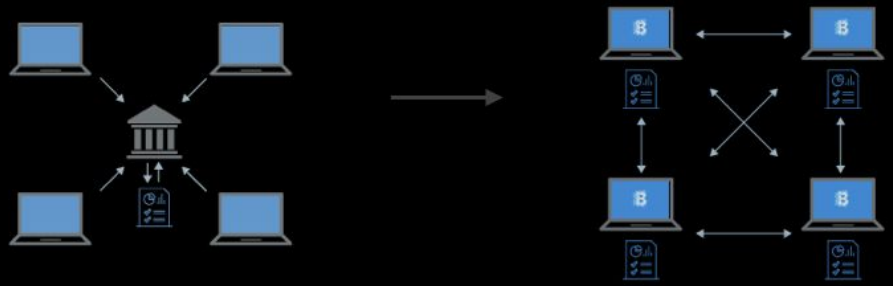
Blockchain Adoption

1.

IDEOLOGY

"TRUSTLESS" TECHNOLOGY

TO BYPASS TRUSTED AUTHORITIES



ĐAQ

bitcoin

BITNATION
GOVERNANCE 2.0

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"TRUSTLESS" TECHNOLOGY

TO REPLACE TRUSTED AUTHORITIES

libra

IBM

HYPERLEDGER

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"Trustless" Technology

to Bring Back Trust in Trusted Authorities

Transparency

Supply Chain

Land Registries

Real Time Audits

Accountability

Regulatory Compliance

Certifications

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TRUST &
CONFIDENCE

Antonopoulus:
"Shift from trusting people … to trusting math"

"Don't trust, Verify"

The Economist:
"Trust Machine"

Werbach:
"Trustless Trust"

BLOCKCHAIN AS… (negative definition)

TRUSTLESS TECHNOLOGY

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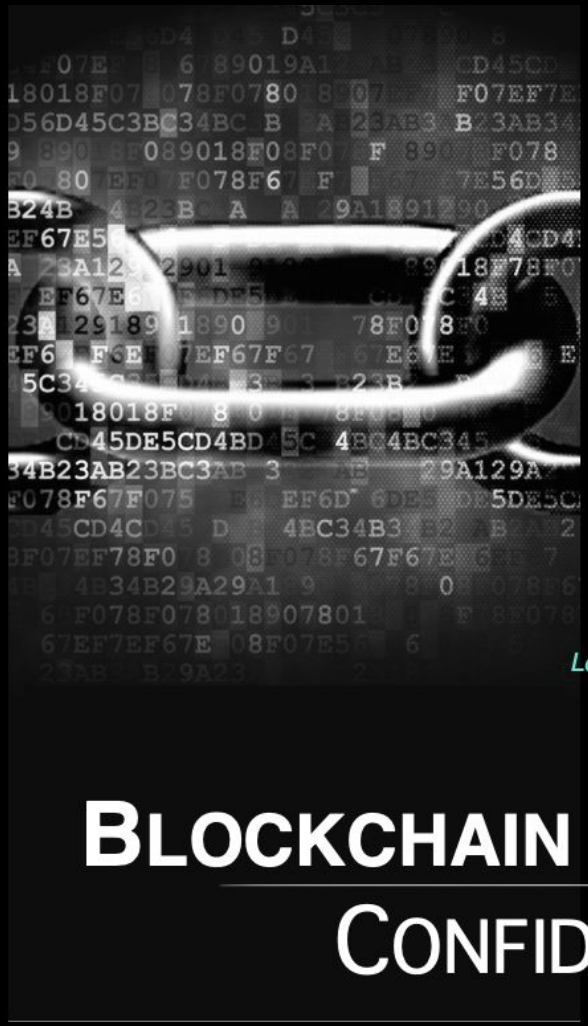
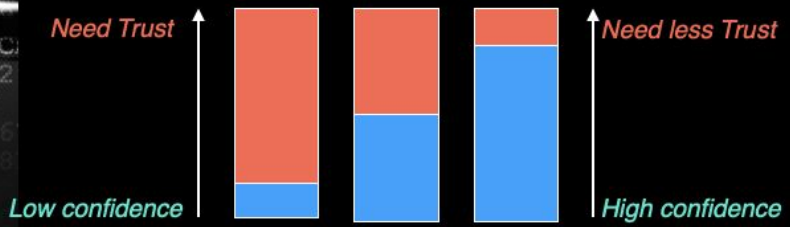


*It is **not** about **eliminating trust** altogether,*
*but rather about **maximizing confidence,***
*in order to indirectly **reduce the need for trust.***

- *The **higher** the **predictability** of the system,*
- *The **higher** the **confidence** in the system,*
- *The **lower** is the **need for trust** in the system.*



BLOCKCHAIN AS... (positive definition)

CONFIDENCE MACHINE

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Confidence Factors

(1) ***Mathematics & Cryptography***

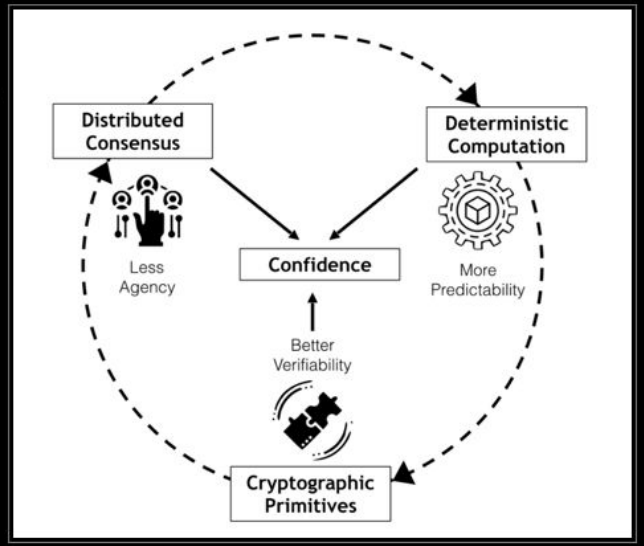
- *Hashing functions, Public-Private Keys*

(2) ***Economic incentives & Game Theory***

- *Utility function*
- *Distributed Consensus*

(3) ***Expert systems***

- *Open Source code*
- *Public verifiability of every operation*



Blockchain as... (positive definition)

Confidence Machine

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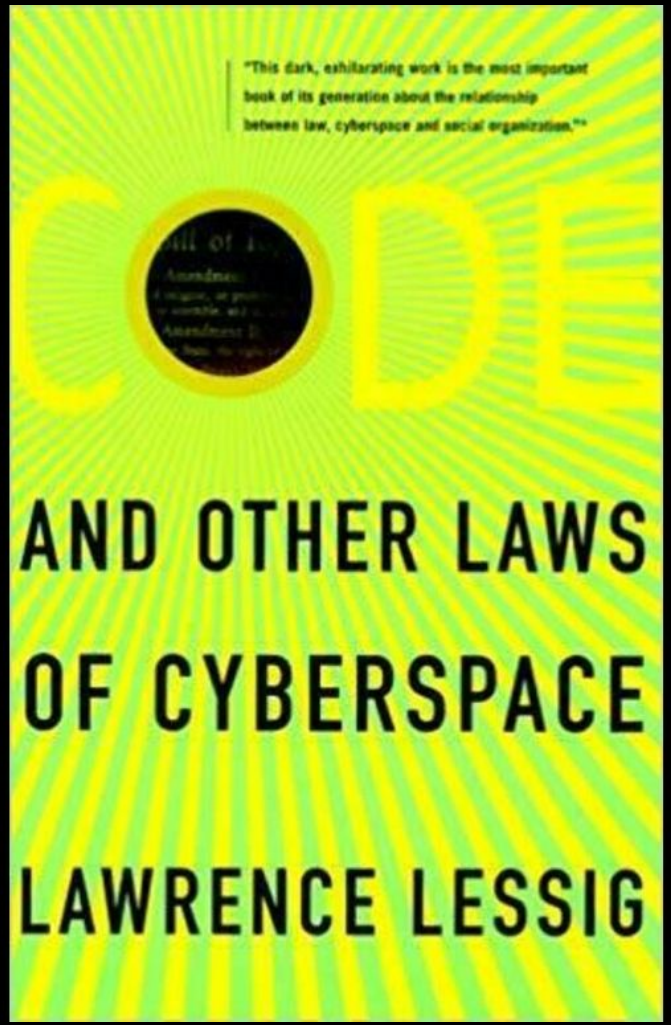
THE RULE OF CODE



CODE IS LAW

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Rule of Law

Access to Legal Remedy

Access to timely justice mechanisms for grievance remedies and peaceful resolutions

Transparency of Law

Laws must be clear, precise, affordable and accessible while protection fundamental rights

Equality under the Law

All are equal under the law: it applies equally to all—governments, citizens, companies, etc

Independent Judiciary

Independent judiciary ensures equality and fairness of law between people & public officials

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RULE ~~OF~~ BY LAW

INSTRUMENTALISATION OF LAW
AS A TOOL OF POLITICAL POWER

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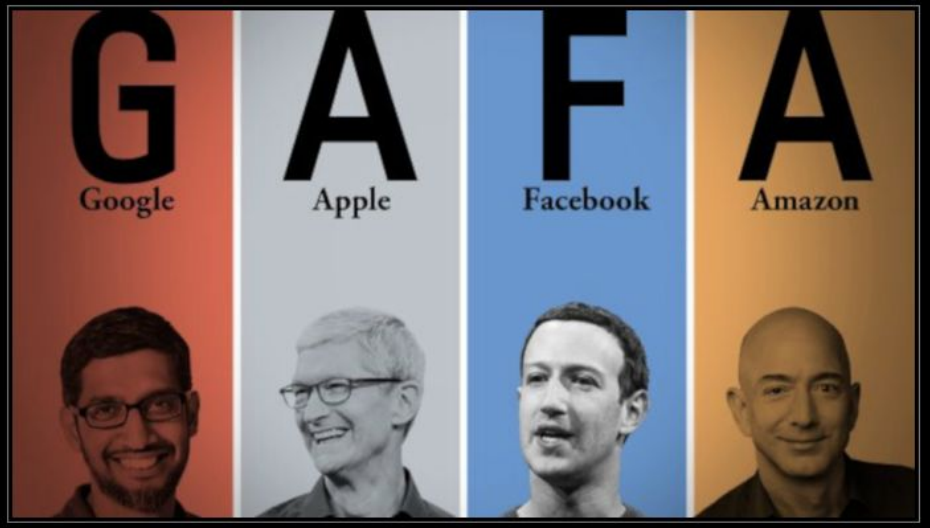
Rule by Code



Digital Feudalism
Functional Sovereignty

Instrumentalisation of Code
as a tool of political power

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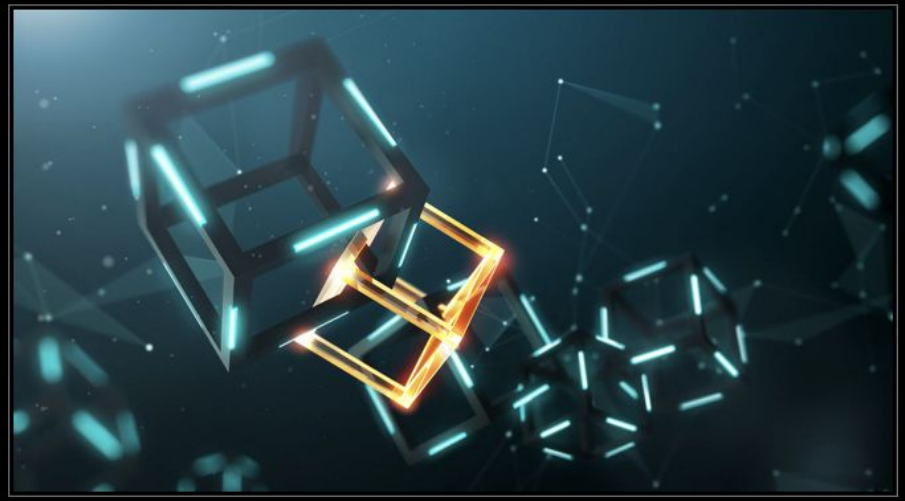
Rule ~~by~~ of Code



Technical Sovereignty

No One is Above the Code

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Code is Law : Blockchain as Confidence Machine

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Bringing Trust back in

Blockchains as Socio-Technical Systems

Confidence of on-chain rules depends on the *trust* of underlying off-chain processes

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Blockchain Governance

Governance

BY the infrastructure

(on-chain governance)

OF the infrastructure

(off-chain governance)

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1. Developers

Core Developpers

Open Source contributors

Technocratic Governance

- Decision on who can push to a repository
- Technical decisions are political decisions
- Contentious issues (e.g. forks)

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2. Maintainers

Miners

Validators

Network Governance

- Distributed consensus
- Hashing power as political power
- Validators as legitimate counter-power

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3. End-Users

Users

Token holders

Plutocratic Governance

- Exit vs. Voice
- Market-based influence (e.g. “whales”)
- Token-based governance (e.g. Carbon voting)

4. New Intermediaries

Super Nodes

Mining Pools

— Cryptocurrency exchanges, Blockchain explorers,
— DApps interfaces, Custodian wallets,
— Commercial service providers, etc.

Delegated Governance

- Centralized Points of Failure & Control
- Invisible powers that can influence the network

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5. Experts

Founders

Influencers

Meritocratic Governance

- Tech-savvy individuals are more respected
- Founders hold strong influence in the governance
- Most vocal individuals can influence the public opinion

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6. Laws & Regulations

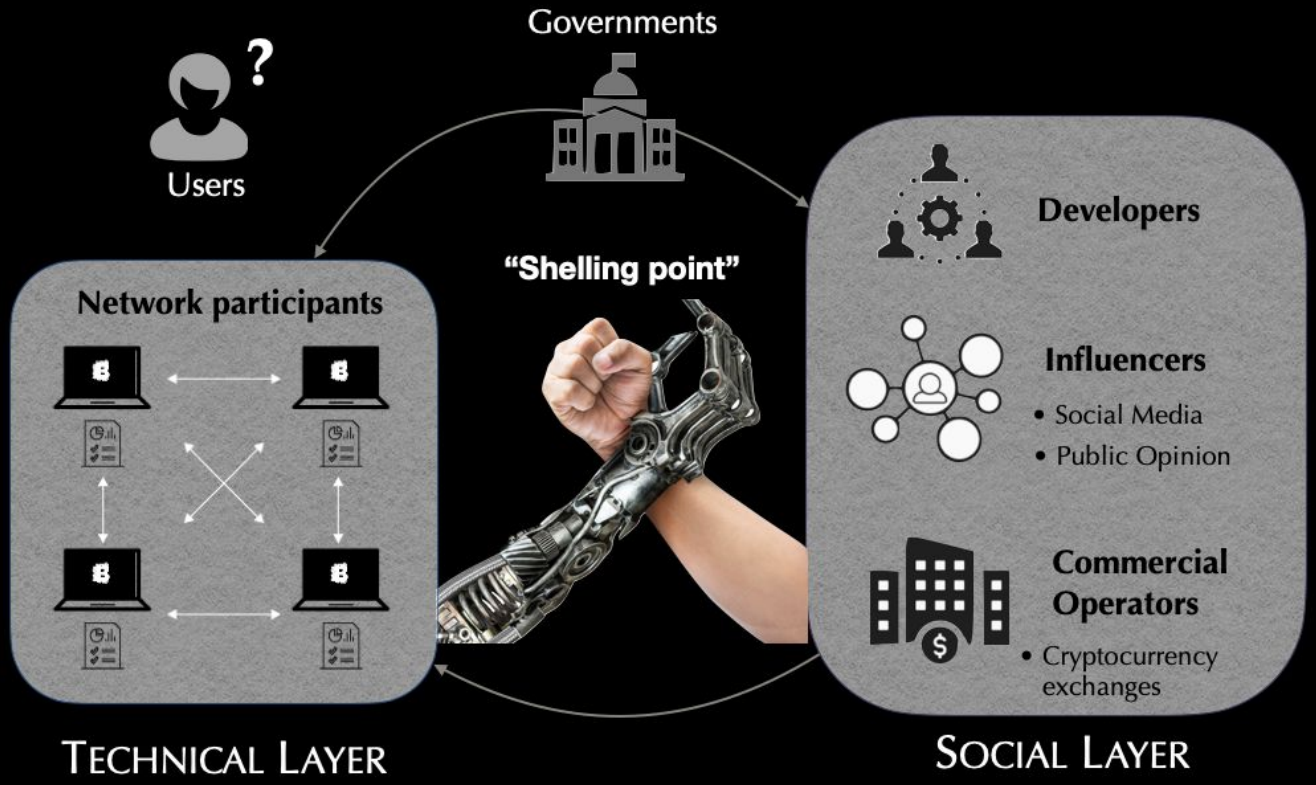
Policy Makers

Regulators

Exogenous Governance

- Provide legitimacy to specific blockchain applications
- Indirectly influence the decision-making of endogenous actors
- Directly regulate the operations of new intermediaries

Polycentric Governance System



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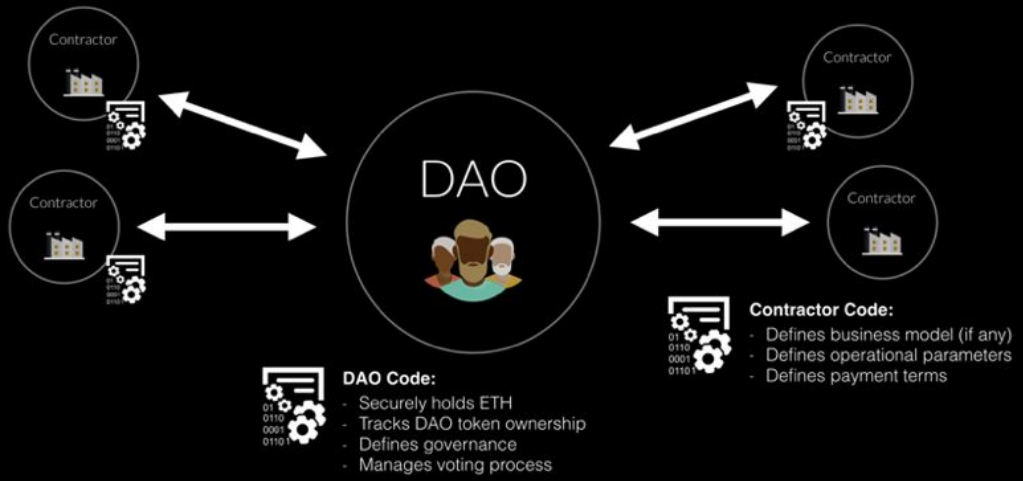
Decentralized Autonomous Organisation

- Invest into a variety of projects
- To benefit its members or get a return on investment



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TheDAO

Decentralized Investment Fund

Decentralized Infrastructure
With Plutocratic Governance Structure

- Board of Directors (Curators)
- Shareholders (Capital investors)

- **Autonomous**
  - Leaderless management
  - Governance defined by Code
- **Self-sufficient**
  - Collect funds necessary to operate (over $160 Millions in Crowd-Sale)

TheDAO HACK

- ATTACKER EXPLOITED A BUG IN THE SMART CONTRACT CODE
  - "STOLE" OVER 60 MILION DOLLARS WORTH OF ETHER

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TheDAO  HACK

- How to Resolve the Issue?
  - Soft-Fork: Censor all transactions coming from or directed to the DAO
  - Hard-Fork: Retrieve the "stolen" eth and move it into a Withdraw account

- Both solutions require cooperation by the community

  Miners (soft-fork), verifiers (hard-fork)

INCORRUPTIBILITY + IMMUTABILITY

AS THERE IS NO CENTRAL AUTHORITY THAT CAN ENFORCE THE LAW
ONLY COMMUNITY CAN INTERVENE TO APPLY THE RULES
(RULE OF LAW OR RULE OF CODE?)

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TheDAO  HACK

—Community Divide—

Contract says that only the CODE MATTERS

=> does Code Vulnerability amount to Consent?

Words of the Code

The attacker simply "used" TheDAO
Restoring the balance would be a theft

Intent of the Code

The attacker has "exploited" TheDAO
Restoring the balance is fully legitimate

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Group Exercise

CASE STUDY: THEDAO

1.- Is there a tort? Which one?
2.- Who is responsable ?
3.- What recourse is available for token holders ?
4.- What liability regime can be applied ? Against whom?
5.- How to enforce a judicial decision ?

ETHEREUM

ETHEREUM CLASSIC

POLKADOT BLOCKCHAIN ACADEMY

TAMPER-RESISTANCE + IMMUTABILITY

AS THERE IS NO CENTRAL AUTHORITY THAT CAN ENFORCE THE LAW
ONLY COMMUNITY CAN INTERVENE TO APPLY THE RULES

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New Power Dynamics

Blockchain Systems are Governed by the community
through Distributed Consensus

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“WITH GREAT POWER,
COMES
GREAT RESPONSIBILITY”

SPIDERMAN

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(1)

The DAO attack

(2)

Multi-sig Bug

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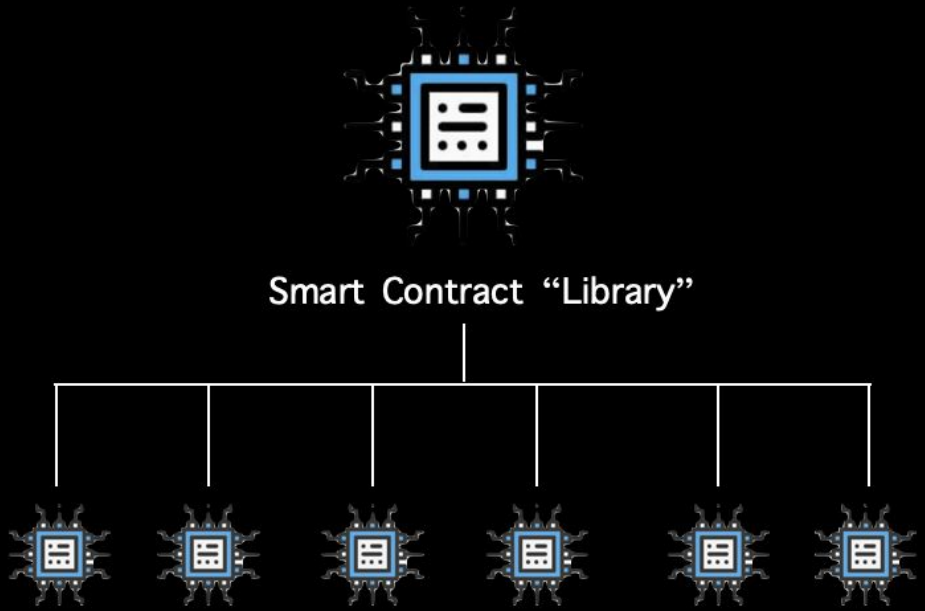
Multi-sig Wallet FREEZE



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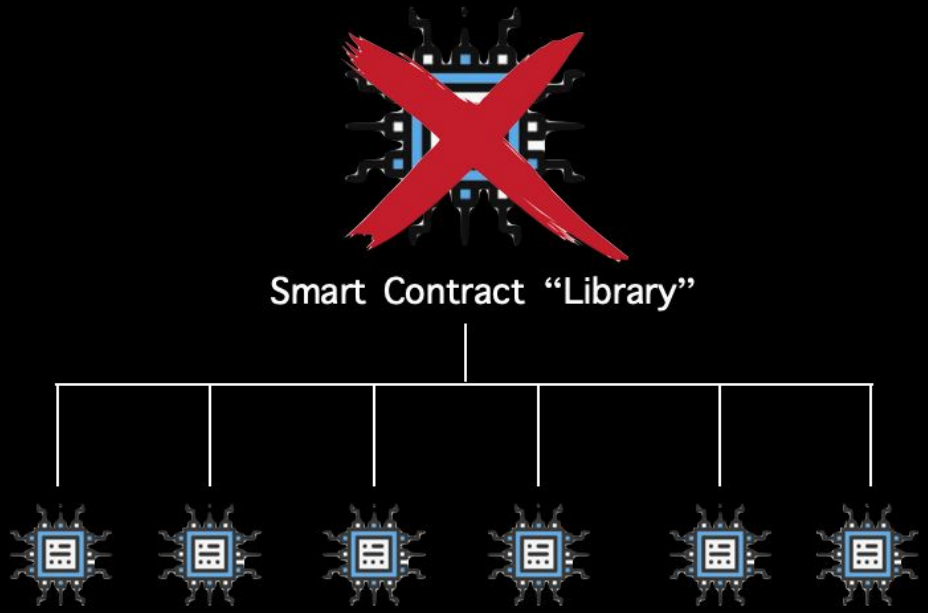
Multi-sig Wallet FREEZE



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Group Exercise

Case Study: Multi-sig

1.- Is there a tort? Which one?
2.- Who is responsable ?
3.- What recourse is available for token holders ?
4.- What liability regime can be applied ? Against whom?
5.- How to enforce a judicial decision ?

To Fork or Not to Fork ?

Multi-sig Wallet FREEZE

- No Exceptionality
- No Urgency
- No Unfair Enrichment
- More Contentious Issue

- Create a precedent
- Liability & responsibility

The DAO attack

STATE OF EXCEPTION
(without a Sovereign)

Exceptional violation to
the Rule of Code
(immutability)

Multi-sig Bug

LEGISLATIVE PROPOSAL
(without a Parliament)

CONSTITUTIONAL AMENDMENT

Standardized procedure
for lost fund recovery

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Lunchbreak :)

Polkadot Polkadot Blockchain Academy

BLOCKCHAINGOV

Designing Blockchain Governance

Lecture 2, 30.05.

Tara Merk & Felix Beer

Agenda

- What is Governance Design?
- Governance Lifecycle
- Governance Cookbook
- Transition Stewardship
- Q&A

What is governance design?

Designing in “the wild”

Governance design is a nascent field

- An emerging and rapidly evolving field of research and practice.
- Existing theories and models do not fully capture the complexity of designing governance in reality.
- Limited precedents, fast-paced technological advancements, and constantly evolving challenges.
- There is no blueprint for

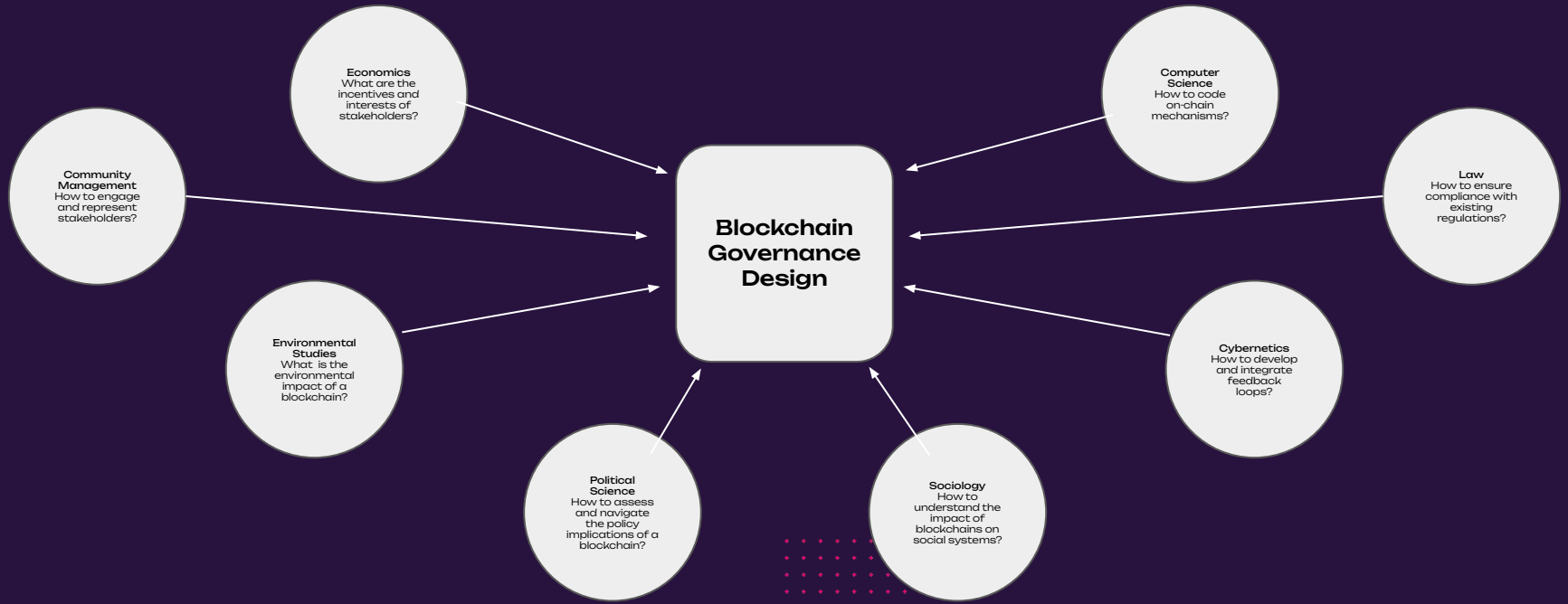
There are no one-size-fits-all solutions

Governance design is experimental

- There are no silver bullets or one-size-fits-all for effective governance solutions.
- The design of governance systems is highly context-specific.
- Constant adaptation and refinement is needed to build effective systems.
- Governance design requires real-world testing

Technology is not just for technologists; we need all disciplines involved

Governance design is multidisciplinary



How to get started?

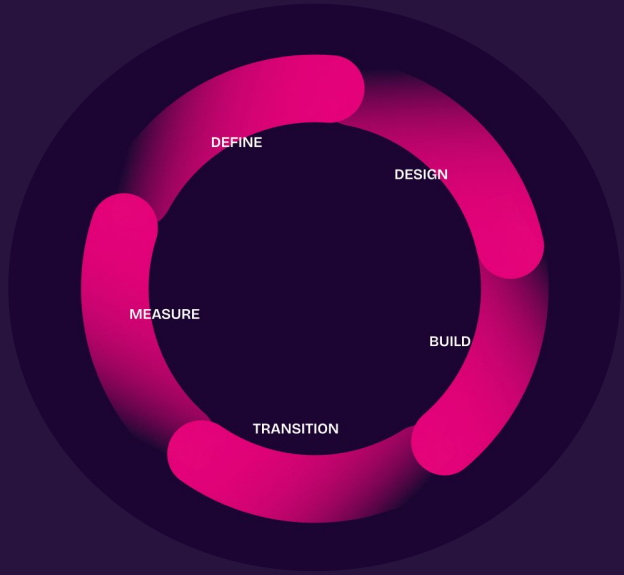
Seven ways to start your journey

1. Make governance a priority.
2. Don’t overthink, get started: There is no right or wrong; only proactive and reactive design.
3. Get familiar with research and best practices but don’t get lost.
4. Develop a vision with clear goals and objectives.
5. Innovate through iterative action-learning cycles.
6. Design not only for but with the community.
7. Collaborate with other projects, disciplines and sectors.

The lifecycle perspective

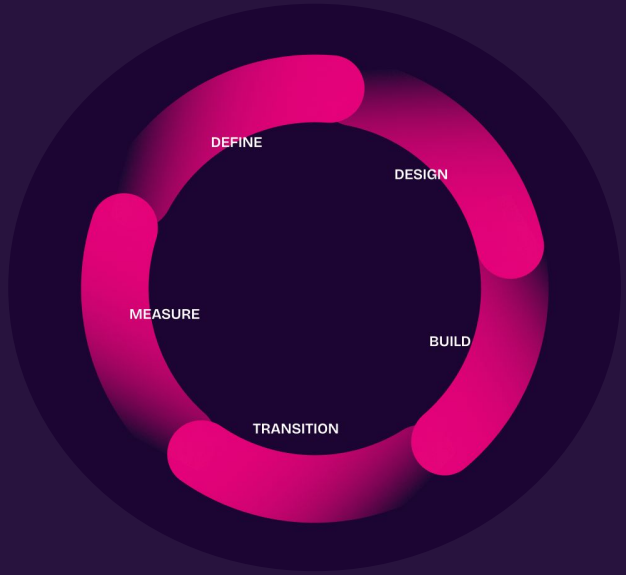
The governance lifecycle model

- A strategic framework for structuring governance innovation in distinct phases.
- A lens similar to agile product management.
- An iterative approach focused on continuous evaluation and improvement.



The six lifecycle stages

1. Define
2. Design
3. Build
4. Transition
5. Measure
6. Upgrade



1. Define the vision

- **Develop a purpose:** Establish clear goals and objectives that governance needs to achieve.
- **Identify stakeholders**: Map out all relevant stakeholders and define their roles and responsibilities.
- **Establish a design framework**: Create the foundational governance primitives, principles, and protocols.

2. Design the intervention

- **Draft a strategic roadmap:** Develop a step-by-step plan for the design and deployment of the governance intervention.
- **Allocate resources:** Assess essential resources, including personnel and technology, to support the governance implementation.
- **Handle legal considerations:** Identify and navigate regulatory and compliance requirements.

3. Build the right mechanism

- **Prototype and test mechanisms**: Iterate mechanism designs to ensure they meet defined objectives.
- **Involve community**: Foster active community participation to gather feedback and refine prototype.
- **Deploy governance mechanism**: Set up necessary technological and organizational infrastructures.

4. Manage the transition

- **Initiate Cultural Change**: Enable cultural and organizational adjustments required to adopt new governance mechanism.
- **Build Capacity**: Provide targeted training and resources to empower stakeholder participation.
- **Enhance outreach:** Implement effective communication strategies to drive adoption and engagement.

5. Evaluate impact

- **Monitor Performance**: Consistently assess governance mechanisms against established benchmarks to verify goal alignment.
- **Identify Risks**: Actively scan for and mitigate risks or vulnerabilities within the governance framework.
- **Spot Opportunities**: Continually analyze the governance system to identify and implement improvements.

6. Upgrade the system

- **Prepare for upgrade**: Draft proposals for necessary adjustments or updates in the governance framework.
- **Implement upgrade**: Update the governance model with approved changes and improvements
- **Ongoing adaptation**: Establish a process for ongoing learning to continuously evolve the governance framework.

Discuss:

1.) What are the benefits of this perspective?

2.) What are the pitfalls and blind spots of this model?

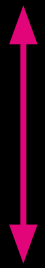
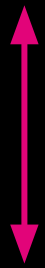
Understanding the cookbook lens

POLKADOT BLOCKCHAIN ACADEMY

Think about all the different blockchain projects you know. How does their governance diverge?

1: Pick your flavor

More of what?

Expediency	**Immutability**	**Automation**
		
Participation	**Adaptability**	**Discretion**

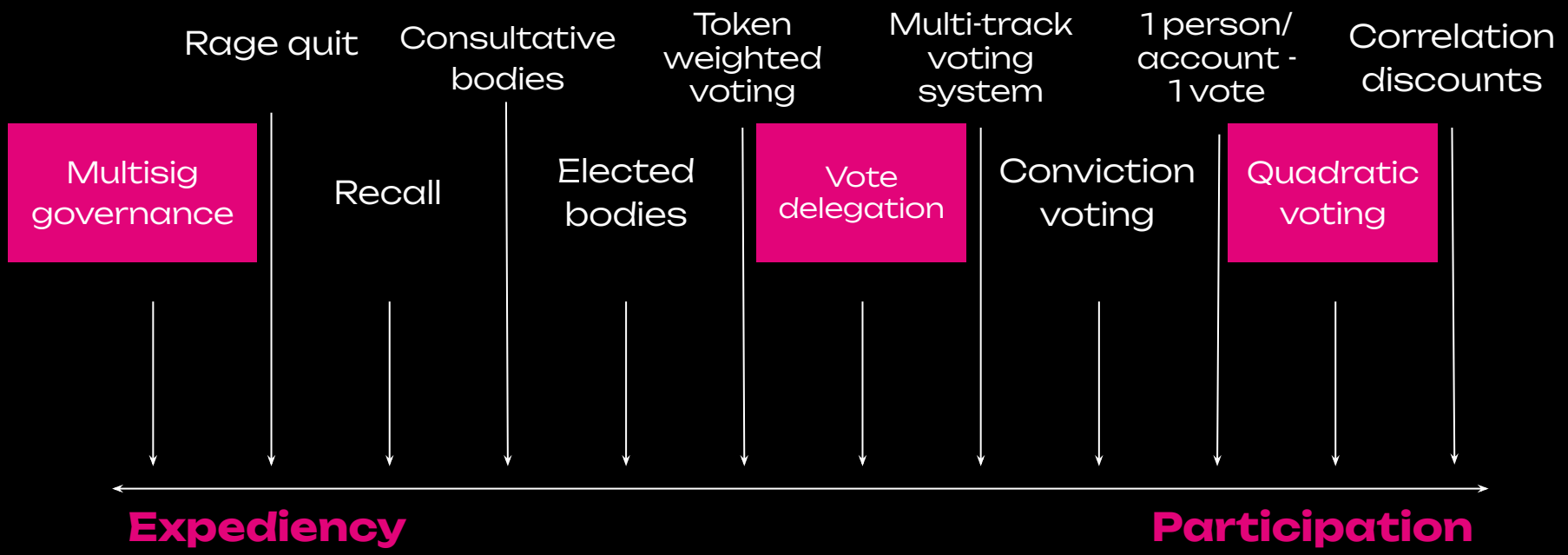
POLKADOT BLOCKCHAIN ACADEMY

2: Pick your ingredients

Understanding governance primitives

POLKADOT BLOCKCHAIN ACADEMY

2: Pick your ingredients



POLKADOT BLOCKCHAIN ACADEMY

Case study: Multisig governance

Example: Polygon Protocol Council emergency updates

Case study: Vote delegation

Example: Cardano's DRep system

Case study: Quadratic voting

Quadratic Voting: How Mechanism Design Can Radicalize Democracy

Steven P. Lalley

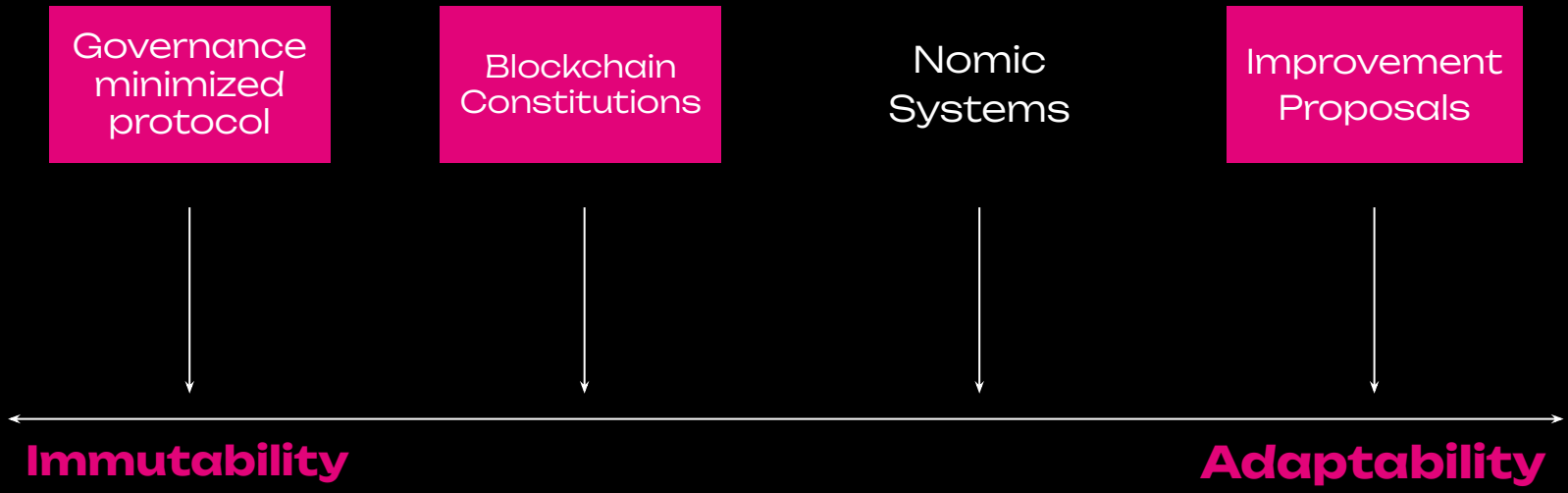
E. Glen Weyl

AEA PAPERS AND PROCEEDINGS
VOL. 108, MAY 2018
(pp. 33-37)

Example: Gitcoin's quadratic funding model

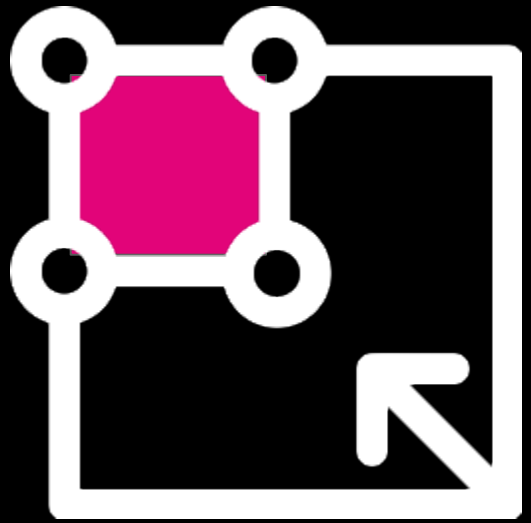
POLKADOT BLOCKCHAIN ACADEMY

2: Pick your ingredients



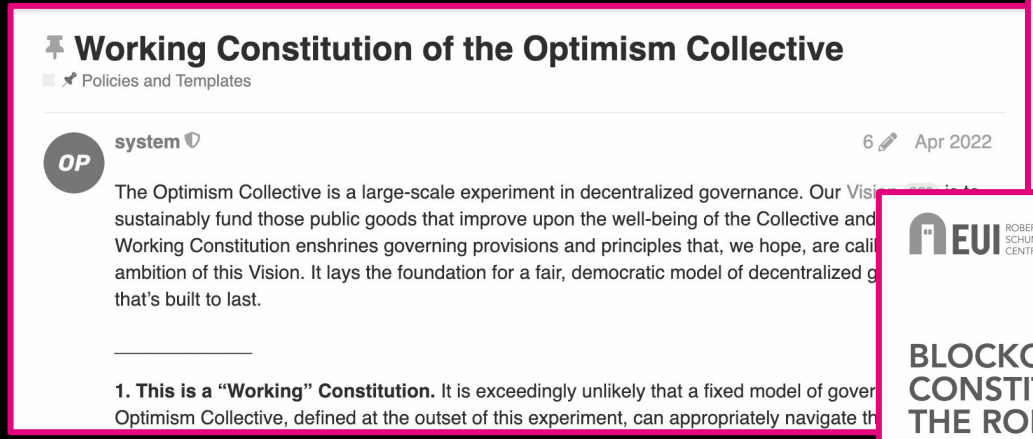
POLKADOT BLOCKCHAIN ACADEMY

Case study: governance minimization



Example: Bitcoin's governance design

Case study: Blockchain constitutionalism



Example: Optimism's working constitution

POLKADOT BLOCKCHAIN ACADEMY

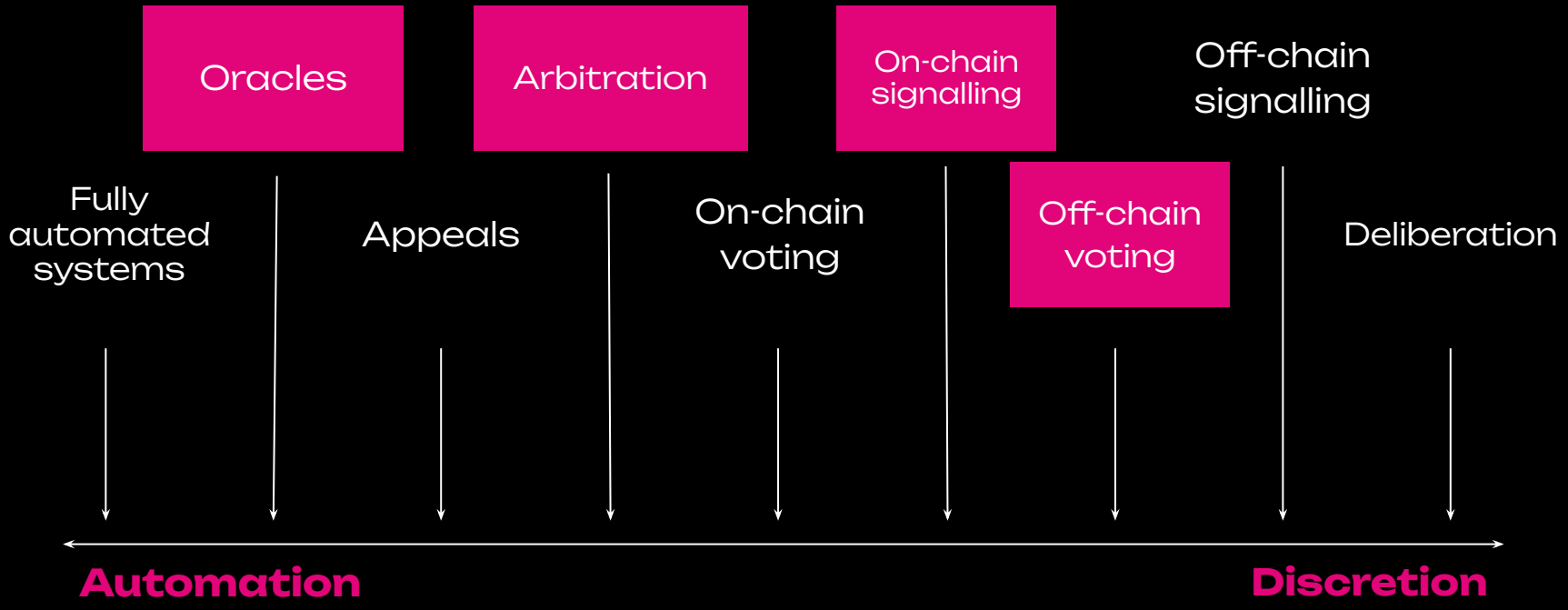
Case study: Improvement proposals

```
BIP: 1
Title: BIP Purpose and Guidelines
Author: Amir Taaki <genjix@riseup.net>
Comments-Summary: No comments yet.
Comments-URI: https://github.com/bitcoin/bips/wiki/Comments:BI
Status: Replaced
Type: Process
Created: 2011-09-19
Superseded-By: 2
```

Example: BIPs and EIPs

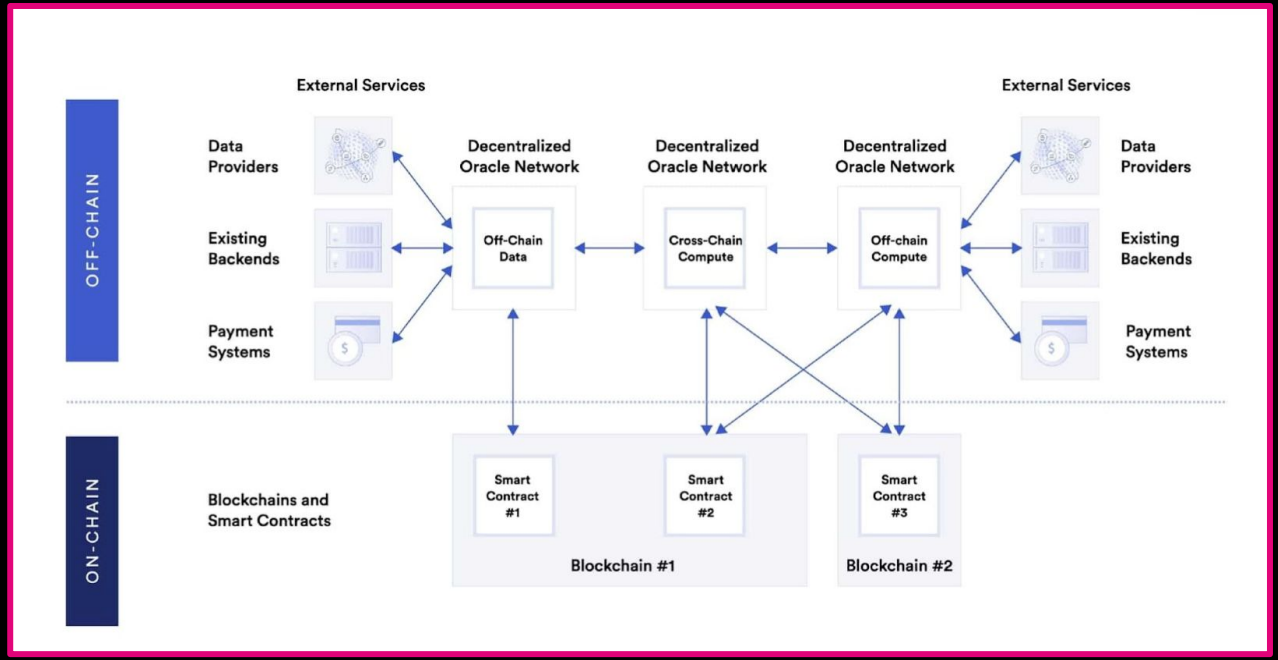
POLKADOT BLOCKCHAIN ACADEMY

2: Pick your ingredients



POLKADOT BLOCKCHAIN ACADEMY

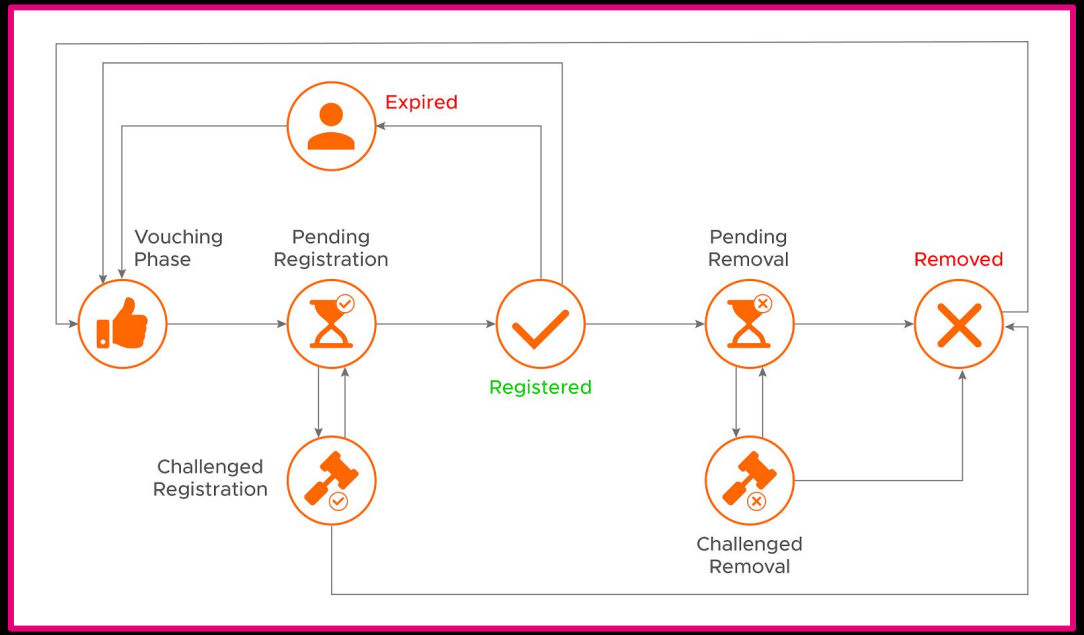
Case study: Oracles



Example: Chainlink oracles/ DeFi pricing

POLKADOT BLOCKCHAIN ACADEMY

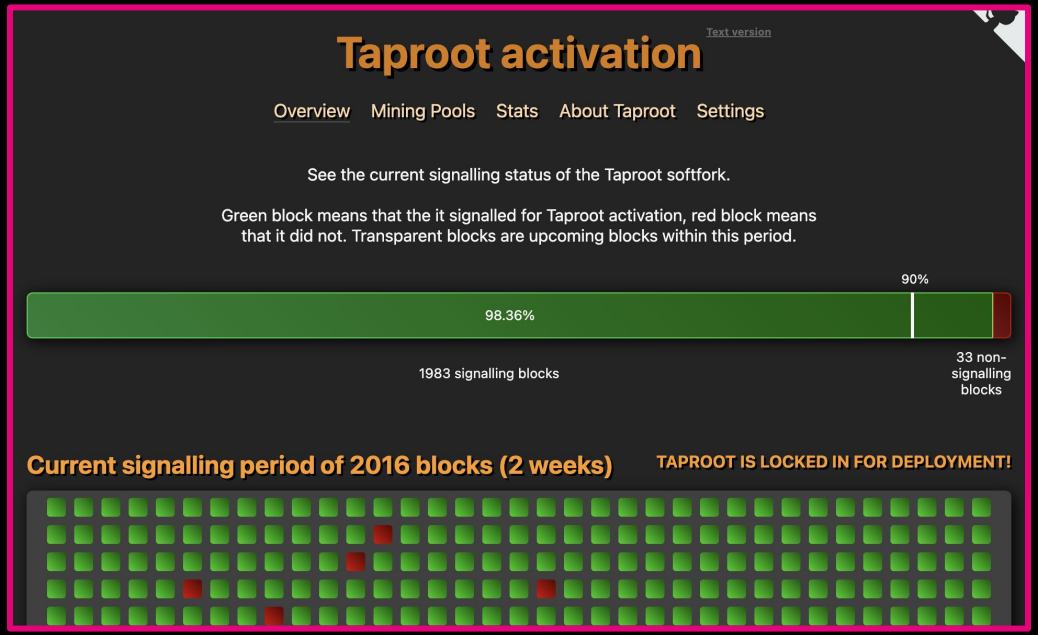
Case study: Arbitration



Example: Proof of Humanity Courts

POLKADOT BLOCKCHAIN ACADEMY

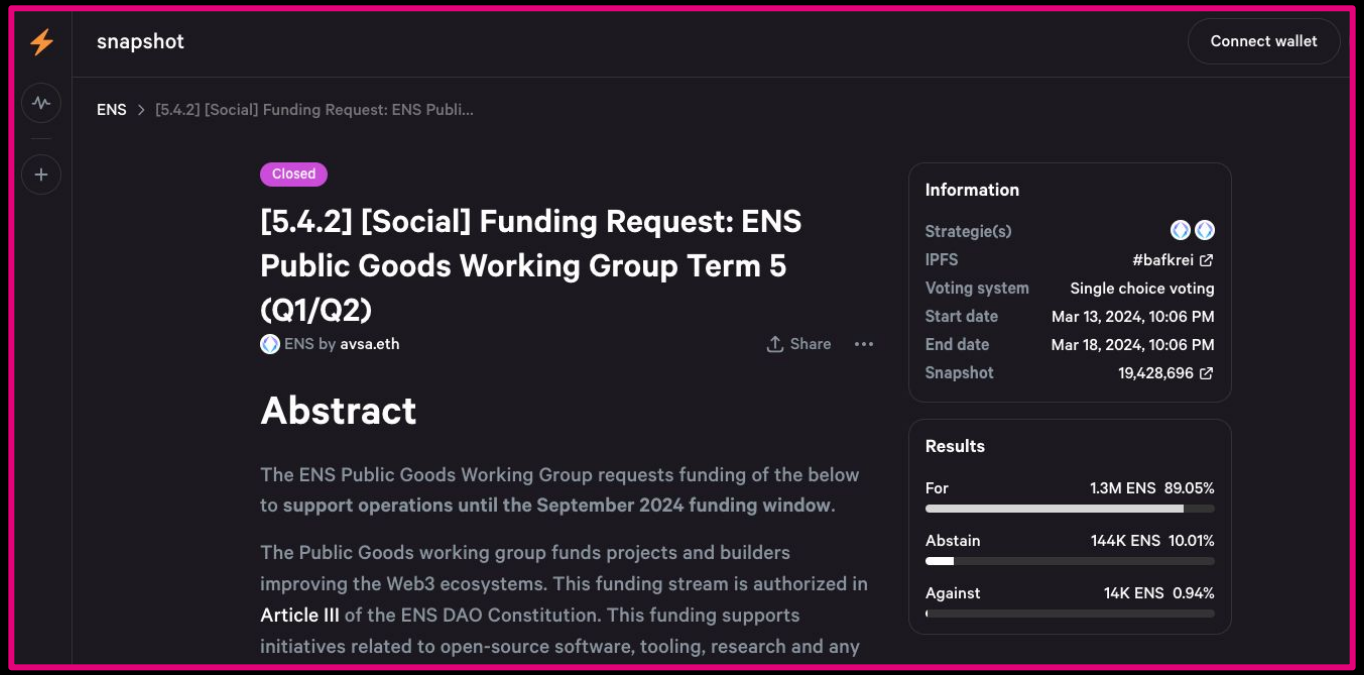
Case study: On-chain signalling



Example: Bitcoin miner signalling

POLKADOT BLOCKCHAIN ACADEMY

Case study: Off-chain voting



Example: Snapshot

POLKADOT BLOCKCHAIN ACADEMY

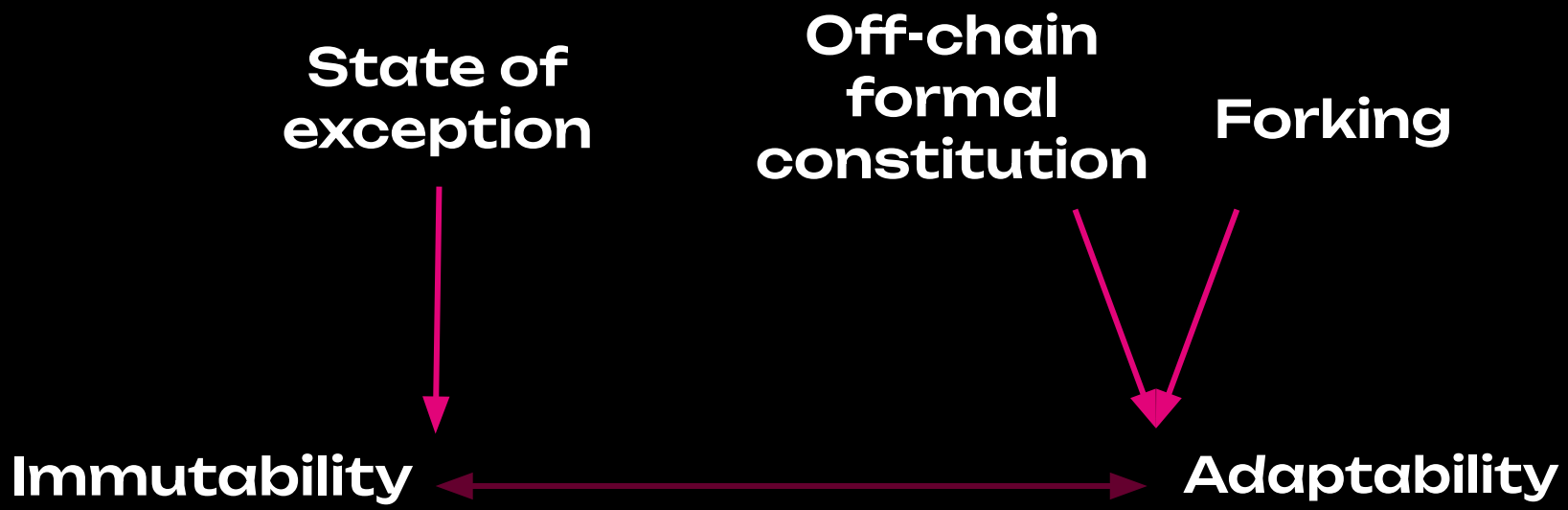
3: Keep strong flavors in check

POLKADOT BLOCKCHAIN ACADEMY

3: Keep strong flavors in check

POLKADOT BLOCKCHAIN ACADEMY

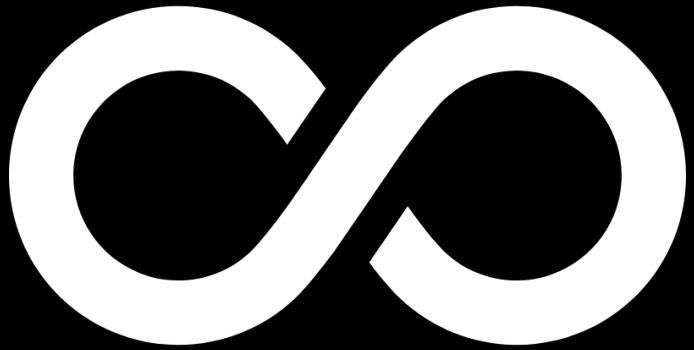
3: Keep strong flavors in check



3: Keep strong flavors in check

4: Create feedback loops for continuous optimization

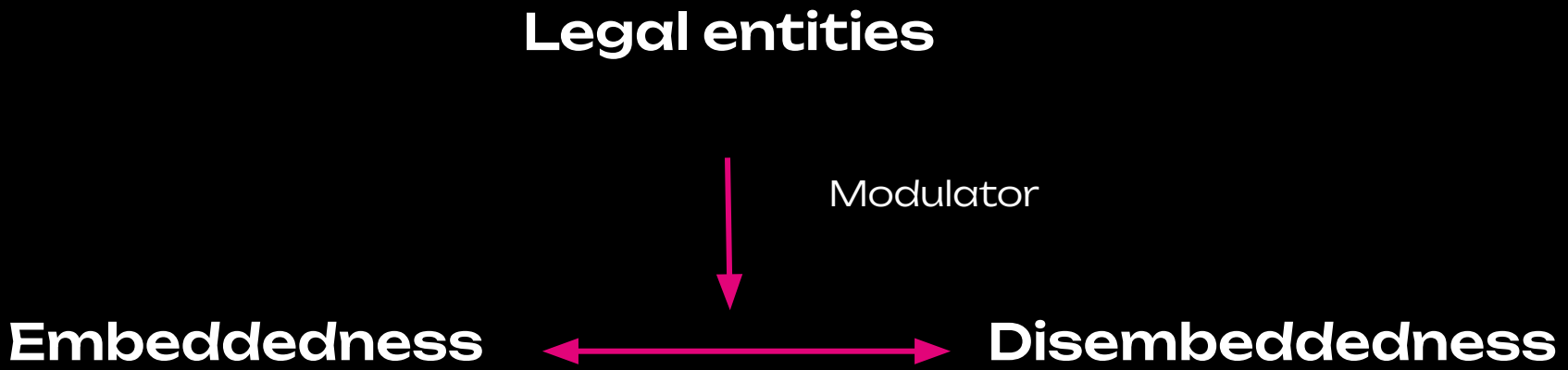
Humans as sensors



Changing external conditions

POLKADOT BLOCKCHAIN ACADEMY

5: Create a side dish



RECAP

1. Pick your flavor
2. Pick your ingredients
3. Keep strong flavors in check
4. Create feedback loops for continuous optimization
5. Create a side dish

Questions?

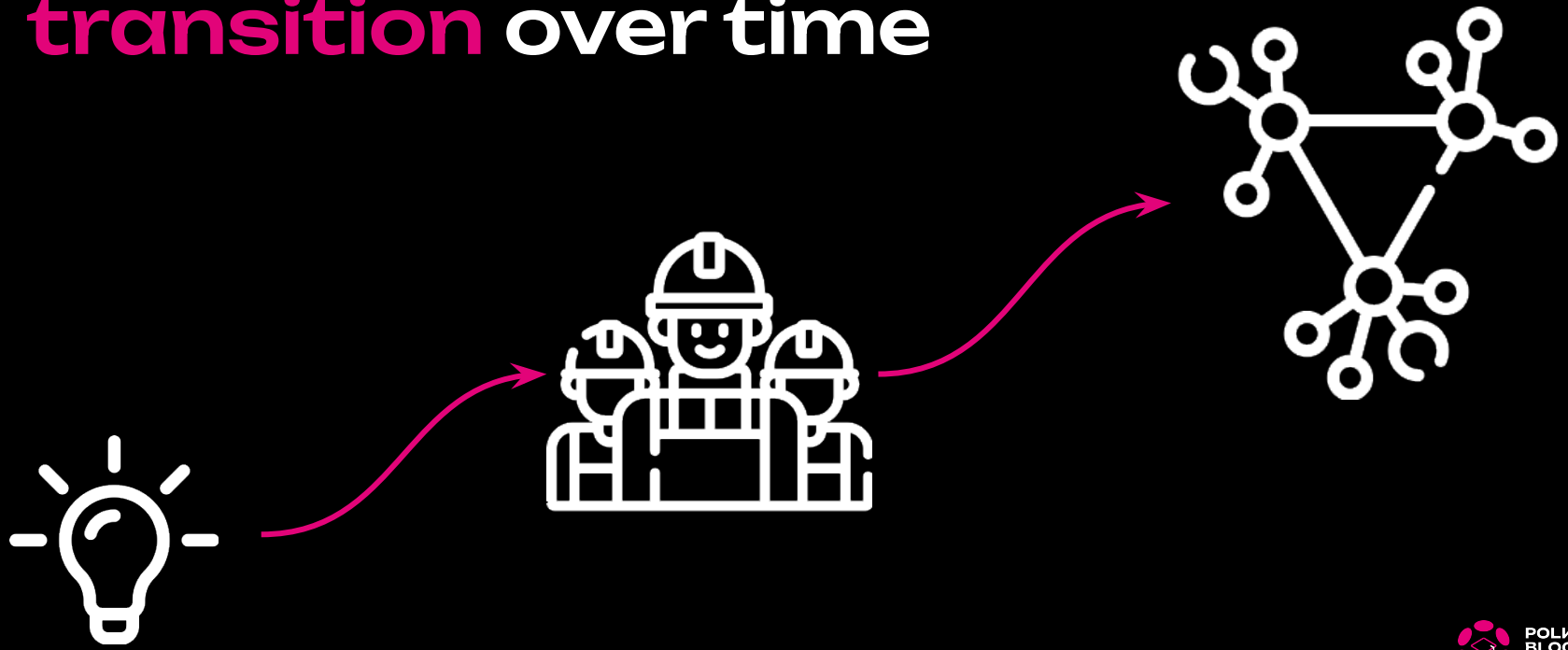
POLKADOT
BLOCKCHAIN
ACADEMY

Before you begin...

Where are you starting from?

POLKADOT
BLOCKCHAIN
ACADEMY

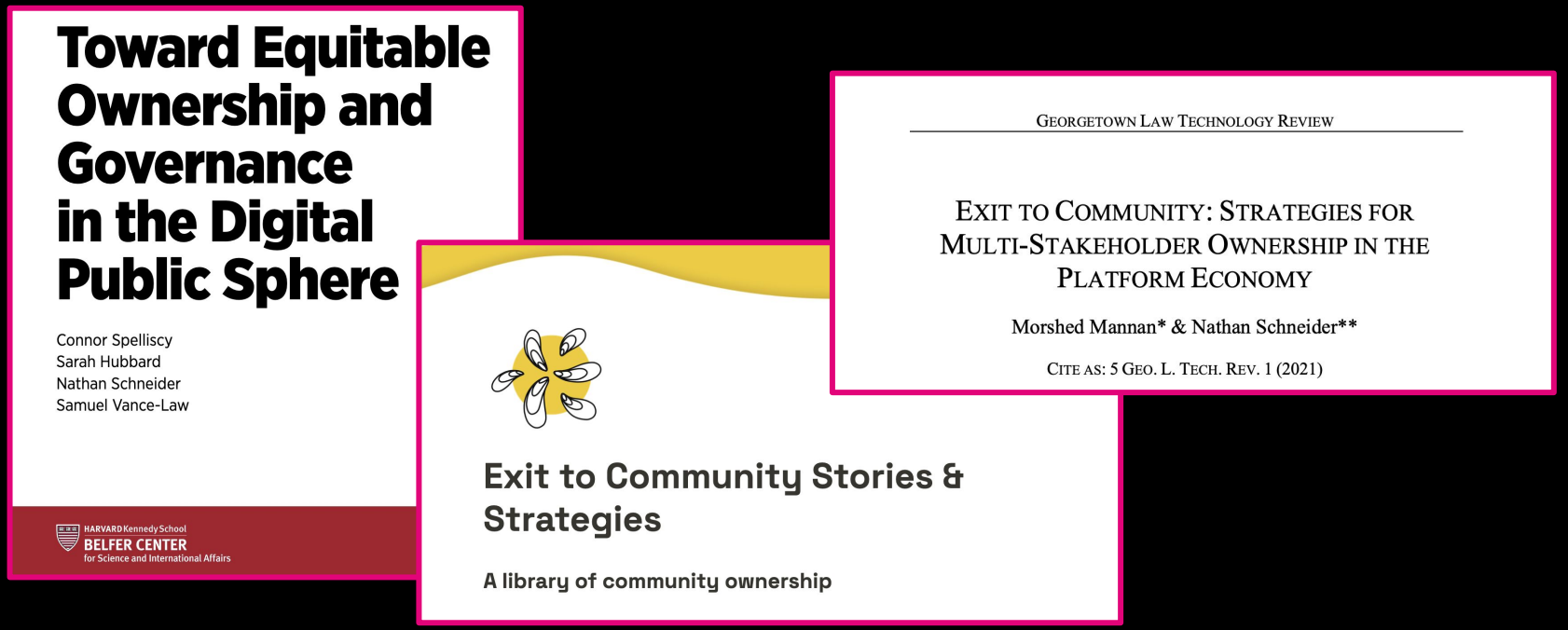
Many blockchain projects start with centralized governance and transition over time



POLKADOT BLOCKCHAIN ACADEMY

Frameworks for thinking through transition management

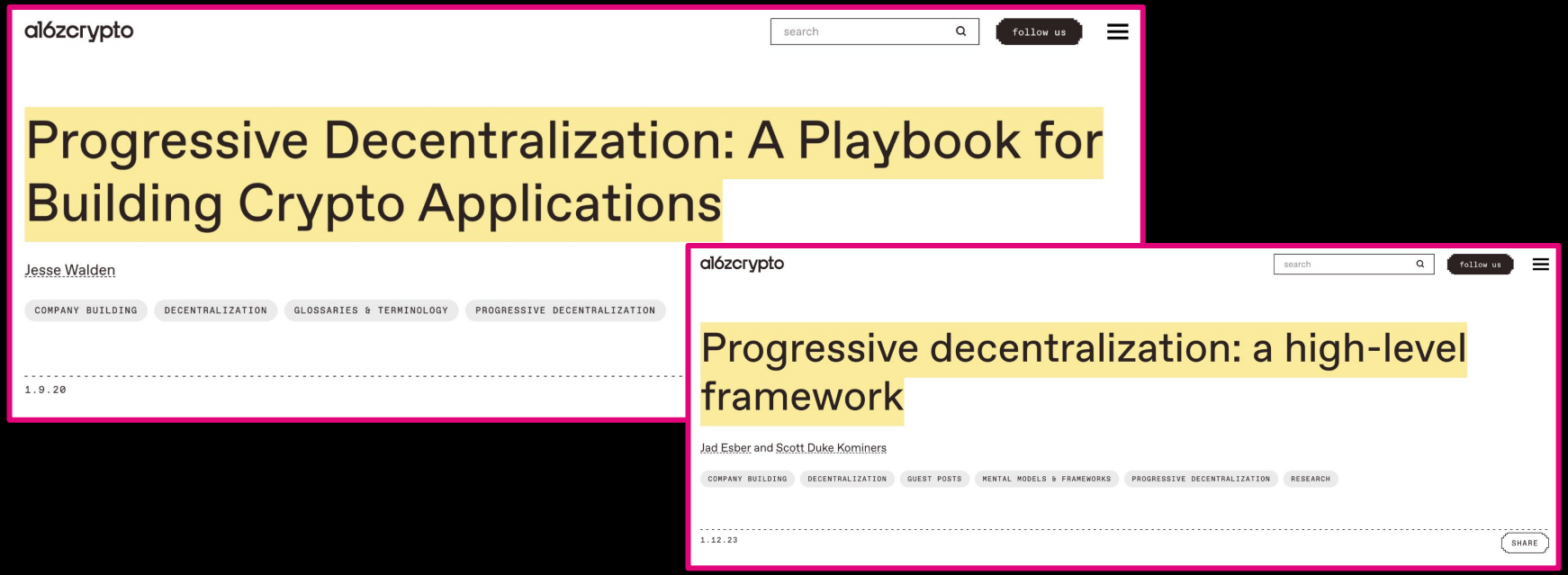
Exit to Community



Learning from experience

POLKADOT BLOCKCHAIN ACADEMY

Progressive decentralization

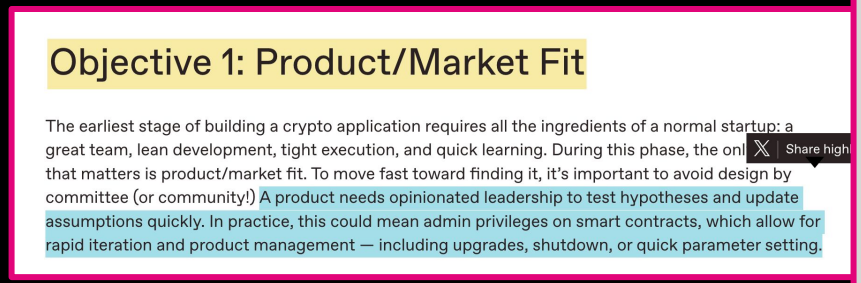


A blockchain specific playbook

POLKADOT BLOCKCHAIN ACADEMY

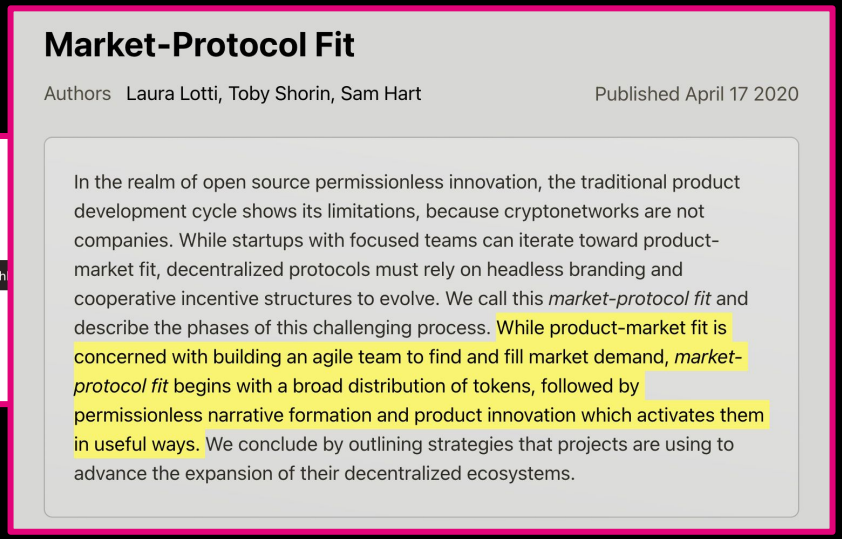
When should the transition start?

When does the transition start?



Objective 1: Product/Market Fit

The earliest stage of building a crypto application requires all the ingredients of a normal startup: a great team, lean development, tight execution, and quick learning. During this phase, the onl Share high that matters is product/market fit. To move fast toward finding it, it's important to avoid design by committee (or community!) A product needs opinionated leadership to test hypotheses and update assumptions quickly. In practice, this could mean admin privileges on smart contracts, which allow for rapid iteration and product management — including upgrades, shutdown, or quick parameter setting.



Market-Protocol Fit

Authors Laura Lotti, Toby Shorin, Sam Hart

Published April 17 2020

In the realm of open source permissionless innovation, the traditional product development cycle shows its limitations, because cryptonetworks are not companies. While startups with focused teams can iterate toward product-market fit, decentralized protocols must rely on headless branding and cooperative incentive structures to evolve. We call this *market-protocol fit* and describe the phases of this challenging process. While product-market fit is concerned with building an agile team to find and fill market demand, *market-protocol fit* begins with a broad distribution of tokens, followed by permissionless narrative formation and product innovation which activates them in useful ways. We conclude by outlining strategies that projects are using to advance the expansion of their decentralized ecosystems.

Product-market vs market-protocol fit

POLKADOT BLOCKCHAIN ACADEMY

Where does the transition end?

Where does the transition end?


INTERNET POLICY REVIEW

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DIVERSITY GOVERNANCE INFRASTRUCTURE & STANDARDS INFORMATION & DATA INNOVATION INTELLECTUA

Volume 10, Issue 2 | Concepts of the digital society

CONCEPT

Decentralisation: a multidisciplinary perspective

OPEN ACCESS

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Jaya Klara Brekke, *Department of Geography, Durham University, United Kingdom, j.k.brekke@durham.ac.uk*
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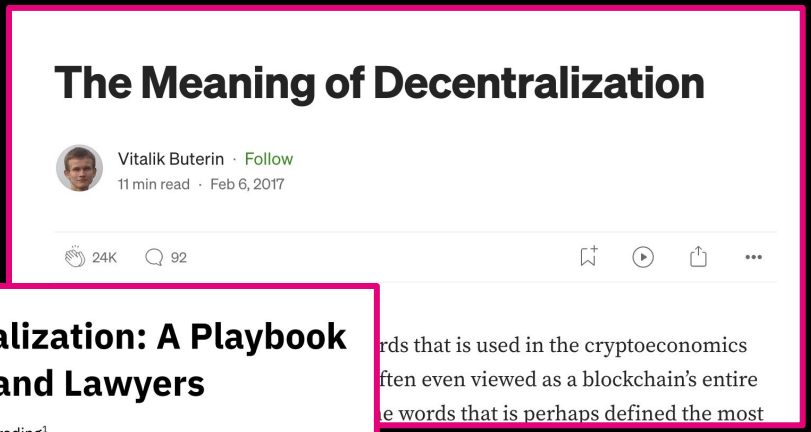
PEER REVIEWED

PUBLISHED ON: 16 Jun 2021 DOI: 10.14763/2021.2.1563

ABSTRACT

Decentralisation as a concept is attracting a lot of interest, not least wit


The Meaning of Decentralization

Vitalik Buterin · Follow
11 min read · Feb 6, 2017

24K 92

rds that is used in the cryptoeconomics
ften even viewed as a blockchain's entire
e words that is perhaps defined the most


Sufficient Decentralization: A Playbook for web3 Builders and Lawyers

By Marc Boiron, Chief Legal Officer at dYdX Trading[1]

Introduction

Web3 builders have focused on the concept of "sufficient decentralization" ever since staff at the U.S. Securities and Exchange Commission introduced the concept in 2018. It led builders to focus on distributing the efforts of driving profits in a crypto-asset from a centralized company to unaffiliated community members working towards a common goal.

Understanding decentralization

POLKADOT BLOCKCHAIN ACADEMY

Questions?

POLKADOT
BLOCKCHAIN
ACADEMY

Polkadot Polkadot Blockchain Academy

BLOCKCHAINGOV

Open Gov .Watch

Introduction to OpenGov

Lecture 3, 30.05.

Tommi Enenkel, OpenGov.Watch

Anton Khvorov
@AntonTheDay7

I swear to god @Polkadot OpenGov stuff should has its own @netflix series

10:51 PM · Nov 14, 2023 · **5,104** Views

8 6 105 2

See similar posts

Post your reply

Reply

Natti | Polkadot Babe @NattiCrypto · 12h
Right? at least maybe this will bring us some spotlight lol

Always have my popcorn ready

2 205

Batman @0xtherealbatman · 8h
Ngl, it can definitely make for a wonderful reality show

1 2 135

Polkadot is a DAO

Polkadot

PolkadotDevs:
MeetUps

Tommi Enenkel

OpenGov.Watch

ChaosDAO

@alice_und_bob - Twitter/YouTube

Agenda

- What is OpenGov?
- Mechanics
- OpenGov Today
- Discussion

Raise your hands...

What is OpenGov?

Universal Token Holder On-Chain Governance

Full Token Holder On-Chain Governance

- On-Chain Governance
  - On-chain submission, voting, execution
  - Automatic(!) execution
- Token holder
  - All decisions are made by all token holders
  - Every token holder can initiate referenda
- Universal
  - Runtime upgrades
  - Change system parameters & state (e.g. mint/burn tokens)
  - Call any extrinsic
  - Treasury spending
  - ...

How can everyone decide on everything?

What do you need to win?

- Decision deposit
- Majority
- Time

Helpful:

- Capital → Voting Power
- Social Capital
- OpenGov Expertise

What's the Process?

Proposal → Decision → Enactment

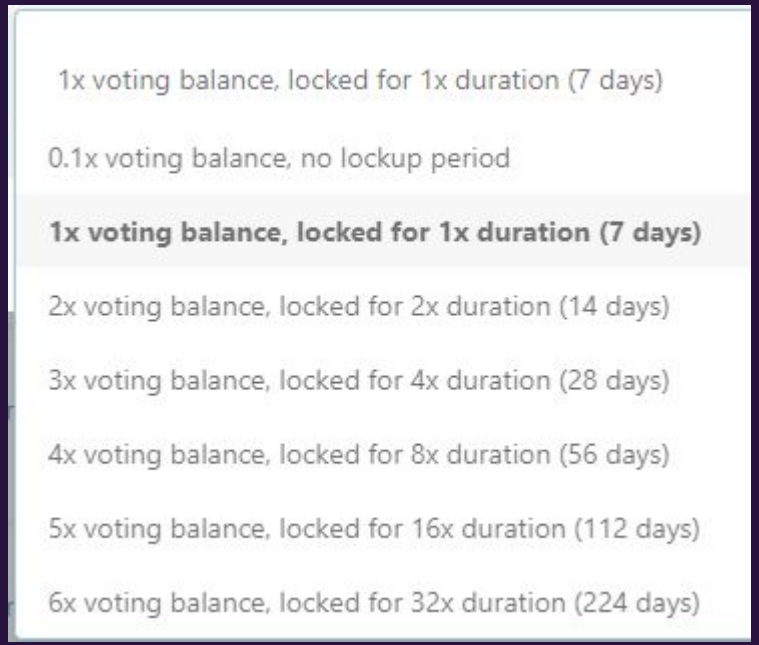
What's the (on-chain) Process?

- Proposals
  - Submit preimage
  - Submit referendum
  - Place decision deposit
- Decision
  - Support threshold
  - Majority
- Enactment

Voting

Voting

- Democracy: 1 person - 1 vote
- Plutocracy: 1 token - 1 vote
- Why don’t we have “1 person - 1 vote”?
  - KYC
  - Nothing-at-stake
- Why don’t we have quadratic voting?
- YES - NO - ABSTAIN
- Conviction Voting



Conviction Voting

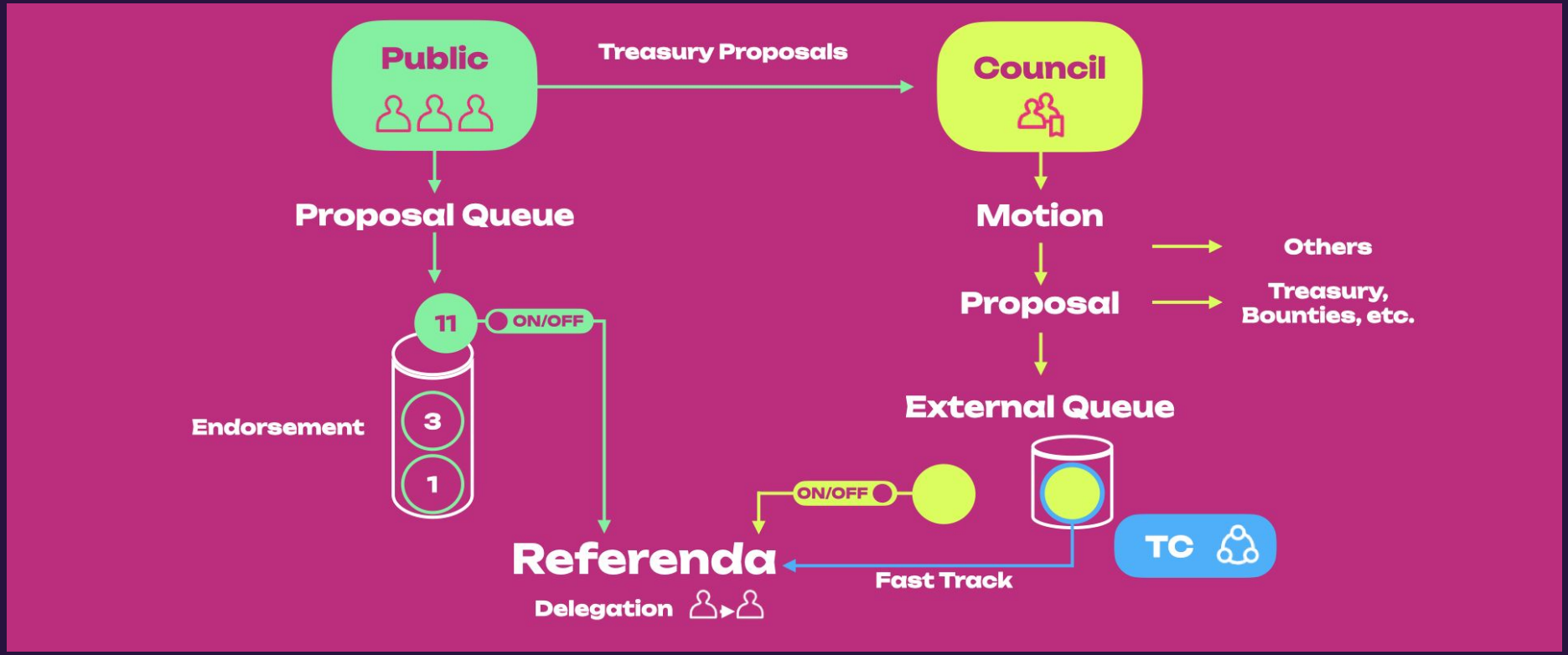
Treasury

Treasury

- Spends & Bounties
- Bounties
  - Pools of tokens
  - Curators (multisig) decide how to pay out the tokens
- Multi-asset Treasury: DOT, USDT, USDC...
- 33m DOT & 250k KSM

History

Gov1


Public
Treasury Proposals
Council
Proposal Queue
Motion
Others
Proposal
Treasury, Bounties, etc.
11
ON/OFF
Endorsement
3
1
External Queue
ON/OFF
TC
Referenda
Fast Track
Delegation

Gov 1

- Referenda
  - Anyone can propose
  - Only one proposal decided at a time
  - Proposals enter a queue
  - Competition to get your proposal on the top of the queue
- Motions
  - Council is voted in by token holders
  - (Decide on tipping)
  - Submit motions
  - Could influence how many votes are needed to decide a referendum
- Technical Committee could fast-track motions

Gov 1 - Implications

- The system was decentralized, but...
- Lots of power for the Council
- In practice you needed the support of the council (and sometimes TC) to get something through

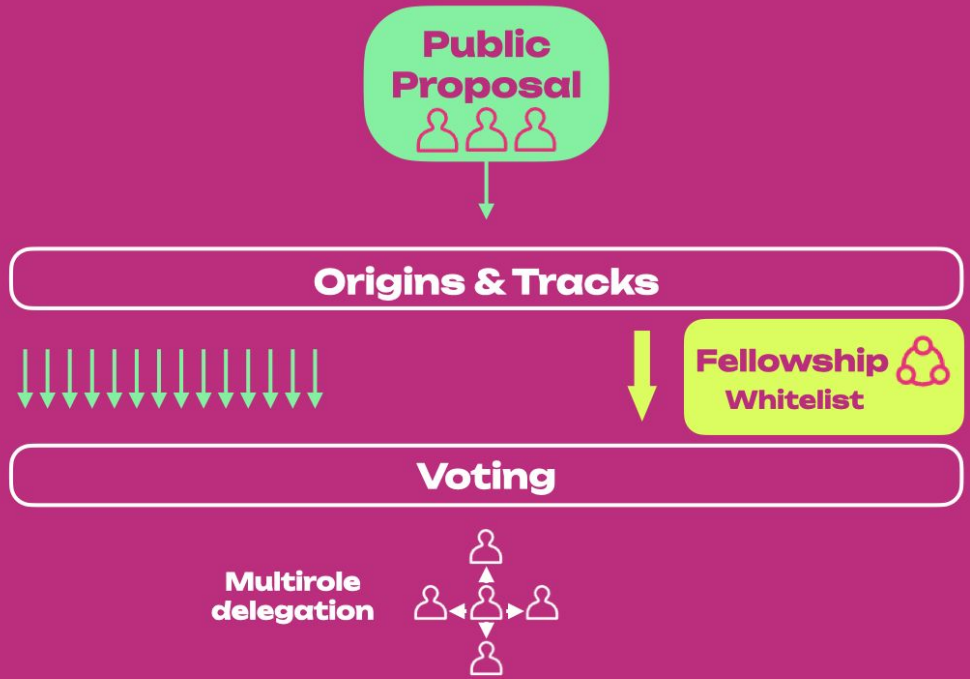
From Gov1 to OpenGov

OpenGov

- Token holders decide everything. No Council
- Multiple proposal tracks
  - Different params for timelines and decision deposits
- Delegations

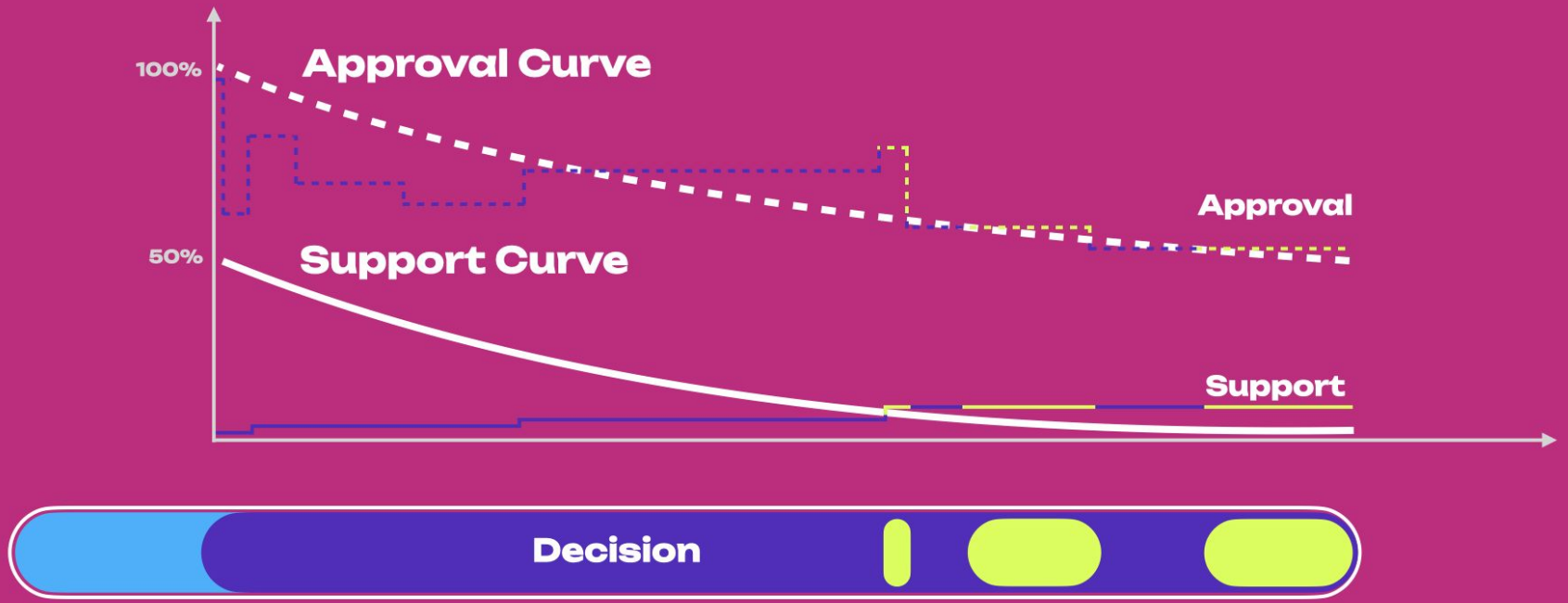
Tracks

- Root
- Staking Admin
- Referendum Canceller/Killer
- Treasury
- Whitelist
- Wish for Change


Public Proposal
Origins & Tracks
Fellowship Whitelist
Voting
Multirole delegation

Track Timeline Structure

Origin	Track
Root	
Small Tipper	


100%
Approval Curve
Approval
50%
Support Curve
Support
Decision

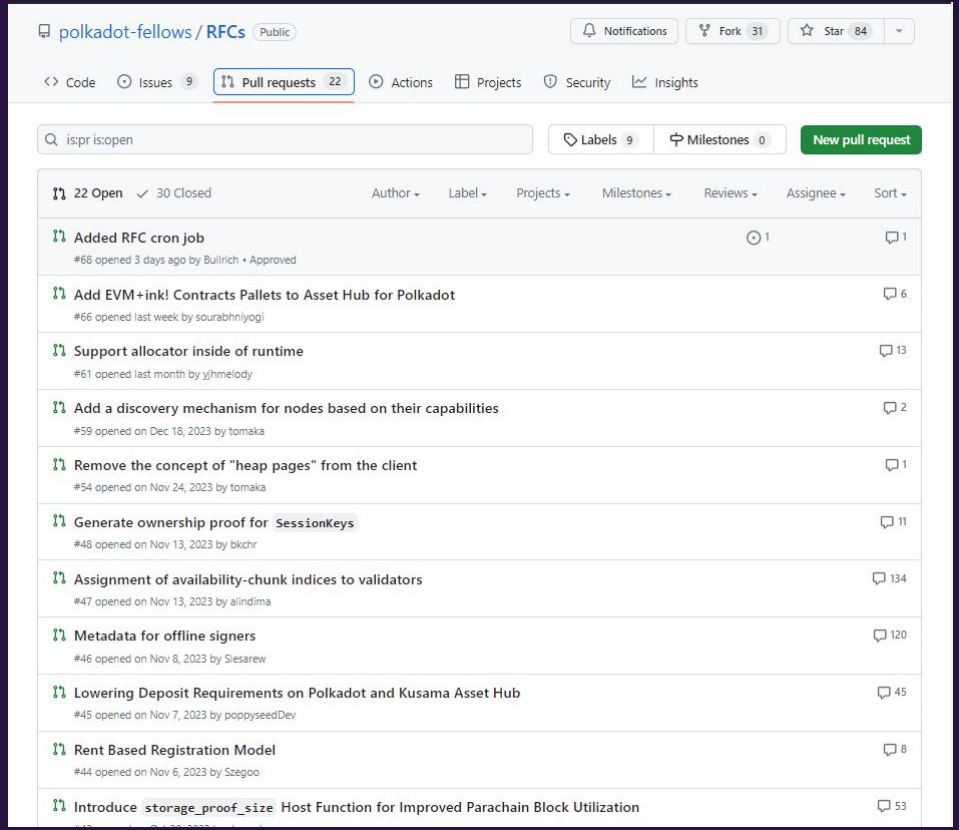
Collectives

Collectives

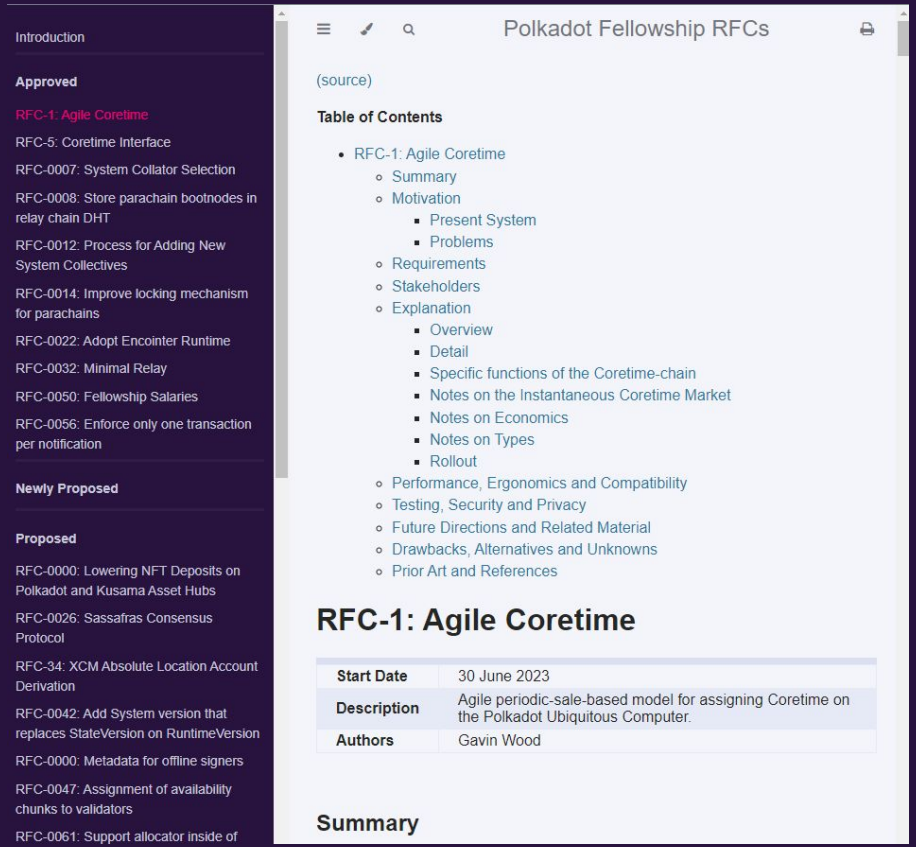
- On-chain primitive
- Technical Fellowship is the first collective
- Ambassador Collective just being built
- Executive bodies
- Custom pallet
- Membership management
- Payroll in DOT, USDT, any

Technical Fellowship

- Consists of Polkadot core devs
- Responsible for building the Polkadot runtime
- Can whitelist proposals for fast enactment/cheaper deposits
  - Sort-of replaced Technical Committee
- RFC system
- OpenDev calls


polkadot-fellows / RFCs
Public
Notifications
Fork 31
Star 84
Code
Issues 9
Pull requests 22
Actions
Projects
Security
Insights
is:pr is:open
Labels 9
Milestones 0
New pull request
22 Open
30 Closed
Author
Label
Projects
Milestones
Reviews
Assignee
Sort
Added RFC cron job
#68 opened 3 days ago by Bullrich • Approved
Add EVM+ink! Contracts Pallets to Asset Hub for Polkadot
#66 opened last week by sourabhniyogi
Support allocator inside of runtime
#61 opened last month by yjhmelody
Add a discovery mechanism for nodes based on their capabilities
#59 opened on Dec 18, 2023 by tomaka
Remove the concept of "heap pages" from the client
#54 opened on Nov 24, 2023 by tomaka
Generate ownership proof for SessionKeys
#48 opened on Nov 13, 2023 by bkchr
Assignment of availability-chunk indices to validators
#47 opened on Nov 13, 2023 by alindima
Metadata for offline signers
#46 opened on Nov 8, 2023 by Siesarew
Lowering Deposit Requirements on Polkadot and Kusama Asset Hub
#45 opened on Nov 7, 2023 by poppyseedDev
Rent Based Registration Model
#44 opened on Nov 6, 2023 by Szegoo
Introduce storage_proof_size Host Function for Improved Parachain Block Utilization

RFC process



paritytech.github.io/RFCs

Off-Chain Governance

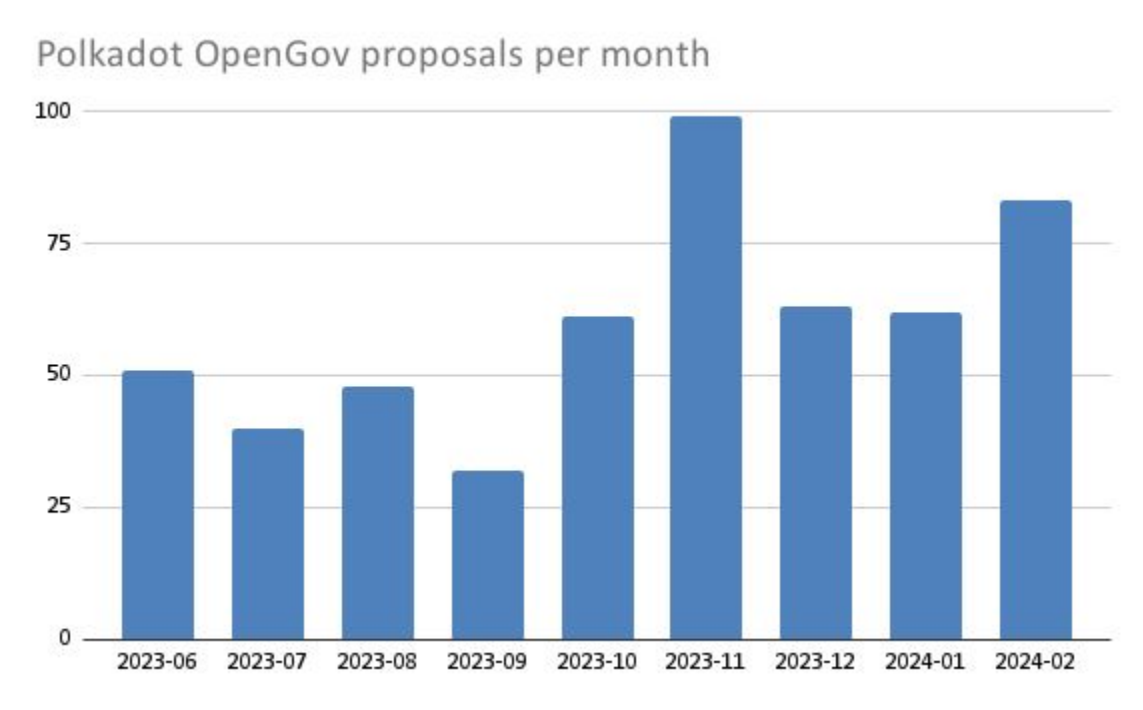
OpenGov Today

Facts

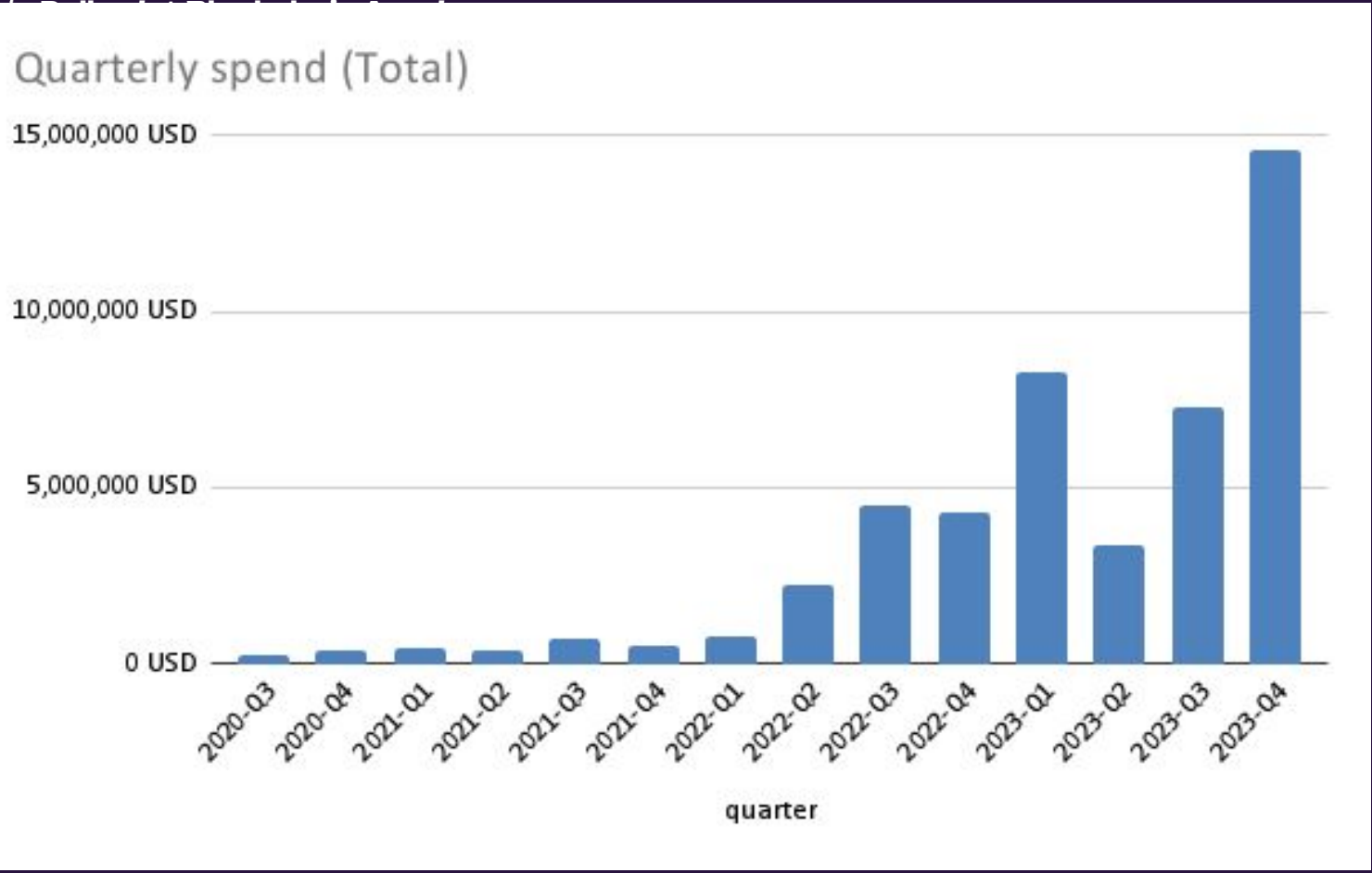
What is it used for?

- Forkless upgrades & system config
- Open HRMP channels, register Registrars
- Unbrick chains, (try to) recover DOT from exploits
- Root track activism (deregister parachains)
- Cancelling and killing referenda
- Request changes to Polkadot: issuance, voting
- Error! Please vote NAY
- Acquire USDT & USDC from HydraDX
- Liquidity loans & liquidity incentives

Throughput



Total: 539, average: 2/day, November: 99 proposals, 3.3 per day


Quarterly spend (Total)
15,000,000 USD
10,000,000 USD
5,000,000 USD
0 USD
2020-Q3
2020-Q4
2021-Q1
2021-Q2
2021-Q3
2021-Q4
2022-Q1
2022-Q2
2022-Q3
2022-Q4
2023-Q1
2023-Q2
2023-Q3
2023-Q4
quarter

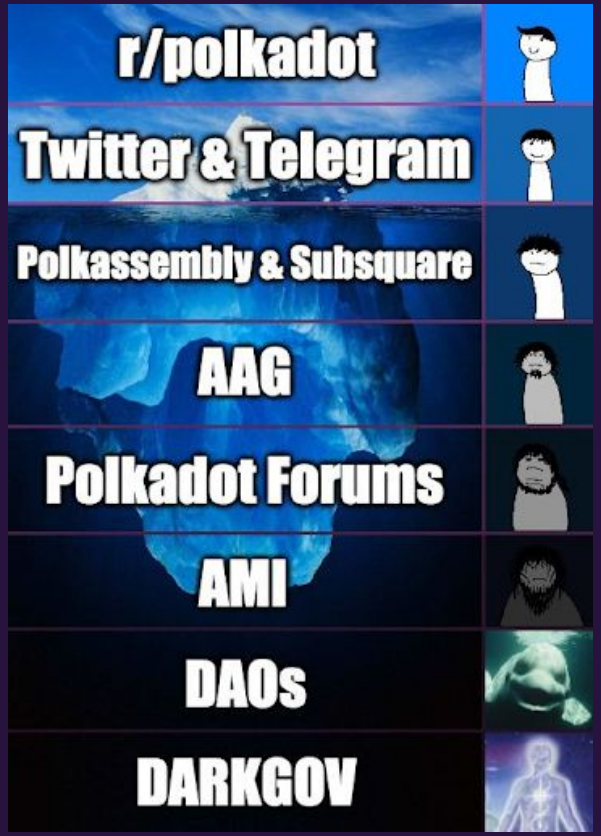
Off-Chain Process

Off-Chain Process

- Project marketing
- Discussion post on Polkassembly or SubSquare
- Present on AAG
- Lobby for your proposal
  - Whales
  - Delegates

Power Structures

- Guardian Angels
- DarkGov
- Whales & Delegates
  - Giotto
  - Decentralized Voices
  - Ivy
  - ChaosDAO
  - Kus
- Breaking: VCs



Tools

Tools

- Polkassembly
- SubSquare
- DoTreasury
- ChaosDAO Discord Voting Bot

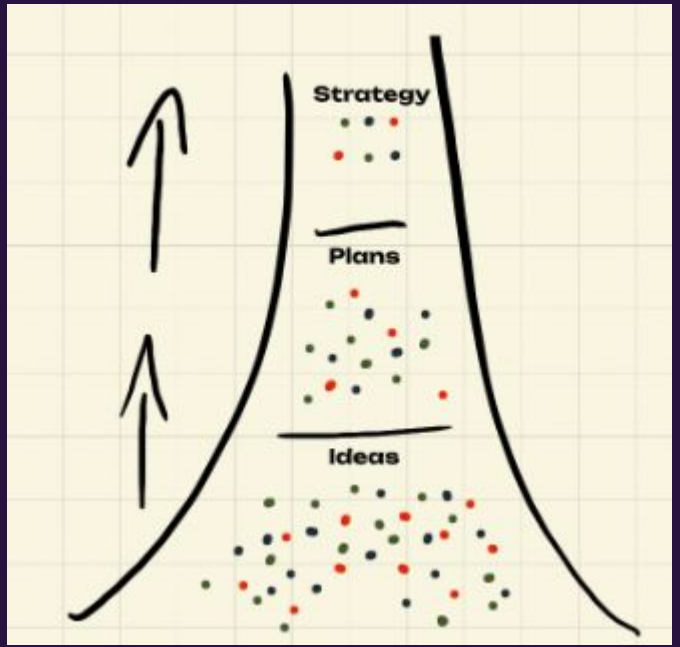
Discussion

Discussion

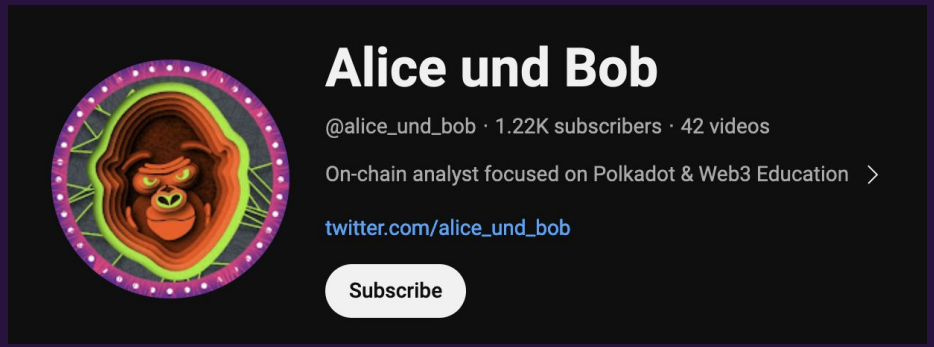
- OpenGOV pushed more responsibility to token holders
- Evolving practice
- Typical issues
  - Low voter turnout
  - Polarization
  - Time, Motivation, Attrition
  - Vote bribes
- Community Organizing
  - Top-Down vs. Bottom-Up

The Future of OpenGov

- Collectives
- Subtreasuries
- Legislative and Executive branch
- Public forums
- Coordination around initiatives
- Budget
- Decentralized Project Management



Follow for luck!



Polkadot

PolkadotDevs:
MeetUps

Thank you!

Polkadot Polkadot Blockchain Academy

BLOCKCHAINGOV

Take Home Assignment

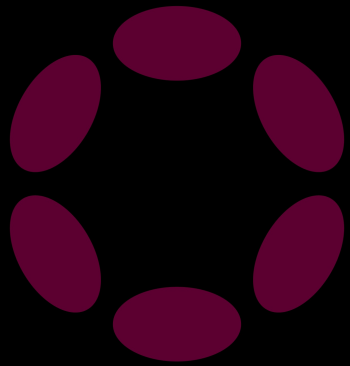
30.05.

For All Students

Case study assignment on trade-offs

- **Case study:** Reflect on your experience with blockchain projects. Have you encountered a governance trade-off similar to those discussed?
- **Analysis:** How was this trade-off resolved? What are potential benefits and pitfalls of the adopted solution? Describe and evaluate the approach taken.
- **Presentation:** Prepare to deliver a five-minute presentation on your case study tomorrow morning.

Day 2: Challenge

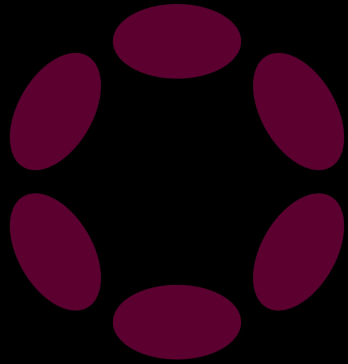


Governance Design Canvas

Title

- Present cookbook according to lifecycle steps. Say they are two different approaches towards gov design (product approach, recipe approach). Its important to use various approaches and also integrate them with each other because this is a complex topic
- Define stage
    - Pick your flavor
- Design stage
    - Pick your ingredients
    - Keep strong flavors in check (design for resilience & robustness)
    - Choose a side dish (legal entities/ embeddedness)
- Get ready to deploy & test by integrating evaluation mechanisms
    - How to integrate feedback loops
- Deploy

Challenge Presentation



- Group exercise
- You have all been **assigned a challenge** that shall be handed in to your **challenge provider** by end of day **(15:00)**
- Followed by group presentation
- Groups of 8
- Graded exercise
  - (no right or wrong answer...)

Start

Participation challenge

Nathalie Boyke
Senior Public Policy &
Governmental Affairs
Web3 Foundation

Parachain challenge

Tommi Enenkel
xxx

Goal

Title

- Text

Challenge Pitch

Title

- Text

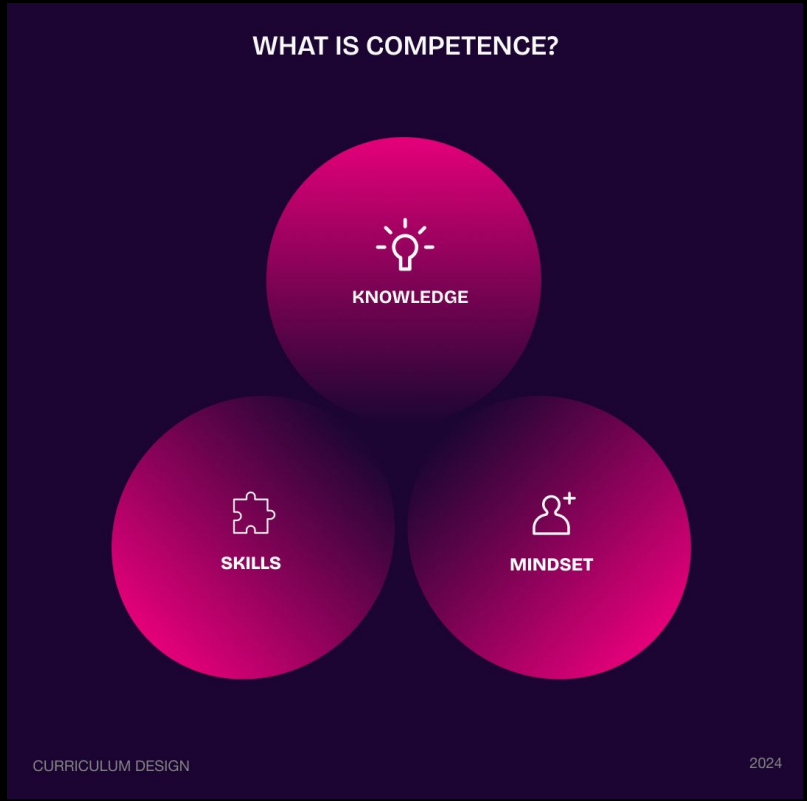
Co-Learning Session

Chief Governance Officer (CGO)

- The Chief Governance Officer (CGO) is a **new role in the blockchain ecosystem**.
- This role integrates a distinct set of competences tailored to the unique challenges of blockchain governance.
- The CGO's responsibilities include strategic decentralization oversight, stakeholder engagement, governance innovation management, and regulatory compliance.
- No matter your skill level, you are needed

What is Competence?

- **Knowledge** = What I understand
  - Example:
- **Skills** = What I do
  - Example:
- **Mindsets** = What I believe
  - Example:



Exercise

- Discuss and build on your cumulated insights from the module
- Let's envision the competence profile of a CGO
  - Map the roles and responsibilities of CGO
  - Map the necessary competences of a CGO
- Micro-Commitment: What are the next tangible steps for you to develop your profile?
  - Reflect on your strengths and weaknesses

Title

- Text