Scalable governance system for decentralized applications

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Introduction

The Republic is a decentralized, smart-contract enabled, and open-source protocol designed to empower organizations and projects to develop a community-managed Decentralized Autonomous Organization ("DAO").

Primarily, **the Republic will serve to work toward harmony and the mutual interest of the participants** within the ecosystem, serving as the framework to secure, order, direct and preserve the aims of a digital organization. At its core, the Republic model is designed to be malleable, capable of developing in accordance with the community's aims and will.

Definitions

Founder: Company or entity implementing the Republic framework proposed within this whitepaper.

Republic: Framework for a decentralized governance system built upon Distributed Ledger Technology (DLT).

Citizen: Token holder within the network.

District: Group of Citizens in an ecosystem governed by a Committee.

Sub-district: District governed under the power of a parent District.

Token: The common currency used within the network.

Council: Governing body of the entire network, composed of Delegates chosen by the Citizens.

Committee: Governing body of an app or other ecosystem within the network. The Committee is a sub-committee under either another Committee or directly under the Council.

Sub-committee: Committee governed under the power of a parent Committee.

Judiciary: A committee of arbiters, chosen and maintained by citizens and Delegates, responsible for dispute resolution, should it arise.

Constitution: Rules set forth and agreed upon and signed by the Council of Delegates and Senatorial Committees who have been entrusted to oversee and guide the Republic.

Contents

1   Background

The term 'republic' originates from the Latin, *respublica*, meaning "public matter", signifying a style of political governance and organization that formed the basis of ancient Rome and several modern structures of governance. The Roman Republic came into effect after the overthrow of the Roman Kingdom in 509 BC, and was designed with a system of checks and balances meant to keep power out of the hands of a minority elite. Within the republic era, Rome gained widespread influence over surrounding territory and eventually, the entire Mediterranean block.

Despite the enterprising nature of Rome's political landscape, the Roman Republic's decline in part resulted through its inability to appease the growing and unemployed proletariat class. Rising economic struggles, political corruption, and a political void resulting from the assassination of Julius Caesar (*DICTATOR IN PERPETUO)*, paved the way for the first Roman Emperor, Augustus[1].

Eventually the Roman Empire suffered from over-administration, the inability of a growing bureaucracy to efficiently address public concern, maintain vast, outlying regions of Rome's imperial provinces, and curb the aristocratic stranglehold on the government: all of which in time led to the decline of public approval and support for the government.[2].

Subsequently, the Roman Empire fell, a decline ultimately based in human frailty and fallibility, the seeming inability of political actors to sustain fair and just governance models[3]. History details the consistency with which organizations, political or otherwise, are corrupted, rotted from the inside out by those in power and the administrative bureaucracies they tend to create[4]. In time this "public matter" became a power matter. The Constitutional safeguards, checks/balances were not enough to protect the sanctity and advantages of the relatively decentralized and democratic republic model of governance[2].

Technological Revolution

With the advent of smart-contract enabled distributed ledger technology, potential solutions to the "human fallibility problem" are being posed and developed. It is now possible to bind classical political wisdom and processes with the trustless nature of smart contracts and the blockchain, forming a means to govern a digital jurisdiction or environment in a fair, just, and consistent manner.

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[1] The Roman Republic, Volume 3 by William Everton Heitland

[2] The Fall of the Roman Empire: A New History of Rome and the Barbarians by Peter Heather, The Fall of Rome and the End of Civilization by Bryan Ward-Perkins

[3] MacMullen, Ramsay. *Corruption and the Decline of Rome.* Yale University Press, 1988.

[4] Mises, Ludwig Von. *Bureaucracy. New Haven: Yale University Press, 1944.*
  Teasley Jr., Harry E. "The Seven Rules of Bureaucracy". <https://mises.org/library/seven-rules-bureaucracy>
  Feb.15, 2018.

The Republic, smart-contract driven, governance model will serve as a tool to determine consensus, requiring minimal intermediation or administration on behalf of human actors, all designed to deliver instantaneous output while preserving an ethical, constitution-based, atmosphere for the conduct of commerce and technological development. An environment combining the best of human political ingenuity and technological consistency by way of distributed ledger technology and smart contracts.

Decentralization brings various advantages to that of centrally managed organizations:

1) **Improved efficiency, cost structure, and access to information:**

    "Institutions, understood as the set of rules in a society, are key in the determination of transaction costs. In this sense, institutions that facilitate low transaction costs, boost economic growth."
            - Douglas C. North, 1992. Transaction Costs, Institutions and Economic Performance

    Transaction costs are a key concept underlying the New Institutional Economics (NIE) theory. These costs pertain to running an economic system, conducting economic exchanges, and enforcing contracts after the exchange is over.

    It is theorized that decentralized business and administration structures have strategic advantages and increased efficiency compared to their centralized counterparts[5]. In short, complex and centralized organizations often become more difficult and expensive to manage the larger they become. Decentralization "frees up" decision making processes, increasing the fluidity of an organization. This increase in organizational capacity and efficiency is resonated by Professor of Management, Rhys Andrews, in his "analysis [which] reveal[s] that decentralization of key decisions can overcome the internal social dysfunctions associated with being a big organization". Recent advances and implementations of distributed ledger technology show that the advantages of decentralization can be extended beyond decision-making to processes, such as supply-chain logistics, of a given organization or business.

    An example of a large, traditionally centralized organization where blockchain technology is being introduced to increase efficiency by reducing overall transaction costs would be Walmart[6]. As a global corporation focused on the distribution and sale of goods, Walmart employs over two million people worldwide, had an annual net sales in 2017 of $308 billion USD[7], and as such maintains an exceptionally complex and vast supply-chain management,

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[5] Andrews, Rhys. "Organizational Size and Social Capital in the Public Sector, *Does Decentralization Matter?"*
    Review of Public Personnel Administration, vol. 30, no.1, 2017, pp. 40-58.
[6]Forbes - IBM Blockchain Technology and Walmart Supply Chain
[7] Walmart 2017 Annual Report: http://s2.q4cdn.com/056532643/files/doc_financials/2017/Annual/WMT_2017_AR-(1).pdf

distribution and logistics requirement. To manage such tremendous human and physical capital, large multinational mega-corporations like Walmart often deploy a complicated web of internal structures, split into regional divisions, management teams, operational networks, profit centres, and so on. Akin to the Roman Empire, complex organizations tend to form into a dense and intricate bureaucratic and corporate enterprise that require an increasing amount of energy and resources to sustain the operation.

Recently though, Wal-mart has turned to decentralized ledger technology in order to address supply-chain management issues concerning hazards and safety standards surrounding the food that it distributes around the globe. The IBM Blockchain Platform in tandem with Linux's Hyperledger technology has partnered with Walmart to " to explore food supply chain traceability and authenticity using blockchain technology. The project comes as Walmart announced its new Food Safety Collaboration Center in Beijing. The goal is to improve the way food is tracked, transported and sold to consumers across China harnessing the power of blockchain technology designed to generate transparency and efficiency in supply chain record-keeping"[8].

A foundational corporation like that of Walmart is embracing advancing blockchain technology to improve its ability to manage and direct its processes and services. Through decentralization and disintermediation - implemented via blockchain technology - Walmart is able to attain a new level of quality assurance, drastically improving the safety of their food supplies, thus providing a better product and quality assurance to their expanding customer base. The pairing of a strong and established central authority, and the disintermediation of particular processes and operations can be effective in overcoming many traditional challenges that tend to plague organizations that grow to a level of complexity, size and influence that cannot be effectively managed through limited and narrowly focused centralized management tactics alone.

2) **Elimination of bureaucracy & disintermediation:**
    "Loss of centralized control is a cost, but the benefit is that such systems become more robust. Distributed systems still require system-wide coordination, but this is achieved through adaptation, such as through the price system in a market."
           - Sinclair Davidson, Primavera De Filippi, Jason Potts - Disrupting governance: The new institutional economics of distributed ledger technology

The decentralized autonomous organization provides a structural framework that is capable of limiting or eliminating some of the negative consequences[9] that result from a bureaucratic, or excessively administrative decision making process. Blockchain based smart-contracts enable self-governance with minimal bureaucracy, control for individual shareholders, transparency in financial matters, and overall flexibility. The minimization of

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[8] https://www.ibm.com/blogs/blockchain/2016/11/leveraging-blockchain-improve-food-supply-chain-traceability/
[9]Teasley Jr., Harry E. "The Seven Rules of Bureaucracy". <https://mises.org/library/seven-rules-bureaucracy>Feb-18.

cost and increased administrative, management, and operational efficiency promises to undermine traditional, hierarchical and centralized organizations.

Innovation, funding, and user-participation all benefit from the absence of centralized authorities dictating all facets of progress and development. Take for example, a traditional start-up which would usually take weeks to draft business proposals, assign share ownerships, complete legal procedures, negotiate internal and external rules and procedures, while simultaneously raising funds. Republic hopes to foster blockchain innovation that may enable smart contracts to facilitate these undertakings in an expedited and more efficient manner[10].
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3) **Incentivization** is another benefit offered through a decentralized and tokenized governance model. Company value is distributed among all token-holders, giving them a direct incentive to promote the functionality of the organization and project.

Awareness is growing as to the benefits of decentralization in the production, distribution and consumption of goods and services. Innovations, non-traditional fundraising modes, and impactful user-participation are some of the benefits that result in the absence of centralized authorities. The rise of blockchain, crypto-economics, and subsequent decentralized and distributed methods of managing networks is making this more of a possibility, and many exciting projects and models are beginning to emerge as a result[11].

Republic is hybridizing the benefits of political decentralization and the operational efficiency of a traditional organization through the formation of a democratic governance model that will be responsible for managing open-source development environments. Republic is designed to uphold the collective will of token-holders (users within the environment), while preserving the efficiency of a complex business environment.

2 Governance Model

"Governance is the process by which people reach consensus on subjective matters that cannot be captured entirely by software algorithms."[12]

Elected representatives known as Delegates will form the Council, and will be responsible for the management and decision making of significant matters. These Delegates are voted into power by token holders ("Citizens"). When dealing with matters that drastically affect the Republic and the Citizens, Delegates can hold polls to gauge their constituents (e.g. voting to overhaul architecture or do a rollback).

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[10] See Colony's Technical White Paper to see what they are doing to promote and develop open organizations
[11] See section 6 for a list of current governance protocols that are making headway in the space
[12] https://github.com/cosmos/constitution/wiki/Research-EOS---Governance-and-Constitution#constitution

In most situations, Delegates will be able to resolve issues amongst themselves, in an open forum. Delegates will follow a set of rules and guidelines in making decisions ("Constitution"). This ensures that the development and deployment of technology and the maintenance of a given digital ecosystem is not driven by a singular person or group, but by the collective will of token-holders as reflected through their elected and Constitution bound representatives.

2.1   Hierarchy

Republic is split into three levels: the Council, Committee, and Judiciary. The Council performs system-wide, high level governance; the Committee performs local-level, focused governance; and the Judiciary will be utilized if disputes arise within the Republic. Developers utilizing the Republic model can choose to either allow full governance by the Council, or to institute a Committee, or to copy the code to create their own fully-controlled Council and/or Committee.

2.1.1 Constitution

This document will be the foundational stone of the Republic, outlining the values of the ecosystem, adherence to which will remain vital for continued participation within the ecosystem[13]. A basic and preliminary iteration of a Constitution can be found at the end of this whitepaper - Appendix A.

2.1.2 Council

The Council, in line with its historical parallel, functions as the collective body of specialized and highly-trained individuals (i.e. industry leaders) who process high-level decisions with wide-ranging impact.

Industry leaders will be at the forefront of proposing and managing the direction or implementation of major changes. If a proposed decision comes under dispute by another leader, a vote may be called to resolve the matter.

Industry leaders may also vote to resolve a matter through a token-holder vote, remove or replace members from the Council, dissolve the Committee and appoint entirely new members, amend the Republic Constitution.

They may also conduct polls to gauge public opinion, or to resolve issues that impact a large base of users of Hyperbridge, its core features etc.

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[13] Please note, we are in the midst of drafting the Constitution that will be used within the Hyperbridge specific ecosystem. It will be an open-source document. Amendments, made by community members and participants will be encouraged, and will be ratified through a popular vote.

2.1.3 Committee

The Committee functions as a management team consisting of elected members that manage specific applications and sub-sections of the ecology (e.g. a particular application with the Blockhub framework.

The constituency of each company may elect a representative from within the management team. A group of companies with shared interests and goals may also form a senatorial committee.

Members of the Committee may also vote to bring about amendments to the Republic Constitution once the amendment is passed through by the Council.

2.1.4 Judiciary Committee

"In practice, contracts cannot specify what is to be done in every possible contingency."
        - Oliver Hart, 1995 - Firms, Contracts, and Financial Structure

In a perfect state of affairs, everything could be resolved by perfectly developed and executed smart contracts. This would of course require that the code has perfect knowledge with regard to all possible outcomes and pitfalls. Because of the imperfect state of both humans and code it is essential for any governance model to have dispute resolution processes built in to it. Within any organization, regardless of how airtight the code of conduct or constitution may be, there are bound to be disputes and disagreements.

We are in the process of developing a judiciary system that is both flexible and fair, and in time will institute an automated Judiciary Committee to handle such disputes. A third-party dispute resolution service such as <u>Kleros</u> may be used to handle disputes.

2.2   Voting

Voting power can be split (e.g. 40/60) between the Republic and Citizens. The Republic will have 40% voting power, and Citizens will have 60% voting power.

A proposed voting model: a single Republic Token ("Token") will be worth 1 voting share. Members of the Council ("Delegates") are required to abide by the rules of the Constitution.

Delegates can be voted in and out by the majority. Like any democratic organization, the will of the community is expected to be upheld by the appointed Delegates. If Delegates act against the will of the community, not upholding the Constitution and the will of the people, a sufficient argument

must be provided to maintain their seat. This argument will be evaluated by the Judiciary Committee (2.1.4).

We believe 11 Delegates is large enough to provide both decentralization and balance, while being small enough to coordinate changes to the system. A 40/60 stakeholder balance provides the community with enough power so that if they need to use it they can, but not so much so that it becomes over-distributed and unfocused. Most of the time, the Republic can operate without need for community voting, but in rare circumstances, the community may need to vote for major changes or for new seat holders.

2.3   Incentivization

A token-based incentive structure will be developed for those who are providing their time and expertise to serve as a Delegate, Senator or Judicial Committee member within the Republic. It is envisioned that compensation will be based on performance and involvement, and will be determined, or in the least, approved by the larger community.

3   Token Model

The Republic specification is designed to work on blockchains supporting smart-contracts. An initial implementation will utilize the ERC20 token standard[1] upon the Ethereum network, and there will be implementations for other ledgers in the future. An implementation of the specification can use any number of tokens desired.

3.1   Basic Functionality

Basic functionality available with a Republic token:
- Appointment of Republic Delegates through industry elections.
- Delegated governance over any Republic-compatible smart contracts (a dApp developer enables governance over "their" smart contract by the Committee).
- Issue resolution through token holder votes.

3.2   Issuance

Republic protocol can be implemented on supporting ledgers as for now, for example Ethereum. As new ledgers arise, the ability to support additional ledgers is possible. New contracts would need to be developed for the desired ledgers. Token holders would need to send tokens to the Republic to be burned and reissued on the new ledgers. In the unfortunate event of a hack, this may be necessary.

3.3   Source Code

In order for a decentralized organization to be truly autonomous, the source code will initially be managed by Founder, and as new Delegates are onboarded and voted into the Council, they will be given administration access. As it is open source, the code is open for anybody to make improvements.

4   Integrations

Republic will actively work with partners to build support for the Republic network and token. Initially, we envision an ecosystem of dApps using the Token due to its advanced governance features. As the network evolves, dApps will use the Token for its reputable Republic of Delegates. During the development of contracts, developers will set which features the Council can manage. In most situations, the Republic will delegate their power to a subcommittee with domain knowledge of that network ("Committee"). If the Committee is to misbehave in a way that causes action from Citizens, or is contra to the Constitution, the Council will have the power to step in and replace the Committee.

The Hyperbridge ecosystem uses an implementation of the Republic specification, as a means to oversee and manage the initial innovations: i) Blockhub, a digital management platform and decentralized application store, and ii) Dataforce, a secure smart contract enabled blockchain that will enable users to store, secure and monetize their data. Since then, the vision has expanded to include the broader technological community.

4.1   Blockhub Platform

One of the first integrations will be with the Blockhub Platform, being developed by Hyperbridge Technology. Blockhub is an app distribution platform and marketplace. Within Blockhub, local Committees will be instituted for the management of the various applications and sub-organizations within the platform. This ensures that application management will be maintained by those that have created it, but will also act in accordance with the collective good of Republic token holders.

4.2   Dataforce Network

One of the first integrations will be with the Dataforce Network, being developed by Hyperbridge Technology. Dataforce is a data exchange network for collecting and monetizing data. For more information visit the official website.

5   The Republic Protocol

5.1   Smart Contracts

5.1.1   The Republic Smart Contract

The Republic Smart Contract ("RSC") will govern high level interactions with the system, such as elections and voting. Other contracts within the system will reference this contract for the state of truth, such as the elected Delegates of the Council.

5.1.2   Republic Citizen Smart Contract

The Republic Citizen Smart Contract ("RCSC") is required for Citizens to interact with the other contracts within the system, such as nominating themselves for election.

5.1.3   The Republic Primary Election Smart Contract

The Republic Primary Election Smart Contract ("RPESC") will allow elections and re-elections for the Council and Committees within the system. Elections are held every specified number of months. In this election, Citizens will be elected to the Council/Committee for leadership of each category of industry specialization.

5.1.4   The Republic Industry Election Smart Contract

The Republic Industry Election Smart Contract ("RIESC") will allow an individual/organization to nominate themselves as the Delegate of a specific industry category. The number of categories will depend on the implementation.

6   Other models

Many decentralized and distributed autonomous governance protocols are disrupting the way projects and groups are managed:

Aragon: "community governed decentralized organization whose goal is to act as a digital jurisdiction, an online decentralized court system…"

Bitnation: Governance 2.0

Colony: A governance and management platform for open organizations

DAOstack: "Just as HTTP allows the creation and interoperability of web sites and web applications, DAOstack allows the creation and interoperability of web companies, collaboration apps and DAOs, as well as the alignment of their interests."

District0x: A network of decentralized markets and communities. Create, operate, and govern. Powered by Ethereum, Aragon, and IPFS.

Ethlance: a decentralized take on Freelancer.com, Upwork, etc.

NameBazaar: a decentralized marketplace for buying and selling domain names on the Ethereum network.

7   Conclusion

Republic is a decentralized smart-contract based governance model. Used by an organization or project, the Republic is designed to monitor and ensure the health and development of an ecosystem, all of which hinges upon the voting authority of token-holders.

Present-day smart-contract blockchain enabled technology seeks to minimize the human capacity to undermine and rot a given and established political system. Governed by code, the Republic is a fully transparent system, trustless in nature, that removes or limits the capacity for corruption. The success of this project relies on your involvement.

All **feedback, reviews, and improvements** may be directed to whitepaper@hyperbridge.org.
For **community reviews**, head to the /r/hyperbridge subreddit.
If you are a **potential partner** looking to get in touch, contact us at partners@hyperbridge.org.

We are a fast-moving, dynamic team looking for talented individuals. Contact us at careers@hyperbridge.org if you, like us, are as passionate about utility tokens and the communities that can be built around them.

Acknowledgement

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References

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[2]   Andrews, Rhys. "Organizational Size and Social Capital in the Public Sector, *Does Decentralization Matter?*" Review of Public Personnel Administration, vol. 30, no.1, 2017, pp. 40-58.

[3]   ERC20 Token Standard. https://theethereum.wiki/w/index.php/erc20 token standard.

[4]   Mises, Ludwig Von. *Bureaucracy. New Haven: Yale University Press, 1944*

[5]   Teasley Jr., Harry E. "The Seven Rules of Bureaucracy".
       <https://mises.org/library/seven-rules-bureaucracy> Feb.15, 2018

Appendix A: The Constitution of the Republic[14]

Preamble

The name of this organization from this point forward shall be known as "Republic".

We, the Council of the Republic, hereby known as the "Council", in order to establish and protect Equal Rights for the Citizens of the Republic, anoint this Constitution for the Citizens of Republic.

Article I: Purpose of the Constitution

A. We recognize this as an instrument to grant and uphold the authority of The Republic, a token-governed digital model for governance that enables and expedites the democratization of decentralized autonomous organizations.

B. We hold these truths in the highest regard: the principles of honesty, integrity, consistency, individuality, and voluntary association. We resolve to invariably integrate them into the fabric of governance.

C. We recognize and grant certain inalienable, mutual Rights: of Liberty, Fraternity, and Equality in status, opportunity, and choice.

D. We recognize that violation of any of these guiding principles is detrimental to, and undermines, the inherent Rights of the Citizens.

Article II: Citizenship

A. The Members of Republic, hereby known as the Citizens, are, and always will be, the ultimate source of all authority over the duties, aims, and objectives of The Republic. The Republic derives its strength from the Citizens.

B. The Republic, as well as any and all organizations modeled in the likeness of, and representingThe Republic, shall not discriminate Citizenship on the basis of race, color, sex,

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[14] please note, this is the preliminary and working iteration of the Constitution. It is subject to amendment.

language, religious faith, sexual or gender orientation, marital status, place of origin, disability, or socioeconomic status.

Article III: Code

A. We recognize the importance, reliability, and practicality of Blockchain technology to facilitate the securing of Rights according to the software contracts (aka smart contracts) created and entered into with mutual consent of various Members.

B. All code created under the agency of Republic shall be to serve, in all extent, the rights of the Citizens of Republic.

C. None may update code created under the agency of Republic in such a way that violates this Constitution.

D. We recognize that code shall never be regarded as immutable. Code, much like any organism, must evolve and adapt over time to survive in a persistently changing environment. Software is constantly under developmental processes and will occasionally fail to perfectly govern and safeguard Rights. Therefore, the existence of processes required for community governance are paramount.

E. All updates to core Blockchain code employed by Founder and all of its derivatives shall require prior Council approval **[Refer to Art.IV.5]**.

F. Emergency updates to core Blockchain code employed by Founder and all of its derivatives shall require continuous approval of the Council for a period of 30 days for the code to take permanent effect.

G. The Blockchain code employed by Founder shall always remain singular. The Constitution shall not recognize any branches, subdivisions, forks, etc. These shall be regarded as an attempt to undermine its the integrity of the Constitution.

Article IV: Organization

A. We recognize Republic as a public body, designed to keep governing authority from being retained in the interests of a minority. We further strive to maintain equal rights and opportunities for all Citizens.

B. We recognize the practical limitations in granting all Citizens equal authority in decision-making, and therefore vest power into two hierarchical bodies: the Council, and the Senate, Members of which, hereby known as Delegates, shall represent the collective interests of the electorate.

C. The Council shall be composed of Delegates elected from the body of the Committee, or through public elections conducted on a biennial basis. The Founder shall institute a Council of X representative delegates for each category of business. For example:

- Logistics & Supply Chain
- Education & Training
- Environment & Transportation
- Agriculture & Food
- Medical & Healthcare
- Artificial Intelligence & IoT
- Software & Web Technology
- Legal & Accounting
- Social & Media
- HR & Workforce
- Health & Wellness

2. The Council shall primarily hold sway over matters that drastically affect the Republic and its Citizens, but shall be free to contribute to matter of lesser significance, and resolve issues amongst either themselves or the Committee, either in an open forum, or through public polls.

3. Members of the Council shall receive administrative rights and extended privileges beyond those given to the Committee. Additional powers given to the Council include:

- Administrative control over the Github repository.
- Conducting public polls to gauge public opinion over a particular matter.
- Voting to replace one or more Delegates of the Council. [Minimum required votes?]
- Voting to replace one or more Members from the Committee. [Minimum required votes?]
- Voting to dissolve the Committee and appoint a new one. [Minimum required votes?]

4. The Council, and only the Council, shall hold executive power to legislate an amendment or modify the structure and implementation of the Republic Constitution. Legislative amendments may also be brought to the Council through a prior vote in the Committee in favour of passing or repealing legislation.

D. The Committee shall be composed of Members either elected from organizational bodies or corporate communities
that are based on the Republic Foundation. Member shall be elected to the body of the Committee on a [periodic] basis, or appointed individually through a vote by the Council.

1. There shall be no more than 555 Members of the Committee, which each organization contributing no more than 2 Members.
2. Members may be appointed to the Committee through an algorithm that selects capable Members based on their contribution to Republic. Members may be appointed only through prior consent.

3. Members of the Committee shall abide first and foremost by the rules laid down by the

Article V: Voting

A. We recognize the act of voting as inseparable from the core philosophy of Republic, and as a principal responsibility of every Citizen. We further agree never to vote in violation of this Constitution.

B. Voting power shall be divided, with 40% strength given to the Republic Delegates, as stated in Article IV B, and 60% to the Citizens of Republic. [Specifics of split in shares].

C. Voting rights shall be obtained by the transfer of 1 Republic Token, as referred to in Art.VI.A., into the stakepool prior to each poll, restricting liquidity of the Token for a set amount of time. Votes shall be weighed with reference to the total amount of Tokens held in the stakepool.

D. Each member shall be presented only with a singular vote for each poll. However, voting rights may be delegated to any other Citizen. A Citizen may be delegated voting representation by more than one individual Token holder.

E. Voting to amend the Constitution shall not be considered a violation of the Constitution so far as the amendments do not infringe upon the underlying Rights guaranteed by this Constitution under Article I. [Changes to the Constitution require a minimum number of votes?]

Article VI: Currency

A. Republic hereby creates a common currency known as the Republic Token ("Token"). as the epicenter of the Republic Model of Governance.The Token will serve as the common medium of exchange and will provide holders of the Token to voting privileges.

B. Ownership and possession of the Republic Token shall be perceived as explicit contribution to Republic and the Republic Model of Governance.

C. [Changes to the Currency require a minimum number of votes?]

Article VII: Property Rights

A. Property Rights on the Blockchain(s) employed by the Founder concern but may not be exclusive to:

1. Rights entitled through digital transactions as defined under this Constitution,
2. The goals of smart contracts as defined by developer comments
3. Traditional incorporated contracts

B. We recognize the fact that smart contracts created on the Blockchain(s) employed by Founder provide the cornerstone for all transactions and exchanges taking place on the Blockchain [Refer to Art.III.A]. The accuracy and precision of conducting and resolving affairs over a Blockchain relies entirely up smart contracts.

C. We recognize no code as absolute and perfect [Refer to Art.III.D], including smart contracts and digital affairs established by them. We recognize the fact that software flaws might render smart contracts to behave erroneously.

D. In the case of consequences arising out of inaccurate code, intentional or unintentional, a Citizen or Citizens that are granted Rights intended for another Citizen shall respond with all necessary actions that result in the restoration of those Rights to the intended owner.

E. Property rights are defined by the intent of the smart contracts as inferred by developer comments, incorporated human readable contracts, this Constitution and inspection of the code. We recognize software bugs may cause contracts to operate in unpredictable or unexpected ways. Those who come into possession of Rights intended for another Member shall take reasonable actions to restore those Rights to the rightful owner.

F. We recognize that the greatest weakness of cryptographic information lies in the manipulation, storage, and use of private keys by a human. We recognize that private keys may be used to impersonate a Citizen and sign messages on their behalf. We do not recognize any authority exercised by stolen keys. We further recognize the difficulty in identifying a stolen key prior to illicit use.

G. We agree to a duly notify the public of any breach of our Property Rights resulting from a misuse of our private keys, erroneous code, or unexpected behaviour of smart contracts.

H. We agree on the important of securing all of our accounts. We recognize that online privacy and security is a shared responsibility and the fact that Property Rights of multiple Citizens may be compromised through a single individual's oversight and carelessness.