



## Goals

- To provide an intrinsically trustworthy platform for safe and effective democratic communication, democratic decision-making and collaboration, and democratic trade and exchange capable of replacing existing corporate or government controlled “walled gardens.”
- A new, vital and growing democratic digital commons

## Principles

- It must be 100% open source
- It must be fully democratic and accessible at every level of its architecture and operation, self-organizing from the bottom up and not requiring any centralized services
- Follow the principle of [least privilege](#) and rely on verifiable privacy to ensure trustworthiness and eliminate reliance on any central authorities
- Do not recreate the wheel: Leverage strong upstream projects, fork and adapt when needed

## Major Component Initiatives

1. Self-Sovereign Data Commons
2. Safe, Democratic Communication and Social Media
3. Democratic Cryptocurrency and Exchange
4. Community Hosting: Infrastructure for the People
5. 100% Realness: Socially Verified Accounts
6. Building the Commons: Coorganisms, Not Corporations
7. Digital Citizens Assemblies, Not Representatives
8. Digital Communities of Values through Compassionate Accountability
9. Exodus: Movement of the People



## All for One. One for All. | The New Digital Commons

### Self-Sovereign Data Commons

Giving users control over their data and content, who it is shared with, and for how long using [object capability](#) access control and decentralized, least-privilege database systems. Breaking down “walled garden” monopolies by freeing users to share their data with one or many service providers for various purposes of their choosing.

#### Proof of concept:

- A [self-sovereign](#) digital identity backed by a private key stored on their mobile phone, computer or a hardware wallet, which can be used for interacting with cryptocurrencies as well as providing proof of identity and logging into sites supporting the popular [OpenID Connect](#) protocol
- A tool to add content to a secure personal data lake, stored on a user’s mobile phone or computer, linked to the self-sovereign digital identity above
- A tool to facilitate sharing content over any communication channel including email, websites, social media and messenger apps while retaining the ability to unilaterally revoke access
- A demonstration of creating multiple “inboxes” where messages and “feeds” can be received, in which the inboxes themselves can be created for specific correspondents or correspondent groups and revoked when needed
- A demonstration of search and discovery in this framework in the form of a restaurant view site with customer submitted reviews, with content caching and invalidation to ensure privacy-protecting performance
- A demonstration of sharing the same data with two restaurant review sites
- A demonstration of artificial intelligence in this framework in the form of a restaurant recommendation engine that delivers messages via our inbox system described above
- A demonstration of the above in a [trusted execution environment](#) to showcase how this framework can operate without trusting service providers to deleted cached content

#### Proposed Approach:

*The 2Gather Project Roadmap. Revised 2/15/21*





## All for One. One for All. | The New Digital Commons

- Create a functional self-sovereign identity by forking the [Status.im](#) wallet and implementing the [DID-SIOP](#) protocol for OpenID Connect
- Build a personal data lake using [FlumeDB](#) as a decentralized transaction log
- Build an actor-based sharing system on top of the decentralized [Tahoe-LAFS](#) object capability database and FlumeDB



## All for One. One for All. | The New Digital Commons

### Safe, Democratic Communication and Social Media

Integrate a decentralized, threaded messaging system that can send and receive end-to-end encrypted messages between individuals, groups and the public that also supports voice and video calls. It should allow users to control their “feed” of content using priorities and algorithms of their choice. It should allow for different presentation modes making familiar and usable for existing users of Facebook, Twitter, Instagram, Snapchat, WhatsApp, Slack, etc.

#### **Proof of Concept:**

- Demonstrate that how such a messaging system can operate
- Demonstrate how a central feed from a user’s various messaging groups and subscriptions could function, with the ability to plug in other variants

#### **Proposed Approach:**

- Adapt and extend the [Element](#) and [Cerulean](#) messenger apps for these purposes.



## All for One. One for All. | The New Digital Commons

### Democratic Cryptocurrency and Exchange

Create a new cryptocurrency-like [blockchain](#), capable of running [Ethereum](#) smart contracts, that implements a [mutual credit clearing network](#) that facilitates exchange between users. The value of a 2Gather Dollar will be pegged to a basket of everyday commodities to prevent speculation or manipulation. Every user of the system must have a self-sovereign identity and run a node, or share a node with a small number of others. The blockchain will be permissioned and validated by all of its members using a fully democratic “proof of authority” system. This means the blockchain is secure and performant, and that it is owned and controlled by all of its users equally.

Make it possible for users to easily send one time or repeated payments to each other or to participating merchants. Create a person-to-person marketplace. Connect to other existing cryptocurrencies like Ethereum to provide a way to settle balances between users. Allow direct transfers on the Ethereum Mainnet for short-term convenience and mirror those transactions on the 2Gather blockchain to help build decentralized financial histories for users over time.

### **Proof of Concept:**

- Demonstrate the operation of a blockchain matching the above criteria with a number of test users, including financial transactions and Ethereum compatible smart contracts.
- Demonstrate Community Hosting of nodes for all users using the approach outlined below.
- Demonstrate a person-to-person marketplace (e.g. Ebay alternative) on top of this blockchain

### **Proposed Approach:**

- Adapt the [Hyperledger Fabric](#) blockchain for our purposes
- Implement Community Hosting for this blockchain
- Build or adapt a functional person-to-person marketplace using this blockchain



All for One. One for All. | The New Digital Commons





### Community Hosting: Infrastructure for the People

Making it possible for groups of people to “self-host” their own, control and share payment for infrastructure in a manner suitable for non-technical people. This means that there will no longer be a necessity for centrally hosted services and all services can be hosted in a decentralized manner.

#### **Proof of Concept:**

- Make it possible for a small group of non-technical users to deploy and use the services for the Self Sovereign Data Commons above to cloud servers, and to jointly pay for those services on a monthly subscription basis. The servers will automatically update to the latest versions of the software they run, automatically and securely backup their data, and self-heal in case of a failure of a part of the system.

#### **Proposed Approach:**

- Arrange for funding of servers via subscription payments using Ethereum or Bitcoin through a jointly controlled account for a group of users. (Initially we will not be able to use our own cryptocurrency because it is not yet widely accepted.) The joint account will be controlled by using a [threshold signature](#) pattern.
- Pay for servers using a smart contract from the joint account through one of the available cloud server providers that accept Ethereum or Bitcoin
- Manage deployments using [Kubernetes](#) from a Community Hosted deployment server
- Automatically trigger update deployments when the underlying source code has changed



## All for One. One for All. | The New Digital Commons

### 100% Realness: Socially Verified Accounts

Create a verification layer for accounts using confirmations from other people on the platform. This ensures that people have one and only one account on the platform as a foundation of trust and accountability without relying on biometric information or requiring any centralized record keeping.

#### **Proof of Concept:**

- Create a system for account holders to verify other account holders and have this information recorded on our blockchain. Create a system for account holders to then verify the verifications to provide two levels confirmation and accountability
- Demonstrate a social verification algorithm using confirmations from multiple people from different chains of relationships to identify fake or duplicate accounts and block them
- Experiment with artificial intelligence models to also detect fake or duplicate accounts
- Create a method for accounts to be restored using multiple social verifications when an account password has been lost and cannot be retrieved
- Analyze effectiveness of our algorithms using data from pilot testers, from “red team” testers, from computer simulations, and from generative adversarial network modeling. Develop an iteration plan to improve the algorithms based on this data.

#### **Proposed Approach:**

- Require social verifications that link accounts with the main user graph
- Augment social verification techniques with graph-based and artificial intelligence-based verification techniques.
- Use threshold cryptography for social verifications and account restorations and persist this data to our blockchain





## All for One. One for All. | The New Digital Commons

### **Building the Commons: Coorganisms, Not Corporations**

We seek to grow an extensive and vibrant new commons of, by and for all people. Consequently, there should be no private ownership or control of any part of the 2Gather platforms and all source code must be open source. In the future, 2Gather may possibly be incorporated as a public utility, but until that time Community Hosting will ensure that a large, vibrant network of users can grow while retaining democratic ownership and control of its infrastructure and operations. Organization of developers and users of the system will occur through organic, democratic, self-organizing special purpose entities we call [Coorganisms](#), rather than rigid and narrowly controlled for-profit or non-profit corporations.

#### **Proof of Concept:**

- Demonstrate a practical system for creating and managing coorganisms, available to all users of the platform, with associated funding accounts, tasks and task assignments
- Adopt this system for the management of the 2Gather Project itself, allowing funds to be raised from supporters and users, and then tracked and spent for all aspects of its development

#### **Proposed Approach:**

- Leverage and extend the smart contract ecosystem from [Vocdoni](#) or [Colony.io](#) or similar





## All for One. One for All. | The New Digital Commons

### Digital Citizens Assemblies, Not Representatives

Every Coorganism of any size should be able to sponsor votes, either anonymous or public, on issues submitted by its members. Votes should also be able to be submitted for randomly selected subgroups of members to facilitate a form of [Citizen's Assemblies](#), rather than rely on elected representatives. It should be possible to use the system for members to find others who share their perspectives and priorities. Mechanisms for online dialogue and deliberation should also be available.

### **Proof of Concept:**

- Blockchain-based polls and votes within Coorganisms should be demonstrated
- Anonymous, secret votes should be demonstrated using a “secret contract” system or other form of [secure multiparty computation](#)
- Secret threshold votes should be implemented, allowing users to determine if there are X number of other members interested in issue Y without revealing their identity. This allows users to safely determine support for issues that concern them without becoming targets of retribution or suppression.
- Tools for text based and video based dialogue and deliberation should be implemented in such a way that their results can be preserved, verified and referenced for future use.
- Delegation of specific work tasks can be achieved using the core Coorganism smart contract functionality.

### **Proposed Approach:**

- Public voting can be implemented using a smart contract library like [HQ20](#) or similar
- Secret votes and threshold votes can be implemented using a secret contract system based on, or integrated with, blockchains from [The Secret Network](#) or [Oasis Labs](#).
- Dialog and deliberation tools should leverage the latest research on deliberative democracy and organizational development and be iterated based on user feedback. Existing open source tools like [Loomio](#) or [Lemmy](#) could be leveraged or integrated.



## All for One. One for All. | The New Digital Commons

- Immutable records of deliberations can be stored, either encrypted or public, on [IPFS](#) or similar decentralized storage system and linked on the blockchain.



### Digital Communities of Values through Compassionate Accountability

As people engage on the platform through Coorganisms, they will identify people with whom they share important values and form long-lived digital communities, democratically governed according to those values. A compassionate reputation system will enable members to hold each other accountable to these values without a centralized authority. In this way, the users can then live their values more fully and powerfully together.

#### **Proof of Concept:**

- Statements of values can be developed using the tools of democratic deliberation described above and adopted by votes of the membership.
- The self-sovereign identity of each user is extended to include reviews from other users illuminating whether he or she is living each identified value strongly or weakly. This is summarized in a reputation system visible within a Coorganism. All reviewers are themselves also reviewed to support fairness and accuracy over time.
- The deliberation system could also be used to resolve disagreements over the reviews with input from the broader community
- A mechanism to deemphasize old/outdated reviews is also provided so that changes over time are fairly reflected

#### **Proposed Approach:**

- A flexible review and reputation system will be created using smart contracts on the blockchain and available for use within Coorganisms. We are not aware of an existing system that could be leveraged, so this may need to be developed from scratch.
- The deliberation system will be extended to support this reputation system.



## All for One. One for All. | The New Digital Commons

### **Exodus: Movement of the People**

Tools for migrating one's content out of all major existing corporate, walled garden networks and importing them onto the 2Gather commons will be provided. Tools for cross-posting from our commons to such networks will also be provided in such a way that the true home of the content on 2Gather is clearly identified. Tools for communicating with existing "friends" and connections on such systems to invite them to join you in 2Gather will be provided.

### **Proof of Concept:**

- Migration tools will be provided for Facebook, Twitter, Instagram, WhatsApp, Discord, Telegram and Youtube.
- Cross-posting tools will be available for the same networks.
- Friends and connection tools will be available for the same networks.
- Demonstrate how easy it is to share the same content for multiple purposes

### **Proposed Approach:**

- Leverage data export tools from these exist platforms and create importers of this data to the 2Gather commons.
- Cross-post content with APIs or share tools from the various platforms.
- Videos can be hosted in a decentralized way based off existing software like [PeerTube](#) or [Dtube](#).

