



BLOCKCHAIN: REGULATION IN THE DECENTRALIZED WORLD

Blockchain policy and regulation conference

24 February | 10 am CET | Online event



CIVITTA



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Blockchain: Regulation in the Decentralised World

Dr. Joachim Schwerin, Principal Economist

DG GROW, Unit G/3 SME Transformation of Industry

BlockStart Policy Conference, 24.02.2022 online

- This presentation reflects the personal views of the author and can under no circumstances be interpreted as an official position of the European Commission. -

Autumn 2008: Sunset of an Old Era, Sunrise of a New One

15 September 2008:

The bankruptcy of Lehman Brothers forms the climax of the subprime mortgage crisis in the US and triggers a chain reaction across financial markets worldwide.



(Picture source: euractiv.com)

31 October 2008:

Satoshi Nakamoto publishes a paper entitled "Bitcoin: A Peer-to-Peer Electronic Cash System" (<https://bitcoin.org/bitcoin.pdf>). Shortly thereafter, he mines the genesis block of the first cryptocurrency.



(Picture source: bitcoin.org)



Systemic Risk Inherent in Centralised Structures

- The 2007/08 financial crisis exposed huge systemic risks inherent in legacy capital and financial markets.
- The key risk factor consisted of interlinkages in centralised systems of interdependent financial intermediaries without adequate risk control mechanisms.
- The crisis heavily impacted enterprises (especially SMEs) that rely on bank lending.
- It also brought whole economies to the brink of collapse.
- For years to come, regulators had to operate in a defensive mode to stabilise dysfunctional centralised structures.





Background: SME Access to Finance

- Over 99 % of all EU enterprises are SMEs (about 25 million).
- They employ two out of every three employees, create 85% of all new jobs and generate about three-fifth of the EU value-added.
- European SMEs extensively rely on the banking system to access finance (and to execute payments).
- SME debt financing amounted to about 75 % of all financing at the start of the 2007/08 financial crisis.

And what has changed by now?

- This percentage has hardly changed (disregarding the current peak in grants due to Covid-19), despite all efforts.
- The banking system as well as the macroeconomic environment in which it operates was, is and remains a hotspot of systemic risk.



Centralisation vs. Decentralisation

Centralised financial structures have been a recurrent source of systemic risks with negative spillovers to the real economy.

Decentralised financial structures have no such track record.

**They are a solution,
not the problem.**

But what about crypto crime!?

2022 Chainalysis Crypto Crime Report:
„Transactions involving illicit addresses represented just 0.15 % of cryptocurrency transactions in 2021 ... the yearly trends suggest that ... crime is becoming a smaller and smaller part of the cryptocurrency ecosystem.“

Tokenisation Based on Decentralised Structures Creates Opportunities

SME Financing

- Initial Coin Offerings
- Tokenisation of bonds, shares etc.



Financial inclusion

- Digital wallets on mobile devices
- P2P lending at local level

Global competitiveness

- SME online market access
- Crowdsourcing of inputs



Programmable money

- Smart contracts
- M2M payments

Tokenised ecosystems

- Value-chain management
- Digitalisation of industries

New (global?) currencies

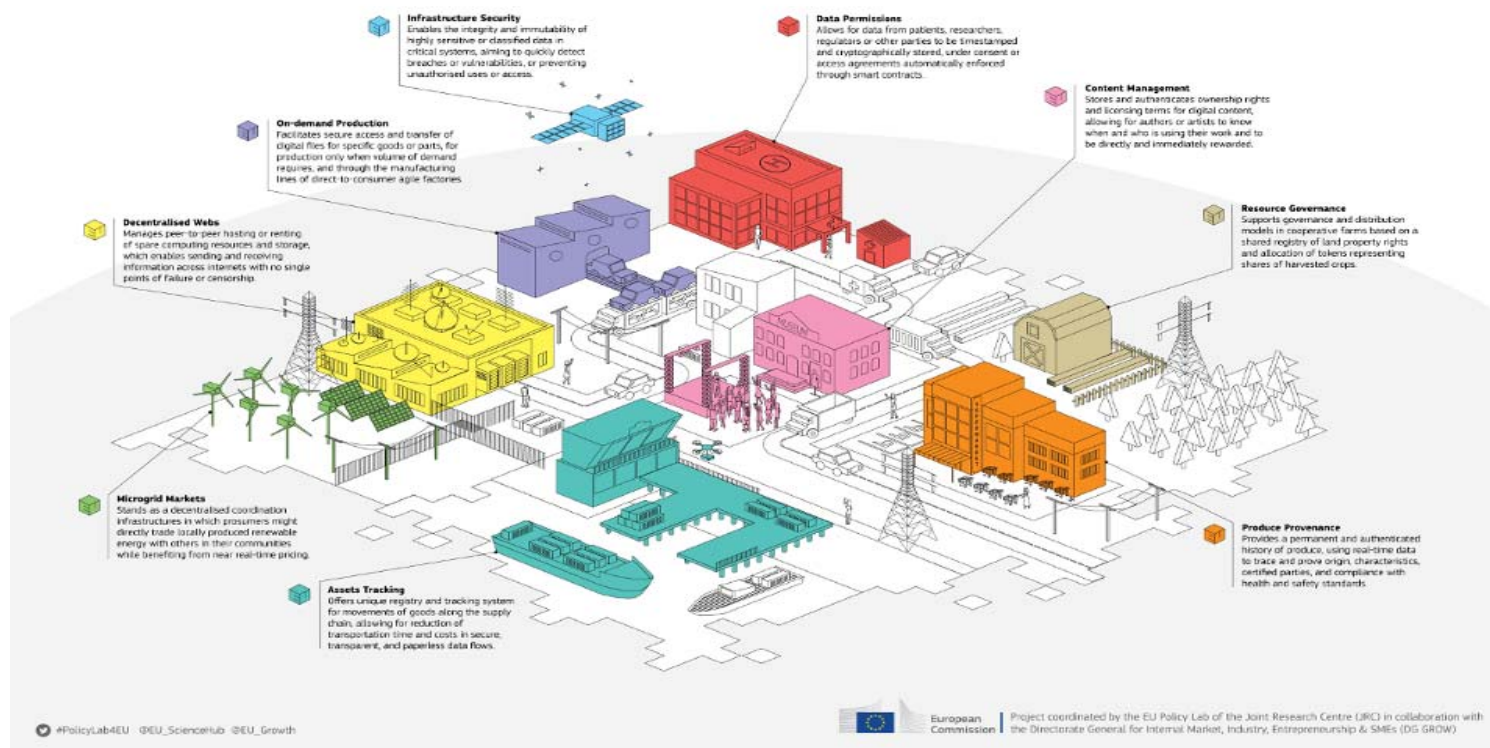
- CBDCs
- Private stablecoins



Prototypical Industrial Ecosystem



Blockchain and other Distributed Ledger Technologies enable parties who are distant or have no particular trust in each other, to record, verify and share digital or digitised assets on a peer-to-peer basis with few to no intermediaries.



Report on EU Innovation Priorities

2016 EPSC report on

EU innovation priorities

(<http://www.oecd.org/education/ceri/GEIS2016-MadelinReport-Full.pdf>):

"European Innovation Mission"

→ *"We will make together ... bold bets on change in tricky areas: education, health, universities, tax; and some bolder bets on potential breakthrough technologies, notably genomics, the brain, **distributed ledgers** and quantum."*

Cf. section on "**Blockchain and its application in fintech and beyond**"





EU: Green light for the Token Economy

1. **(Post-)Financial Crisis Management 2008-14**
 - Bank Rescue Operations, Banking Regulation, State Aid Modernisation
 - "Alternative finance"/Crowdfunding 2012 onwards
2. **Emergence of New Initiatives in Parallel 2015-19**
 - Digital Single Market
 - Capital Markets Union
 - Start-up and Scale-up Initiative 2016
 - FinTech Action Plan 2018
3. **Coherent Move towards Digital/Token Economy 2020-24**
 - **Digital Strategy February 2020**
 - European Strategy for Data, Artificial Intelligence, ...
 - **SME Strategy + European Industrial Strategy March 2020**
 - **Digital Finance Strategy September 2020**
 - Markets in Crypto Assets, DLT pilot regime, digital operational resilience, online payments, ...
 - Digital Euro, taxation of crypto assets (DAC 8), Data Act, ... *yet to come*

Essential and Inevitable: New Approach towards Governance

Top-down

- Mature markets
- Limited number of incumbents
- Few new competitors
- Incremental innovation (for more efficiency)
- Regulation in long cycles
- Regional ringfencing possible

➔ ***solid, durable structure***

Examples:
banking,
securities



Bottom-up

- Emerging markets
- No established incumbents
- Many new competitors
- Disruptive innovation (for the market)
- Innovation outpaces regulation
- Global yet decentralised

➔ ***open, fluid approach***

Examples:
crowdfunding,
crypto assets,
tokens



Example: (draft) MiCA Regulation

I. Exemptions (Article 4)	II. Crypto Assets (except Stablecoins + E-Money Tokens)	III. Stablecoins + E-Money Tokens
<u>No</u> regulation Examples: <ul style="list-style-type: none">- < € 1 mio/year;- < 150 investors;- Bitcoin mining	<u>Relatively light</u> regulation White Paper sent to regulator ➔ EU passport	<u>Comprehensive</u> regulation (but no prohibitions) Why? Potential problems originate from outside crypto domain (e.g. monetary policy)



Most Urgent Need: Digital Education/Skills

Which competences do “**digital skills**” refer to?

1. Information and Data Literacy
2. Communication and Collaboration
3. Digital Content Creation
4. Safety
5. Problem Solving (by using digital tools)

(cf. 2016 Digital Competences Framework 2.0: <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework>)

The acquisition of sufficient digital skills is the most important prerequisite for meaningful market-based action.

This also applies to policy makers/regulators.

➔ Need for public/private co-learning spaces (sandboxes, education platforms etc.)



DLT/Blockchain Information Sources (examples)

EU Blockchain Strategy: <https://digital-strategy.ec.europa.eu/en/policies/blockchain-strategy>.

EU Blockchain Observatory and Forum:
<https://www.eublockchainforum.eu/>.

INATBA: <https://inatba.org/>.

European Blockchain Association:
<https://europeanblockchainassociation.org/>.





Decentralisation continued ... and continued ... and continued ...

A few buzzwords, in ever shorter sequences:

- Alternative finance
- Peer-to-peer lending
- Crowd-X
- Industry 4.0
- DeFi
- Web 3.0
- Metaverse
- ...

➔ Decentralisation is here to stay, the more so as DLT transfers the “internet of information” into the “internet of value”.



We are at a critical juncture

We have the tools to move from experimenting/gaming towards the creation of meaningful digital communities that (co-)exist with our daily physical lives.

This requires decentralised governance structures, where opportunities are exploited based on joint decision making and where risks are shared by the community, without attribution to individuals.

Such digital communities may even resemble (borderless) states, with all implications thereof.

This reality (illusion/delusion?) is under threat from 3 sides:

1. Central authorities defending their territory/privileges (legacy system, autocratic states, ...);
2. BigTechs and Wannabe-BigTechs that pump huge amounts of money e.g. into the metaverse with the false promise of being „decentralised“; and
3. The arrogance of some DeFi/NFT/crypto newbies that know everything better and do not want any link with the „old world“.



Making Decentralised Governance Work: Elements for discussion

- DLT creates proximity in global spaces. It thus resembles traditional villages, with all social elements that villages display – including the key role for trust and social capital.
- Regulators will never again outpace the speed of crypto innovation. They can only go with the flow, setting boundaries and providing infrastructure and guidance, not more.
- The absence of regulation is not the absence of rules, and the absence of individualised responsibility is not the absence of responsibility (the community matters, not the individual).
- Learning is learning by doing, especially for public entities.
- The relevance of tech rises and falls with the benefits it brings to real people on the ground. Digital money stinks as much as fiat money does if it does not lead to democratisation of finance, inclusiveness and improved living standards.
- We must listen to those that know best. They are called entrepreneurs.



Many thanks for your attention!



More information:

https://ec.europa.eu/growth/index_en





INATBA

International Association for Trusted
Blockchain Applications

BlockStart Policy Conference

February 24th 2022

Marc Taverner, Executive Director
marc.taverner@inatba.org



INATBA Introduction

GLOBAL MEMBERSHIP

170 full members across **38** countries

Our Governmental Advisory Body Includes

31 organisations from more than **24** countries across six continents

Our Academic Advisory Body Includes

53 academic experts from **19** countries across the globe

Supported by European Commission &
Abu Dhabi Global Market



International Association for
Trusted Blockchain Applications

**Report on Data Privacy Regulations
Applicable to Blockchain
Technology in Various
Jurisdictions Worldwide**

Authored by the INATBA Privacy Working Group

**INATBA Convenes International
Event Series on Decentralised
Finance and Regulation**

International Association for
Trusted Blockchain Applications

**INATBA Finance Working Group
Issues Response to European
Central Bank's "Public
Consultation on a Digital Euro"**

International Association for Trusted
Blockchain Applications

Reports, papers & events at inatba.org



Traditional Regulation vs Self Regulation

Central authority acting as the 'safety' enforcer



Source: change-climate.com



Traditional Regulation vs Self Regulation

Central authority acting as the 'safety' enforcer



Source: change-climate.com

'Safety' enforcement devolved

Czech millionaire investigated over alleged 417km/h motorway drive in Germany

8 February



AFP

The wealthy motorist was driving a Bugatti Chiron (file photo)

Germany is famous for having no speed limits on stretches of its motorways, but a Czech millionaire appearing to do 417km/h (260 mph) may have been testing the limit of what's tolerable.

Source: bbc.co.uk



Are top-down regulation and the decentralised
essence of blockchain compatible ?



Blockchain enabled huge innovation & potential for change

Increase EFFICIENCY of existing models & processes



Börse
Stuttgart

BBVA

NEW trust models, stakeholder engagement, governance & more...



Algorand™

Fireblocks



AAVE

TRANSPARENCY Analytics tools coupled with free access to blockchain data





'Bottom-up' regulation arguments

- Blockchain models can have 'in built' regulatory approaches as 'preventative' measures
- The Blockchain industry is motivated to 'self police' for example:
 - The industry responds to correct problems & limit market risks , e.g. 2016 DAO hack
 - Stolen or hacked funds can be identified, tracked, blocked & maybe eventually returned to owners, e.g. 2016 Bitfinex hack
 - The community monitors activities and rapidly alerts faults or hacks to alert users, e.g. Open Sea exploit 2022



'Top-down' regulation arguments

- Sector almost too big to ignore as value of Crypto Currencies rises above ~\$1.75 Tn* Interest in stablecoins creates need for action.
- Relentless innovation compounding product innovation and risk? Crypto ...ICO...DeFi...NFT...what next – metaverse ??
- Regulations aim to uphold **'first principles'**: protect consumers, protect market integrity & balance sheet protection
- Increasing fears that uneducated consumers are exposed to risks



Finance work group

Over 150 private contributors collaborating to try and grow the industry

We do see SOME regulators ready to adapt. Come join us to work on

Digital Assets
&
Tokenisation

Anti Money
Laundering &
Know Your
Customer

Decentralised
Finance



Bi-weekly Policy Monitoring in Europe & US

Latest Policy Developments for DLT



International Association for
Trusted Blockchain Applications

Latest Policy Developments for DLT

Newsletter No. 19: 24/12/2021 – 07/01/2022



Latest Policy Developments for DLT

Prepared exclusively for INATBA Members.

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 - d) Tax: Delay on the proposal for amending DAC8 and VAT
 - e) Upcoming dates
- II. US Policy Developments
 - a) Congress
 - b) Commodity Futures Trading Commission (CFTC)
 - c) Securities and Exchange Commission (SEC)
 - d) Federal Reserve (Fed)
 - e) Federal Deposit Insurance Corporation (FDIC)
 - f) State and City Updates (New York)
 - g) Upcoming Dates

Highlights: INATBA Policy Developments

INATBA continues to work on the Policy Position and response to eIDAS through the Identity Working Group. The group is also working on developing outreach and advocacy strategy for eIDAS. Members who would like to get involved in the work or get more information should contact the co-chairs of the Identity Working Group.

The Finance Working Group is working on their DeFi-related outputs, including a focus on DeFi and DAOs, NFTs and a regulatory proposal. Members are also working on the AMLR initial output and follow-up, plus a comparison between INATBA policy proposals on the PRR and the final PRR output. Contact xenofon.kontouris@inatba.org to get involved.

Highlights: EU and US Policy Developments

This is INATBA's bi-weekly newsletter covering policy developments which affect Distributed Ledger Technology (DLT) and its applications in the EU And US. It covers the period from the 24th December to the 07th January 2022.

Brussels continues to slowly get back on track after the Christmas break. The co-legislators are back on schedule but discussions on the main digital issues will still

[Website](#); [Twitter](#); [LinkedIn](#)

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Latest Policy Developments for DLT

Newsletter No. 19: 24/12/2021 – 07/01/2022



EU Policy Developments

Blockchain: ESMA's call for evidence on DLT

On 4 January 2022, the European Securities and Markets Authority (ESMA) [published a call for evidence](#) on distributed ledger technology (DLT), which seeks stakeholder feedback on the use of DLT for trading and settlement and if regulatory reporting and transparency requirement regulatory technical standards (RTS) are needed. The DLT Pilot Regime Regulation requires ESMA to assess whether the MiFIR RTS on pre- and post-trade transparency and data report requirements need to be altered to account for the DLT system. Additionally, the call for evidence wants advice on effective ways to allow regulators access DLT information for transaction, reference data and transparency data. The feedback period will be open until 4 March 2022. ESMA will then consider whether the amendments to the RTS are necessary and, if so, will consult on its proposal before submitting the final draft RTS to the European Commission for adoption. The DLT Pilot Regime is expected to apply in early 2023.

Digital Euro: Digital Identity Framework tied to the CBDC project

The Digital Identity framework could be tied to the European Central Bank's digital euro in the future. At least according to the European Commission. [In an answer to a written question](#), Commissioner Breton hinted at the possibility for the European Digital Wallet to enable digital euro payments in the future. The question was posed by an ID MEP. Internal Market Chief Thierry Breton thinks that there could be some complementarity between the two initiatives. "The European Digital Identity Wallet would be able to allow for securely initiating and receiving payments," he wrote in a response to a parliamentary question yesterday. "This could in future also enable payments with a possible future digital euro".

Tax: Delay of proposals for amending DAC8 and VAT

According to non-public information seen on the week of 3 January, the European Commission plans to publish its proposal for amending the Directive on Administrative Cooperation (DAC 8) to include the exchange of information on crypto assets by Q3 2022. The publication of this proposal is tied to the ongoing negotiations at the OECD. A report by the latter was supposed to be published by the end of 2021, by now is expected during the first half of 2022. Additionally, the OECD still needs to publish a consultation on the report.

Separately, the expected proposal on the rollback of the exemption for VAT for Financial Services has been delayed until 2023 from Q4 2021. The delay is because the

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Selection of Regulatory Files in Europe

Markets in Crypto Assets (MiCA)
provides clarity on treatment of
Crypto Assets, Asset Referenced
Tokens & E Money Tokens
together with CSAP in 30
countries in Europe

AML Package
Ongoing work to develop
Regulations to improve
detection of suspicious
transactions & activities and
close 'laundering' loopholes
MiCA & TFOFR timelines
linked?

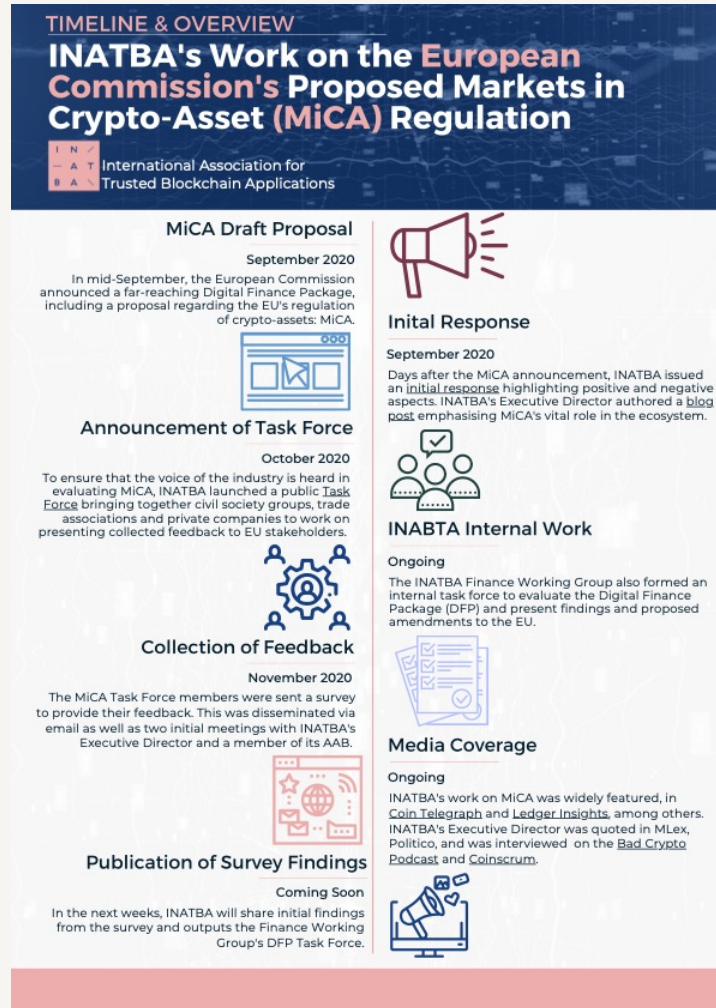
Crypto Taxation
OECD leading global work that may
result in framework for policy
development
DAC8 at the EC could be tied to the
OECD's work. Both are delayed in
publishing reports

DLT Pilot (PRR)
Provides a sandbox
for non-licensed operators to
develop blockchain based
applications in 30 countries in
Europe

Identity
eIDAS Regulation ongoing
work towards common
technology standards for
wallets and trust services in 30
countries in Europe

Central Banks Digital Currency
BIS ~ 40 members experimenting
Digital Identity framework could be
tied to ECB's digital Euro in the
future
ECB = prototype in 2023?

INATBA's work on MiCA



Finance Working Group led a detailed review of MiCA & PRR with input from a diverse membership group of start-ups, large companies, traditional finance operators, innovators and academia.

Academic Advisory Body led a process to gather data and opinion from non-INATBA members using interviews, questionnaires and interactive presentations.

Secretariat lead a series of meetings with stakeholders to present INATBA policy positions and convened bilateral meetings for benefit of INATBA members



Many other developments impact DLT

- **Identity** – regulations being developed to try and determine what constitutes digital identity / self sovereign identity and how it can work cross borders
- **Data & Smart Contracts** – regulations being explored to determine how ‘trusted’ data can be gathered and how smart contracts can be legally enforced across borders
- **Standards & Interoperability** – what standards can the industry and governments adopt and rely upon to establish interoperability and vendor/tech neutrality

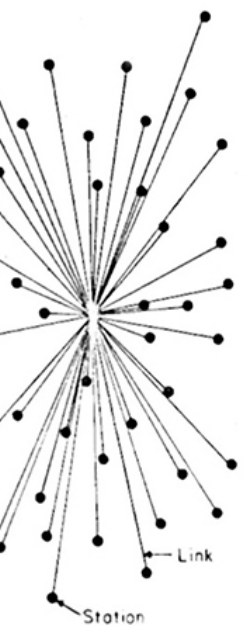
Risk of global regulatory fragmentation & arbitrage unless regulators & industry collaborate



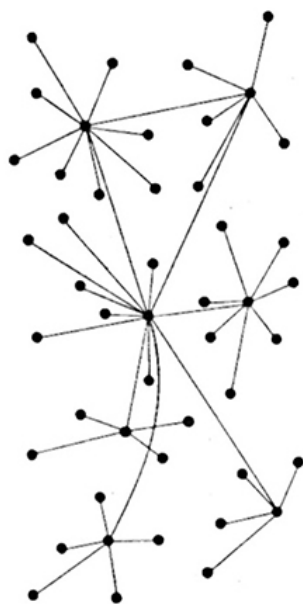
**Join us.
Make your voice heard!**

Website: inatba.org

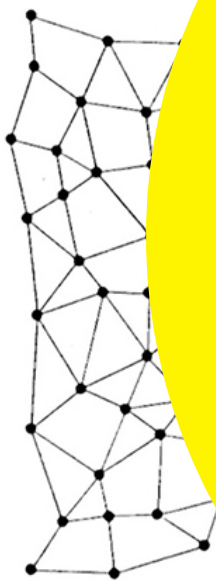
To join INATBA : membership@inatba.org



CENTRALIZED
(A)



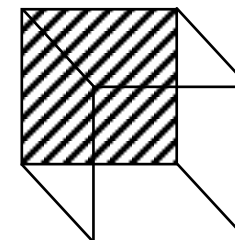
DECENTRALIZED
(B)



DISTRIBUTED
(C)

ELECTIS

Decentralized Governance



Electis



Electis is a **non-profit** organisation and is organising democratic projects in partnership with cities and organisations worldwide

Electis developed a **verifyable** and **open-source** voting solution in order to enable bottom-up governance on all levels of society

The **Tezos Foundation** funds our work in the third year

Electis is part of the Start-up program of **Scaleway**

The electis.app solution is validated through leading experts in the e-voting field (**Microsoft, e-Vote ID, RICE University, Tartu University** and many more...)

Organised more than **15** official elections with more than **20.000** voters and counting.

Electis.app



Safety: Elections are secured by storing the results on a **Blockchain**. This reinforces the safety of the results and prevents fraud.



Secret ballot: Decentralization and end-to-end encrypted voting enables Electis to enhance the secrecy of the vote



Trust: Secure voting and verifiability post-election (through e-scrutators)



Independence and transparency: Non-profit organisations working exclusively with open-source technology

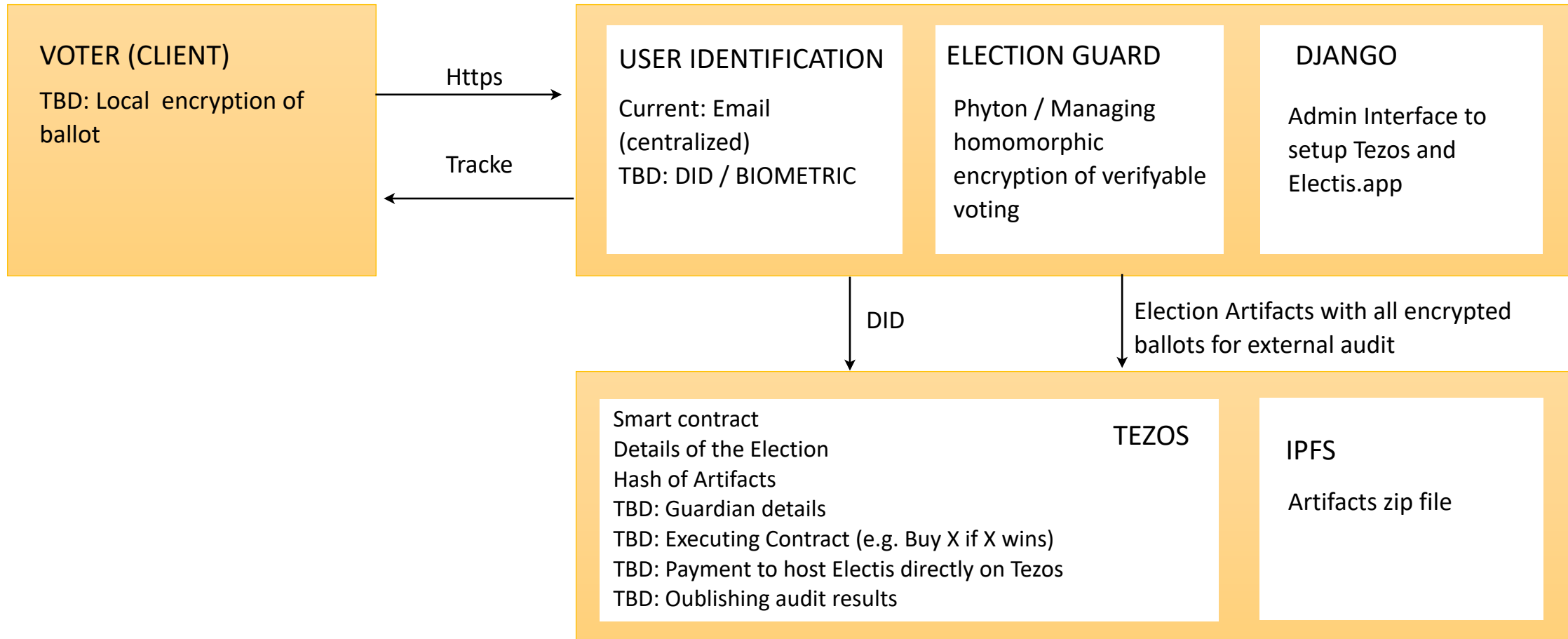


Usability: Fast implementation and user Friendly interface



Sustainability: Electis uses only environmentally friendly technologies (Tezos Blockchain, Scaleway Cloud)

Architecture of Electis.app



Where can we improve decentralized governance?

International organisations

Electis is working with international organisations together to promote democracy on a global political level.

During the COP26 the Youth Constituency of the UNFCCC has voted for their Global Focalpoints (North and South) on Electis.app ab. 6.000 + young voters across the world were invited to vote for their delegates.

Migrants and refugees

We need to identify groups of people that are structurally excluded from governance today.

Together with the NGO Baloti, Electis organises elections for migrants and refugees in Switzerland that are not Eligible to vote, in order to make their voices heard.

Universities

Universities are a central place when it comes to learning civic values and university elections have been traditionally central to this.

Electis is supporting the Université de Paris for their student elections. Other projects are ongoing with the Kings' College London Blockchain Society and the EPFL Blockchain Society in Lausanne, Switzerland.

International NGOs and associations

Electis aims to increase democratic governance in all organisations, such as associations and parties.

ACCESS in Singapore chose electis to elect their council members in 2022

Electis City



NEUILLY-SUR-SEINE



Vic-en-Bigorre



Stadt Zürich



Neuilly-sur-Seine - pilot project (60,000 citizens, near Paris)



Vic-en-Bigorre (5,000 citizens, near Tarbes)



Zürich and other Swiss cities in cooperation with Baloti



6 Wahlen zu kulturellen und infrastrukturellen Projekten
mit **> 20-40 % Beteiligung**

**Mit Electis e.V. Deutschland wollen wir nun e-Voting auch in
Städte und Kommunen in Deutschland bringen**

Electis City

Consultations on the blockchain

1 Step

The organisation of tests and internal votes

2 e-voting culture

Use in simple, low-stake elections. Gradually expanding the horizon of use cases to foster a culture of e-voting

3 participative city

Using Electis for higher stakes votes and consultations, such as local referendums, budgetary decisions and public infrastructure

4 e-democratic city

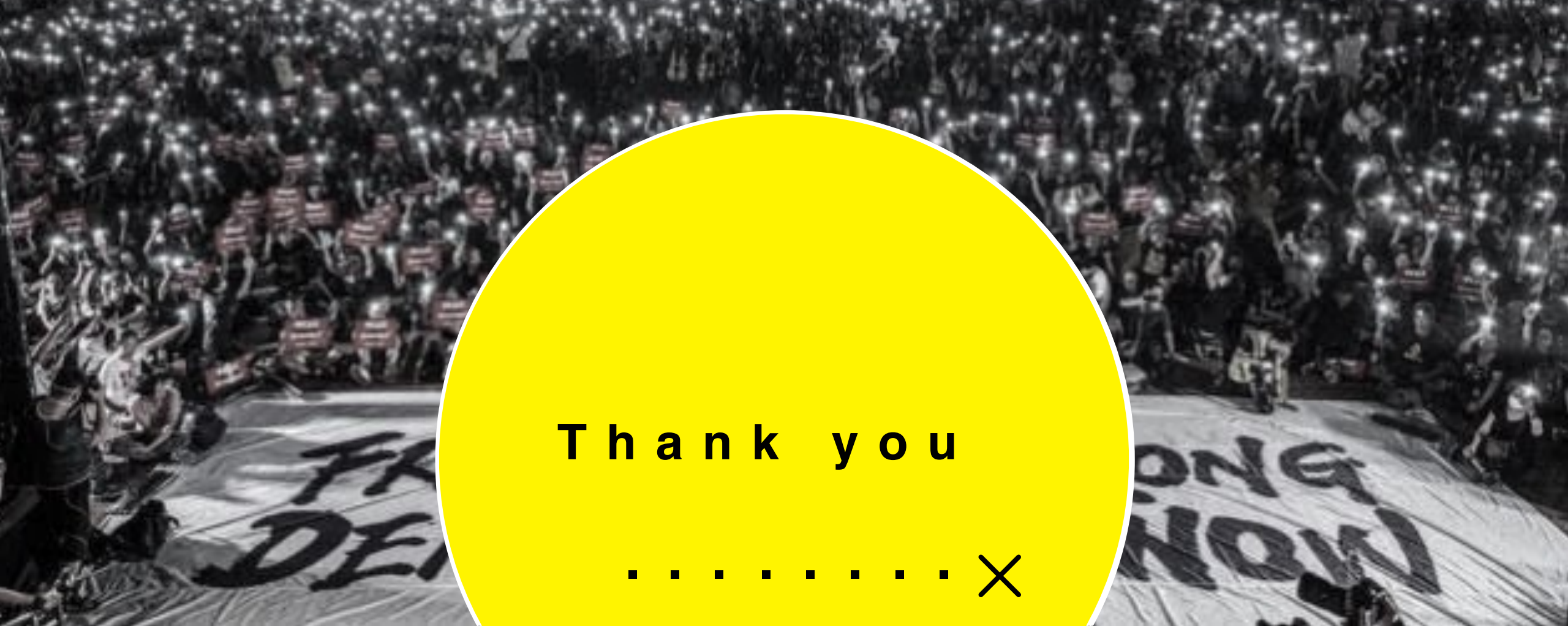
Modelled after an Estonian or Dutch city, fully connected to its e-citizens.

Internal use

Building a base of users

Increasing legitimacy in important decisions in community life.

Citizens as part of a regular process of local consultation and decision-making



T h a n k y o u

. X

Blockstart

Regulation in the decentralized world



Peter Nobels

DAOs

Decentralized Autonomous Organizations

Self

Regulation



Peter Nobels



DAO

Decentralized

Nodes

Members

Autonomous

Protocol

Censorship resistant

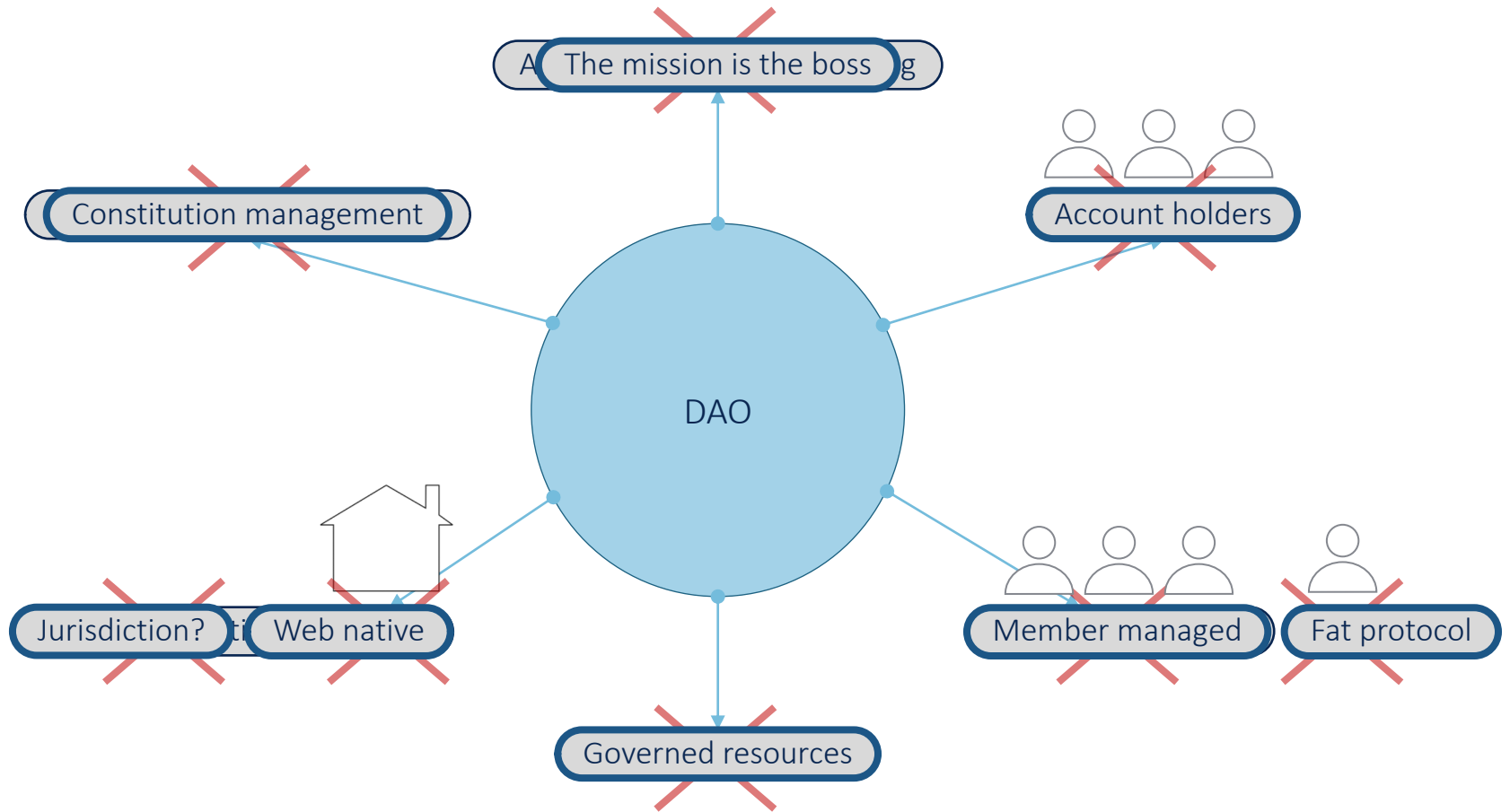
Organization

Governance

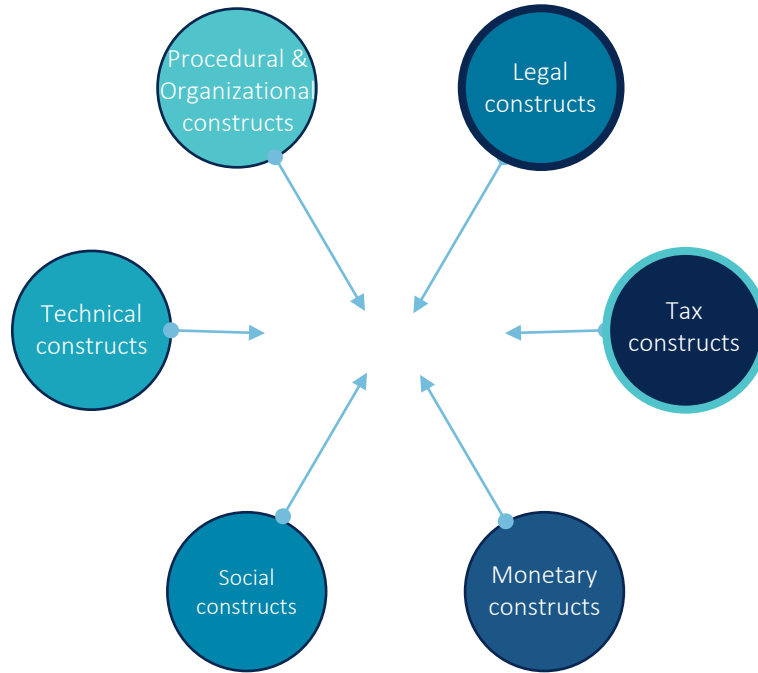
Coordination

Run on top of a blockchain infrastructure like Ethereum or Lisk

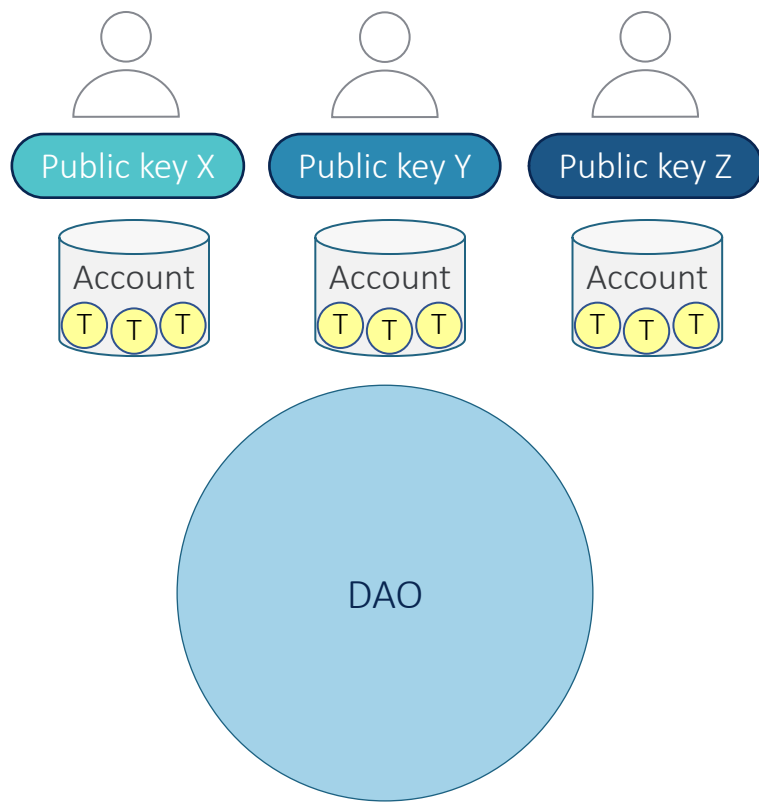
For the community, by the community

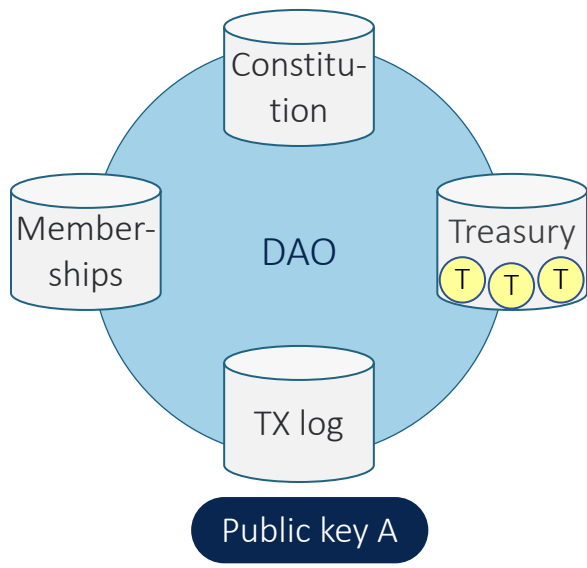
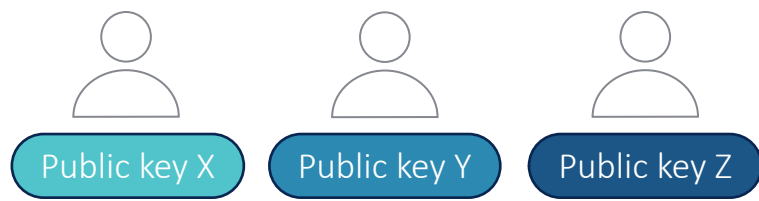


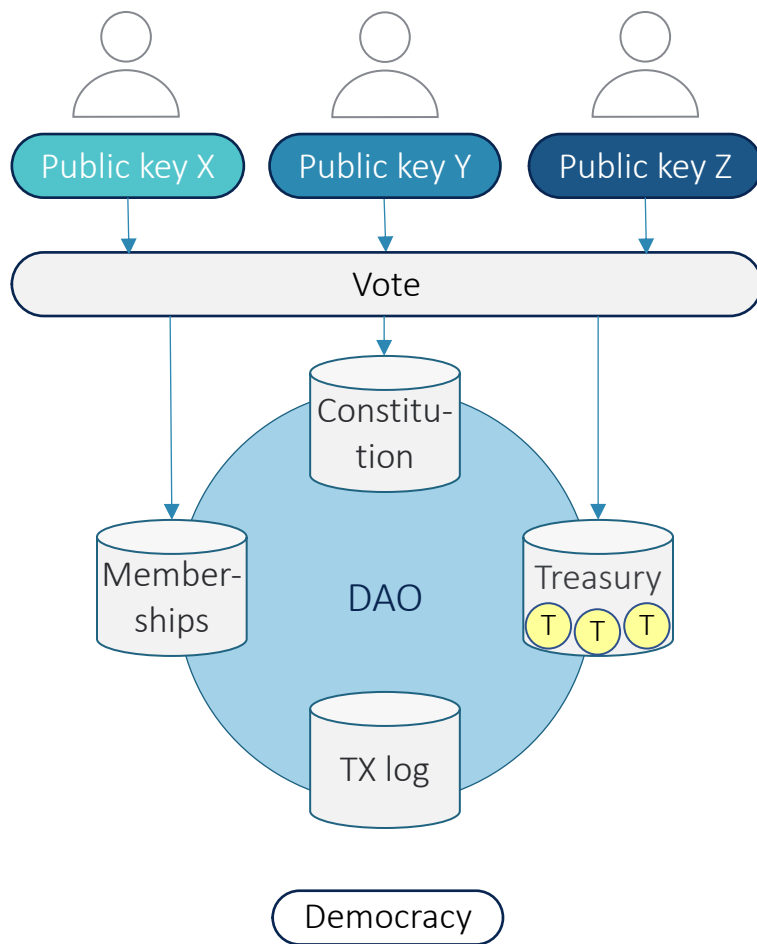
Constructs to steer and protect

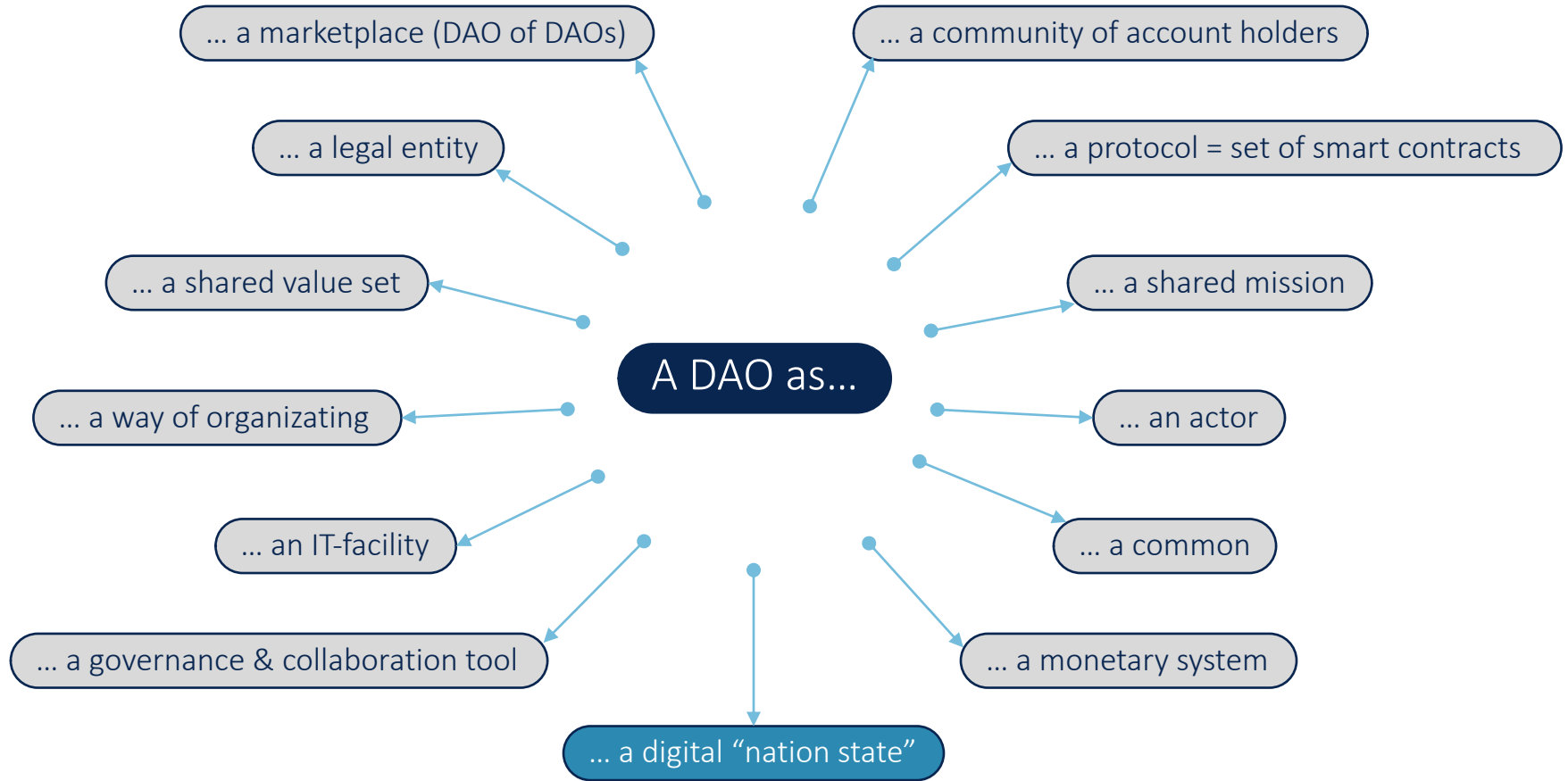


Fat protocol









A DAO as...

... being a jurisdiction on its own?!

... a digital “nation state”



Physical nation states



Netherlands



Resident X



Hong Kong



Resident Y



Estonia



Resident Z

Public key Y

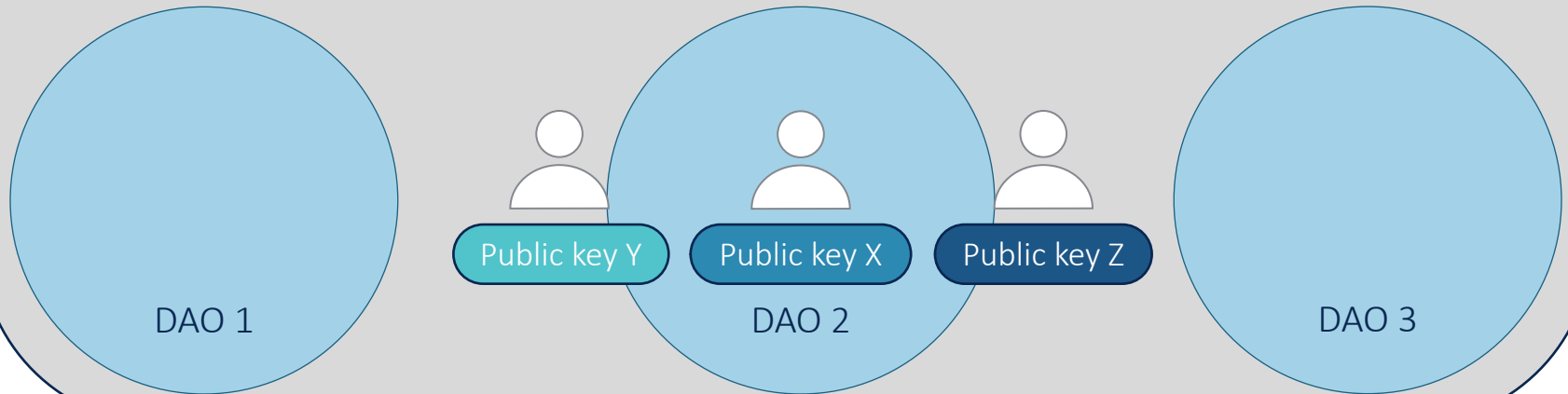
Public key X

Public key Z

A DAO as...

... a digital nation state / jurisdiction

... a digital nation state
... a jurisdiction on its own



... a digital nation state
... a jurisdiction on its own

DAO
governing
the
Platform

DAO 1

DAO 2

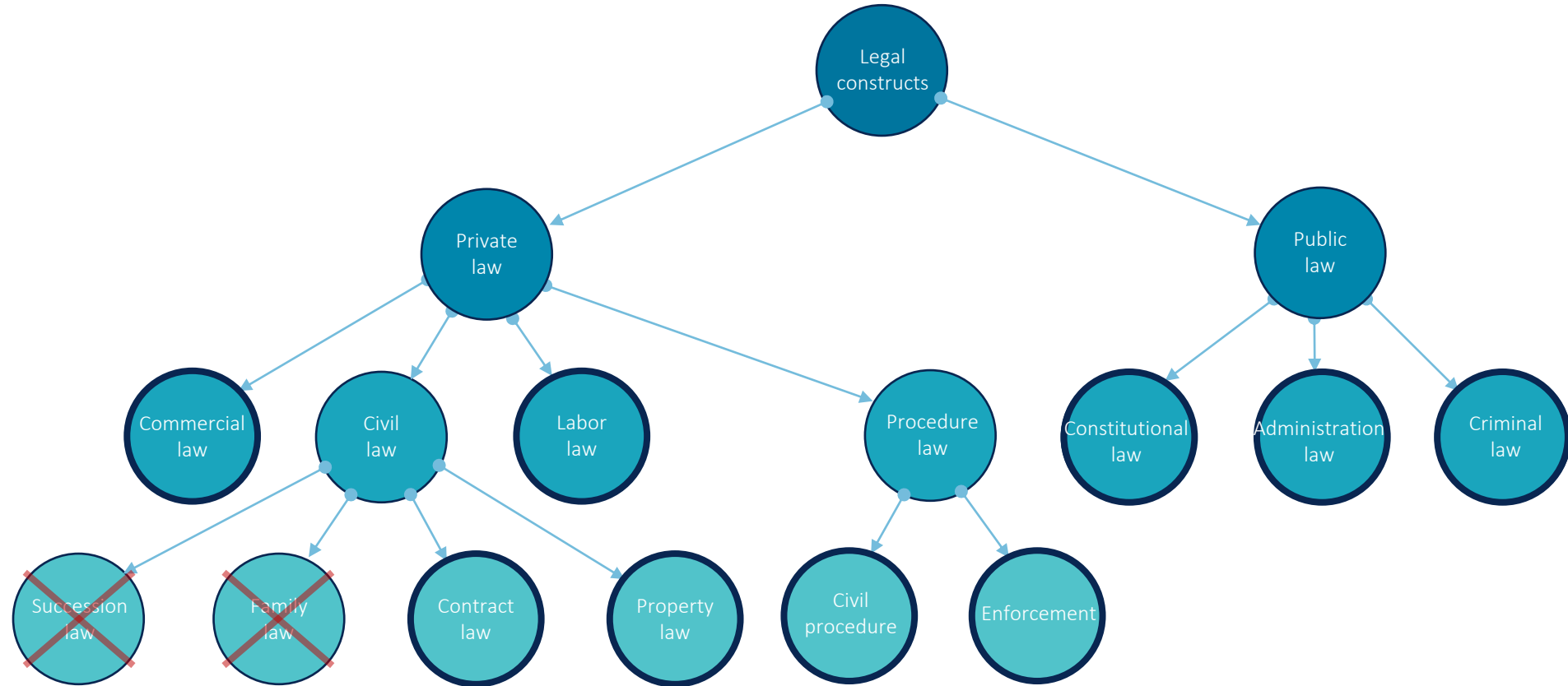
DAO 3

Starting from the requirement that a DAO platform is a digital realm of its own:

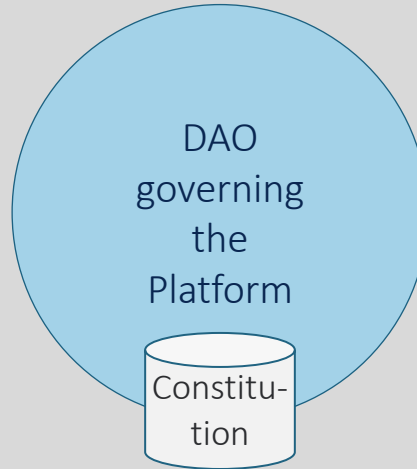
What legal issues/challenges should we tackle in this digital realm to...

- ...make it a safe place to do transactions
- ...prevent malicious behavior
- ...provide justice
- ...enforce justice
- ...define general rules that apply to everyone
- ...define the governance of the platform and member DAOs

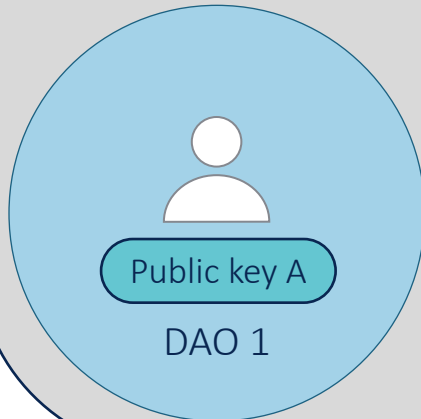
What can DAOs learn from constructs used in current 'regular' jurisdictions?



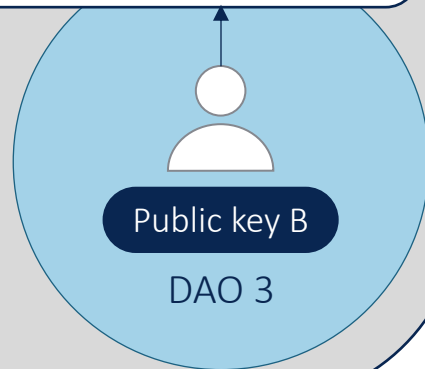
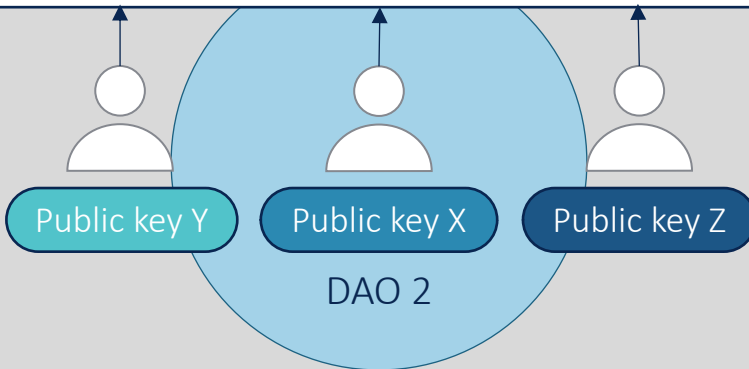
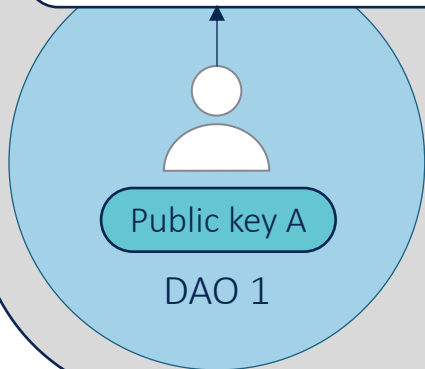
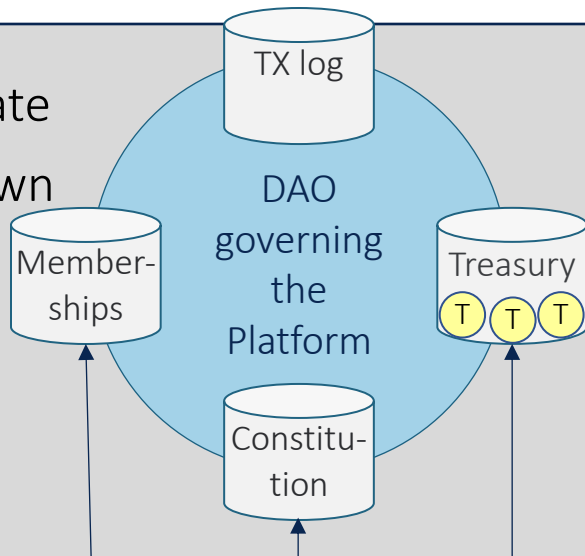
... a digital nation state
... a jurisdiction on its own



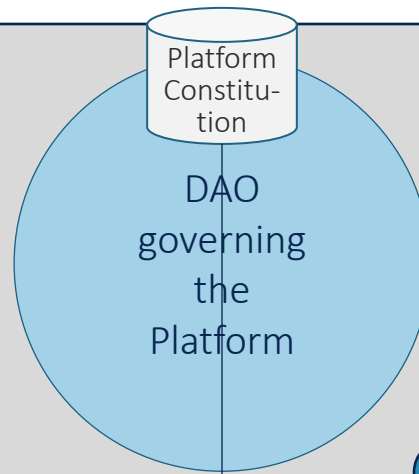
On boarding =Accepting the constitution during



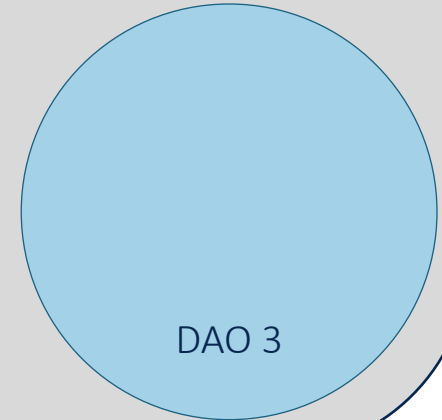
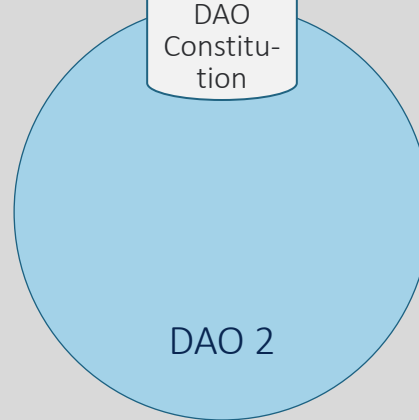
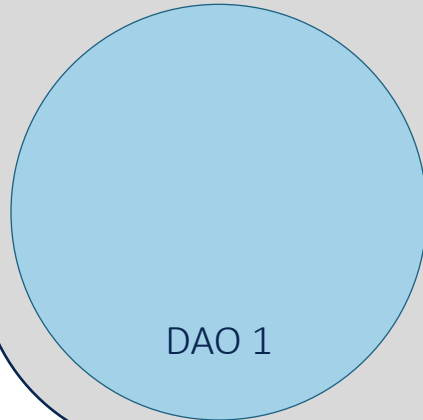
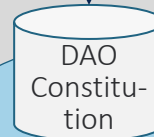
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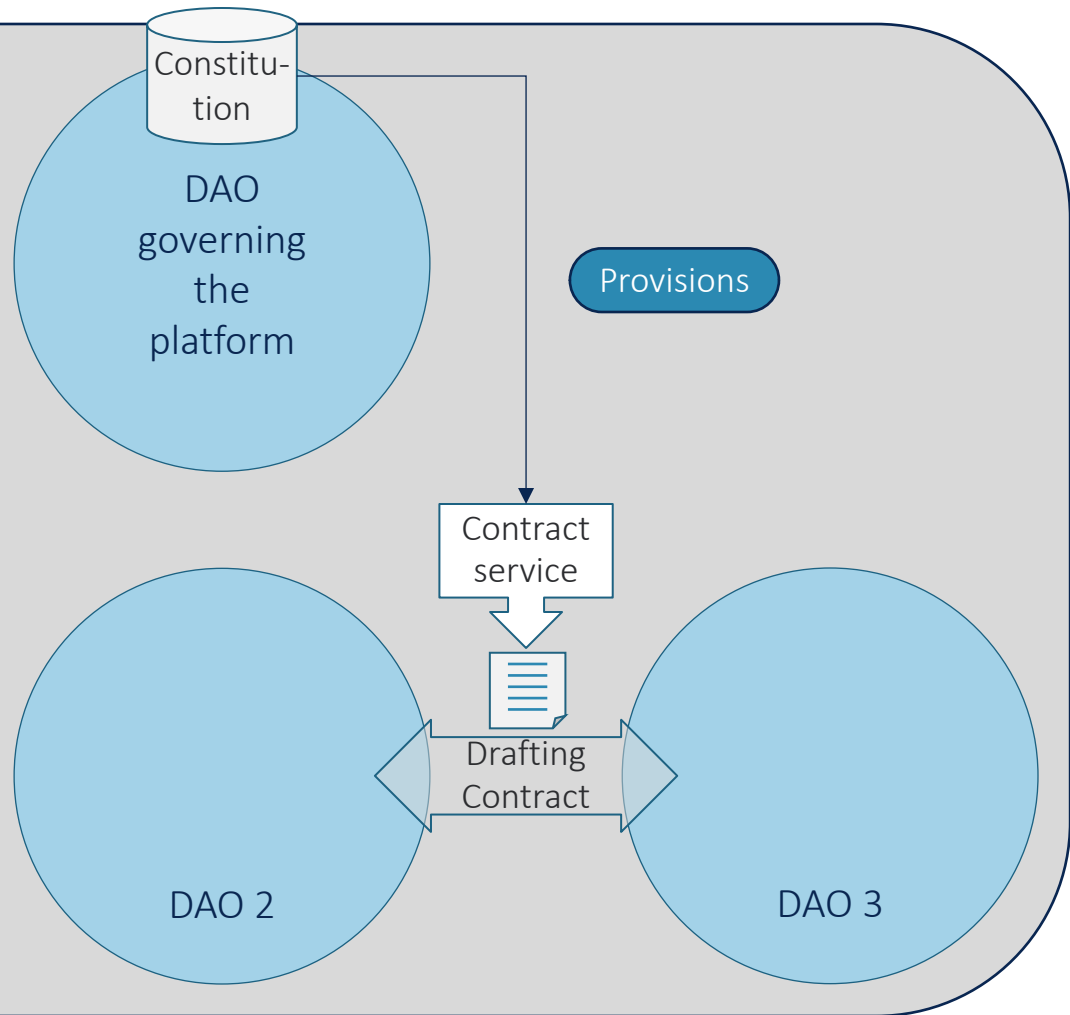
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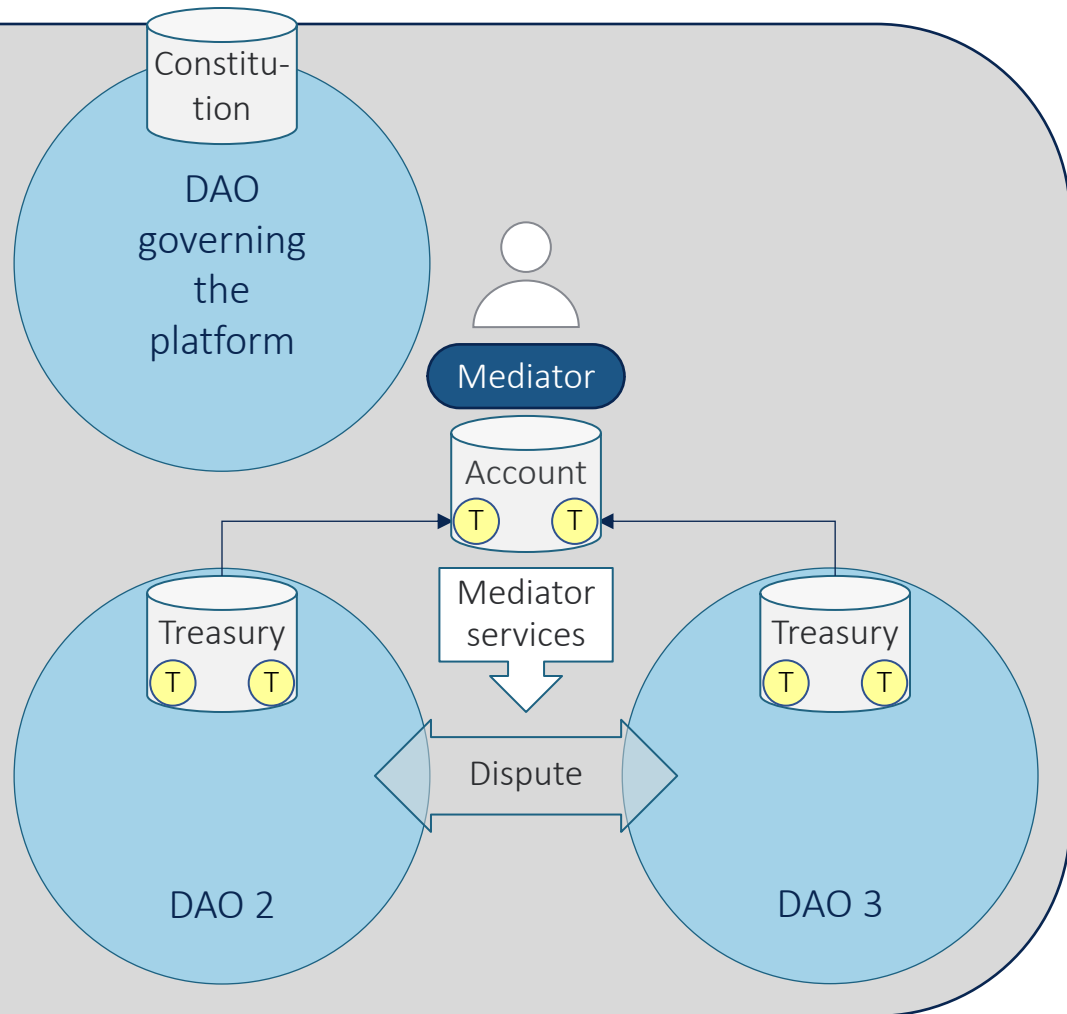
Hierarchy



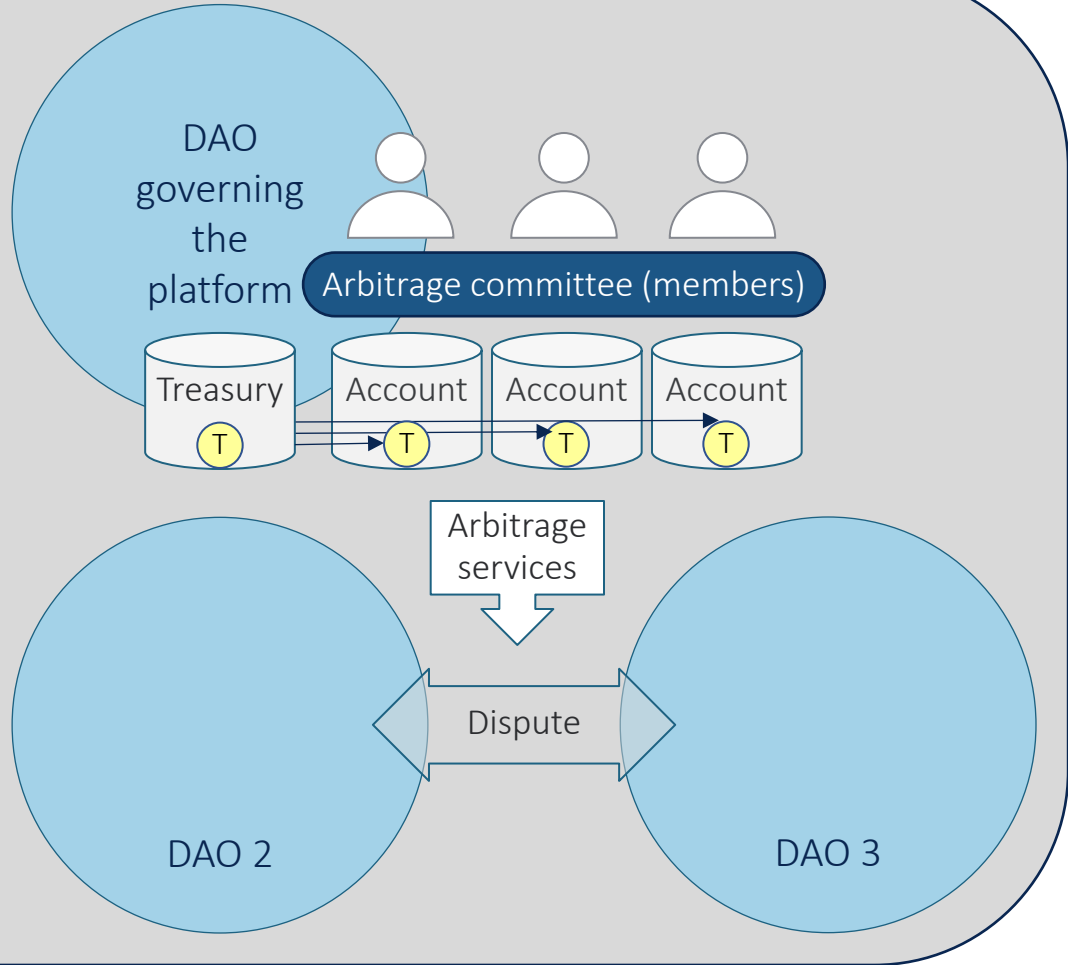
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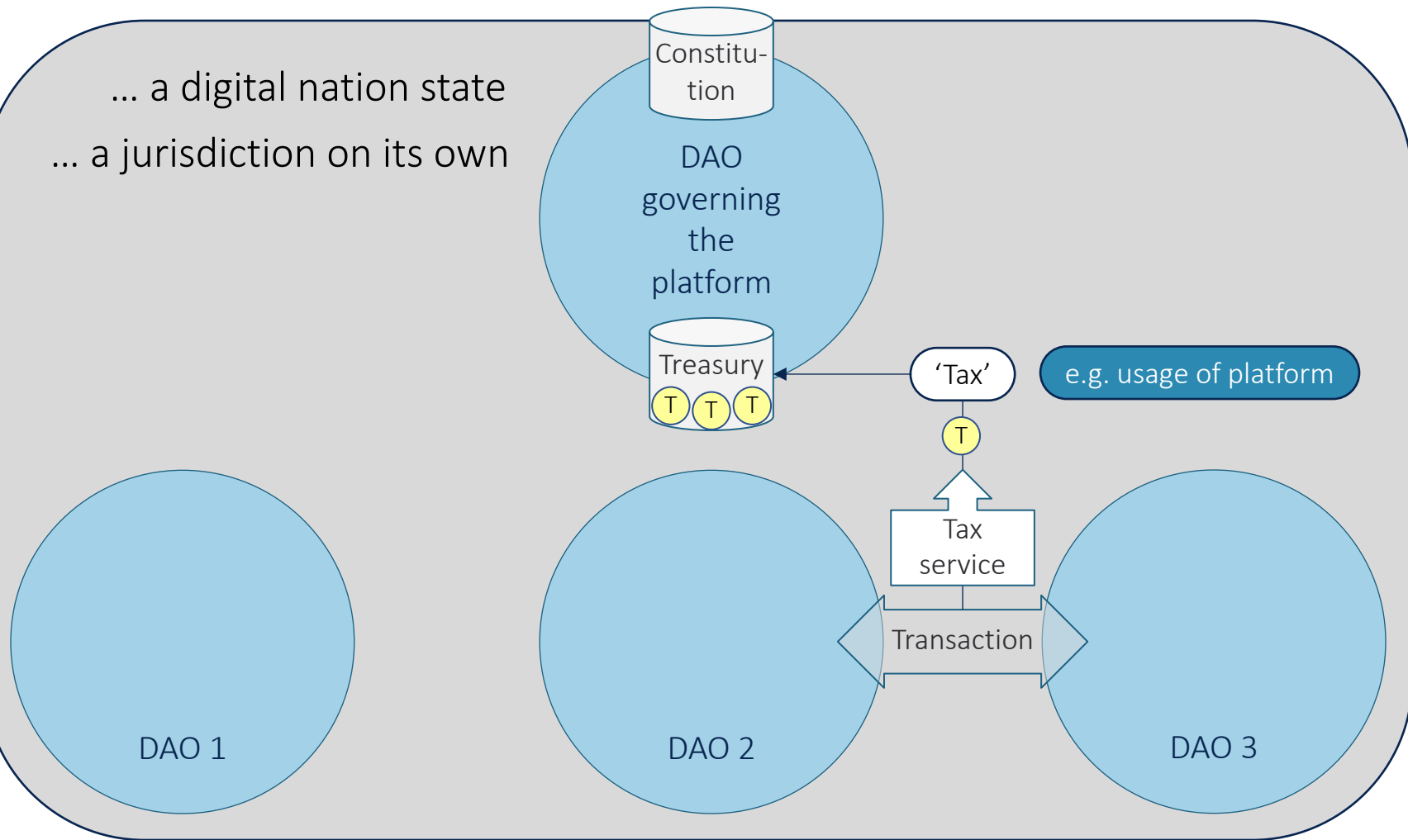
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How to connect DAOs to current jurisdictions?

Starting from the requirement that a DAO-platform is a digital realm of its own:

What are the legal issues/challenges we can expect in relation to the 'outside' *regular* jurisdictions?

- What policies / additional laws do we ask for?
- Is there a way to fit a DAO-platform and its member DAOs to one of the existing legal entities under European Law?

How to connect DAOs to current jurisdictions?



Netherlands



Hong Kong



Estonia

Demand

Ask

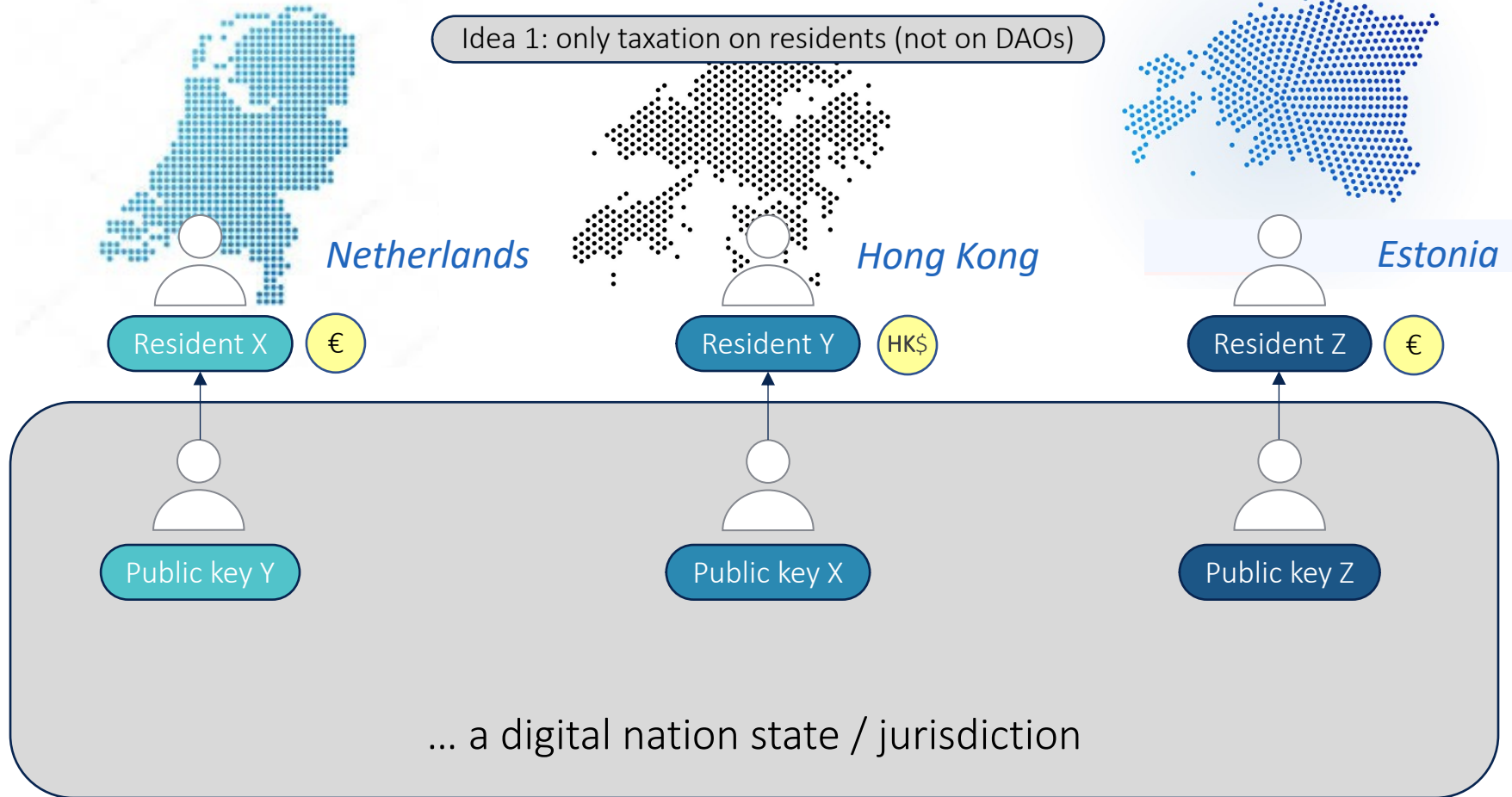
DAO 1

DAO 2

DAO 3

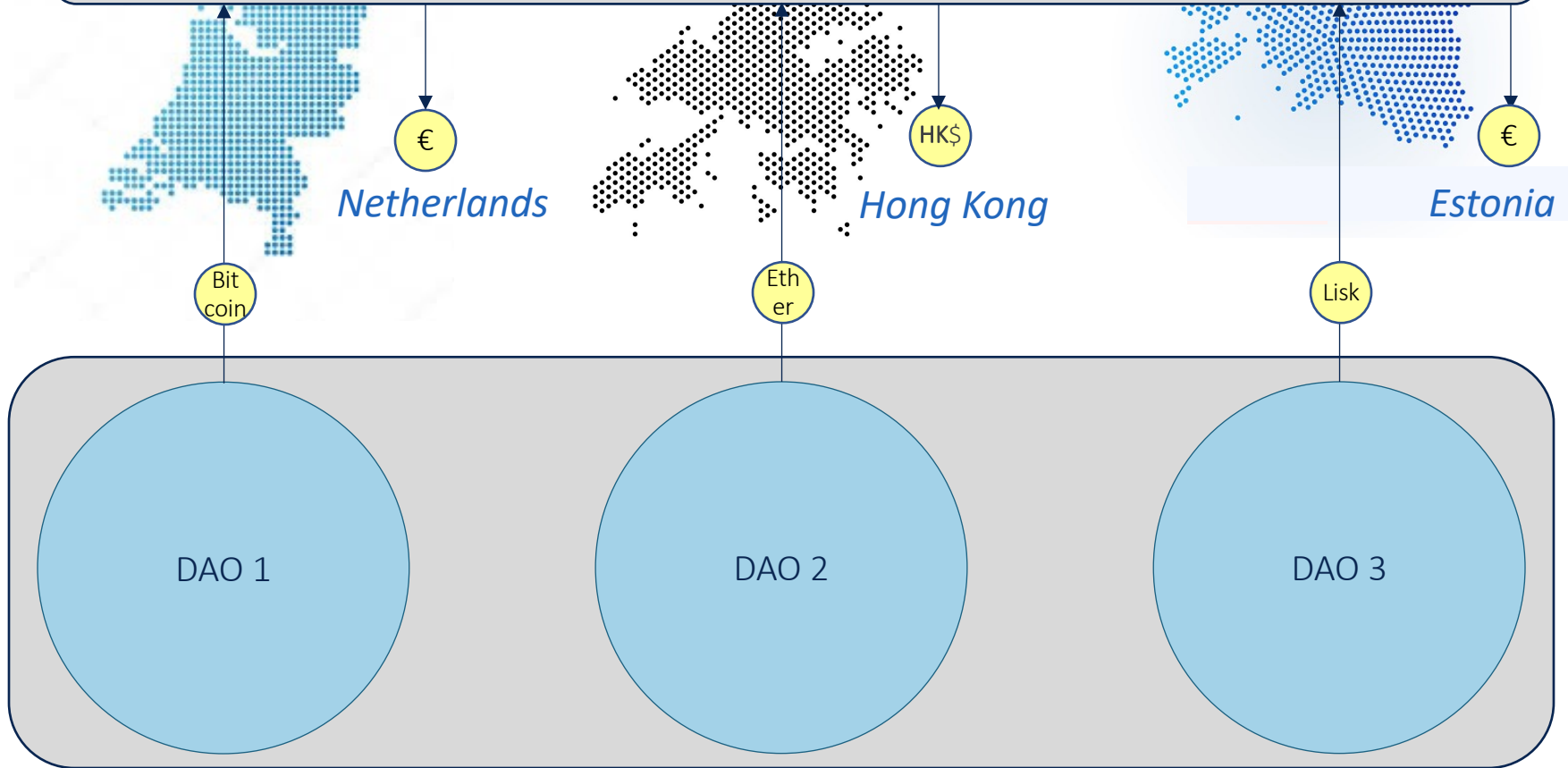
How to connect DAOs to current jurisdictions?

Idea 1: only taxation on residents (not on DAOs)



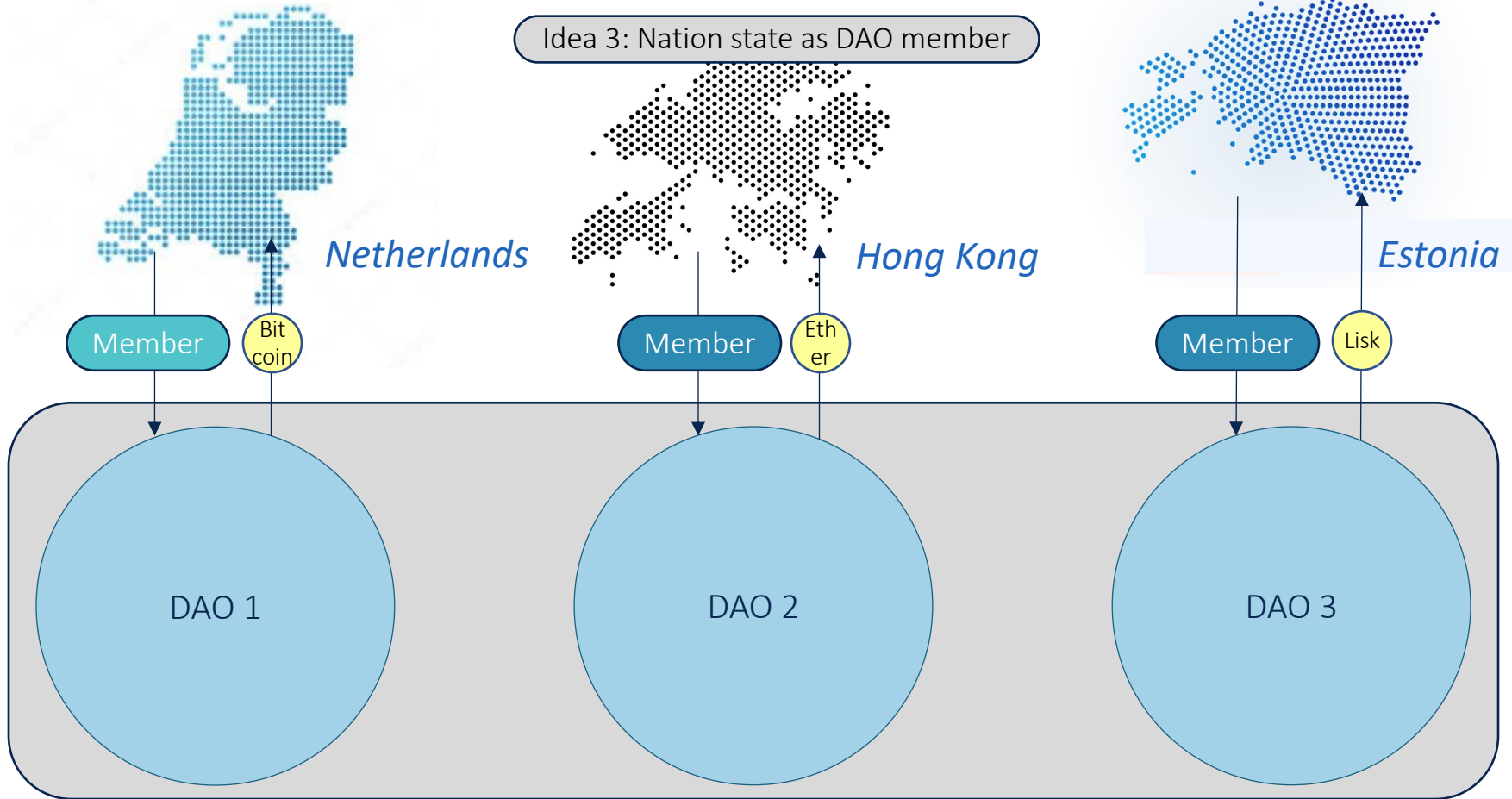
How to connect DAOs to current jurisdictions?

Idea 2: One global tax office



How to connect DAOs to current jurisdictions?

Idea 3: Nation state as DAO member



How to connect DAOs to current jurisdictions?

Idea 4: Nation state as a DAO

