CollectiveOne

Part A. CollectiveOne in a Nutshell

CollectiveOne is a *platform* for creating and managing collaborative projects. These are its main features.

> *It promotes open collaboration through contributions*
> Anyone can become a member of the platform, and create a new project, or add value to an existing project by delivering a contribution. Any input or task that adds value to a project is considered a contribution.
>
> *It facilitates accurate record keeping on who contributed what*
> When a member makes a contribution to a project, he or she receives 'participation points' in return. These points are project-specific, and are not designed to be bought or transferred – they are a primarily a record of the value of all contributions made to a project.

It promotes 'liquid ownership'
The participation points that members receive in return for their inputs to a project are not taken away from other members; instead, they are new points that reflect the value added to the project. This means that each contribution dilutes the participation of project members who contributed in the past.

It enables efficient collective decision-making
Decisions within projects are taken collectively by project contributors, through an efficient decision mechanism that accounts for the participation structure. The decision mechanism allows decisions to be taken fast even if the number of contributors is large by giving the option, but not requiring, all participants to influence all decisions, and forcing decision to be taken within limited time. Collective decisions govern all aspects of the platform, at all levels,, right from the beginning.

It promotes openness – in every sense of the word
The collaboration method proposed in the platform, and the concept of liquid-ownership, both welcome openness. Openness is needed to give external users the information needed to propose contributions. For this reason, in CollectiveOne, information about the platform development is open. Projects are invited to follow a similar approach but are free to choose up to what degree.

Fortunately, several other initiatives related to CollectiveOne are starting to emerge, evidencing the existence of a clear need to find new ways to collaborate. Some of the key aspects that differentiate CollectiveOne are

CollectiveOne aim is not to be owned by a closed group of people
CollectiveOne uses the method it proclaim to develop itself. Participation is open and the current contributors are willing to dilute their control of the project right from the beginning, in favor of new contributors.

CollectiveOne does not rely (initially) on a blockchain
The development of the CollectiveOne platform will be more dynamic and flexible because it will not initially rely on blockchain-backed smart contracts. The goal is to allow the platform to organically evolve from a simple and flexible set of rules and protocols, into more complicated contracting structures. As the platform evolves, it is likely that smart contracts will be introduced for transactions, when and if contributors consider it necessary.

CollectiveOne contributions are attributable to individuals
At the core of CollectiveOne is the idea that contributions should be attributable to individuals. This is why participation points cannot be purchased or transferred. The initial design of the platform will aim to require some level of proof-of-identity to allow users to contribute in the platform.

Part B. Overview of interactions in the CollectiveOne platform

Creating a user

The platform allows any individual to become a *user* by signup up, but signup is expected to follow a reference process in which each new user must be referred by an existing user to increase responsible use of the platform. *Signup requests can be done here.*

Creating a project

The platform allows any registered user to create a *project*. The project creator chooses the initial distribution of participation points of that project, and upload some basic information.

Initially, during the dry tests, projects creation will be limited. As the platform matures, free project creation will be allowed. Contact CollectiveOne at newprojects@collectiveone.org or get into the Slack if you are interested in starting a project.

Setting project goals

Project *structure* is given through a hierarchical definition of its project *goals.* Goals are concrete statements about project **objectives** and should become the target of all decisions in a project.

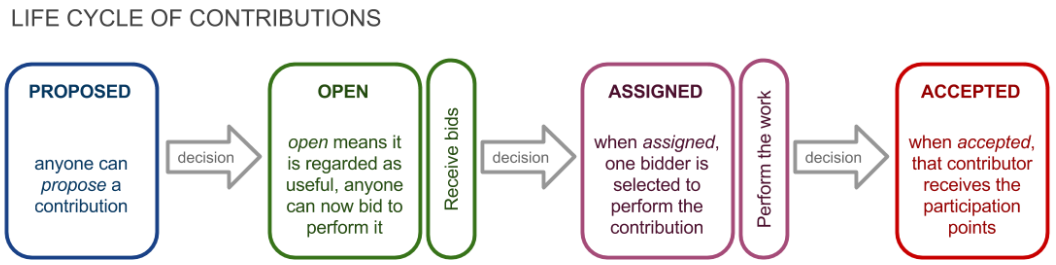
Goals also tend to convert themselves into sub-projects, grouping related contributions, being locally controlled by some contributors and without having to involve the rest of the project.

Goals can be modified or extended as the project evolves. Goals creation, edition and deletion is handled through the decision mechanism.

Contributing to a project in exchange of Participation Points

A contribution item defines a concrete in-kind input to a project, which is conducive to fulfilling specific goals. By definition, contributions are always attached to project goals.

A contribution to a project is formalized by creating a *contribution item* in the platform. Each contribution has a life cycle, passing through different states and eventually resulting in the attribution of new participation points to one user.



Proposing a contribution item

Any registered user can propose a contribution item. This includes both users that own participation points in a project, and users who do not, and the process is the same in both cases.

Opening a contribution item for bidding

After a contribution is proposed by a user, the decision mechanism is used to decide if it gets *open* for bidding. Only after it is open, users can bid to perform that contribution.

Assigning a contribution

Any user can submit an offer to fulfill any contribution request that is open. To do so, they specify a bid with the amount of participation points they want in exchange of making the contribution and, optionally, provide some additional information that can help the rest of users decide if the contribution should be assigned to them.

Users decide, using the decision mechanism, to accept or reject each bid made to the contribution. Once a the decision mechanism reaches a verdict on whether to accept a bid (see Part C for details on how verdicts are reached), the corresponding contribution item is marked as "assigned" to the *bidder*. After this point no further bidding is allowed.

Contributors can decide to accept or reject multiple bids for the same contribution request (provided there is more than one bid). The assigned bid will be the first one that is collectively accepted, as per the decision mechanism.

Accepting a contribution

Once an assigned contribution is submitted (at or before the agreed delivery date), users decide whether it has fulfilled the expected results using the decision mechanism. An accepted submission marks the contribution as "accepted", while a rejected submission releases the request back to "open for bidding".

Once a contribution has been marked as "accepted", the participation points requested as payment are created and transferred to the *bidder*. This is done automatically by the central platform without further action from project users.

Reaching decisions

Decisions within projects are always taken openly by project contributors through the *decision mechanism*. The decision mechanism is sovereign and overrules any decision taken by anyone else.

As a general rule, participation points grant influence in the decision-making process rights. This means that all decisions in a project can be influenced by all users who have participation points in that project. Nevertheless, influencing a decision is optional, and the decision mechanism weighs the influence of each contributor by the number of participation points..

The decision mechanism acts over general-purpose *decision objects.* Initially, decision objects are yes/no questions and are used for different purposes within the platform. Current decision objects include whether to create goals, accept contribution requests, assign contributions to bidders or mark contributions as delivered.

To the extent that any decision within the platform eventually requires the formulation of a suitable decision object, it is expected that the evolution of the platform will entail the use of decision objects beyond the cases just mentioned.

Sharing benefits

CollectiveOne crucially aims to facilitate record-keeping of project contributions in a secure and reliable way through participation points. This, however, is independent of how projects use those records. Projects will be free to decide whether and how to map participation points into legal ownership and benefits distribution, monetary or otherwise.

It is natural to expect that projects that do generate monetary benefits, and distribute them fairly among contributors, will receive contributions and grow. But there is nothing in the platform that requires projects to generate profits and distribute them in proportion to participation points. There are no hard-wired rules about how to split benefits.

Building a reputation

The success of CollectiveOne rests on the premise that collaborative projects can be self-managed and self-regulated, which in turn requires trust. To promote a culture of trust, CollectiveOne allows contributors to share their experience when interacting with the platform, the projects, and other contributors. In its initial version, there will be nothing more than an open space for contributors to leave feedback, to share their opinion of projects and other contributors. In the future, as the number of projects and contributors grows, CollectiveOne is likely to endogenously develop a more sophisticated reputation mechanism.

Contingency mechanism

Being a software tool, the platform is susceptible to work in unexpected ways due to implementation errors, or be abused by external actors. A contingency mechanism is included to protect the platform against these scenarios.

The contingency consist in allowing any user to flag an erroneous or malicious attribution of participation points. The decision mechanism is used to decide if the assignation was indeed erroneous or the result of malicious activity.
However, for *that* specific decision, the distribution of participation points that existed immediately before to the attribution of participation points that are in question is used instead of the current distribution.

If the decision mechanism determines that the attribution was indeed erroneous or malicious, the participation points are taken back from the user that receives them and destroyed.

Part C. Decision Mechanism

What is the decision mechanism?

The decision mechanism is an algorithm that takes the votes of the users on any given matter, and automatically analyses them, in real time, in order to decide *which* decision should be taken and *when* it should be taken.

The inputs used by the algorithm to take a given decision, are

- The list of contributors who can influence the decision – this initially corresponds to the users that have contributed to the project, but can be specific of each goal of the project
- The participation points of all users who can influence the decision and their voting weight within a given goal
- The votes that users have cast at any point in time – these can be either **yes** or **no**.

How does it work?

When a decision object is created, users are allowed to start voting. To influence the decision outcome, users can vote 'yes' or 'no'. The platform will allow users to provide arguments in support of 'yes' and 'no' votes; or endorse the arguments that have already been provided by other users.

Users are able to change their vote at any time, but they must take into account that verdicts are reached – and hence decisions are taken – automatically by the platform with the available votes that have been cast at any point in time.

Once a verdict is reached and a decision is taken, the platform automatically executes the actions that derive from it (e.g. create a goal, mark a contribution as delivered and assign the participation points, etc.).

Why a decision mechanism?

One of the pillars of CollectiveOne is to enable fast collective decision-making. Typical quorum-based majority voting methods are too slow when the number of voters and decisions is large. *This is why CollectiveOne needs a sophisticated decision mechanism.*

The *decision* mechanism aims to take decisions more efficiently than traditional voting rules, by determining the point in which a verdict can be reached without the need of everyone's vote, and be statistically confident that the outcome is the same as the one that would have been reached if everyone had voted.

What is the intuition behind the *decision* mechanism?

The algorithm determines the point in which a verdict can be reached without the need of everyone's vote for two reasons:

- Informational value of waiting for additional votes diminishes with every vote, so, the idea is that, as more people vote, it it becomes less likely that the outcome will swing.

- The incentives to vote on a given decision do not have to be homogenous among all users, as they are concerned with different matters of a project.

It is expected that, as collective decisions become common, the most interested parties, on each decision, will be those actually *wanting* to vote and settle things. For example, for contributions about graphic design, perhaps only the votes of a few of the contributors who developed the user interface of the project will be sufficient to reach a verdict; and similarly for marketing, software development, and so on. The decision mechanism is able to handle this, and, at the same time, allow anyone to vote, if he or she wishes to, on any matter.

Implementation

TBW after new simplified algorithm is implemented

Part D. Intellectual property, licensing and data ownership

Intellectual property

The CollectiveOne platform simplifies tracking the intellectual property of its projects, because it provides an incorruptible record of every contribution and its associated author, starting from the project creation. CollectiveOne, however, allows projects to decide how to best use this record in order to distribute intellectual property rights. This is in line with the approach proposed for sharing benefits: there are not hard-wired rules about how to split benefits or intellectual property.

In the case of CollectiveOne as a project itself, the intellectual property of all the products created as part of its development (documents and code), will be owned by the platform, and will be therefore linked to the platform ownership, which is in turn distributed among its contributors proportionally to the participation points.

Copyright Licensing

The CollectiveOne collaboration method is open in nature. Consequently, it is natural to expect that hosted projects will want to make information open. Open access to project information should allow for external contributors to gather what they needed in order to propose meaningful contributions.

Open access does not mean, however, open-source licensing. As a starting point, CollectiveOne will keep legal copyrights to the intellectual property it generates, but, at the same time, give open-access to it. This can change at any time based on the will of the contributors.

Similarly to how the benefits and intellectual property are managed, the projects retain the freedom to chose the copyright licensing approach they prefer, in order to protect the products generated in the framework of their activities.

Data ownership

CollectiveOne proposes an ambitious approach to the management of data and its ownership: to offer the projects hosted in the platform a shared database to which every project contributes by feeding data, and receiving in exchange unlimited access – in all cases, strictly respecting user data privacy. This the current plan of CollectiveOne and is not yet implemented.

Each project is free to opt-in or opt-out of using this shared database. The database management is implemented as an independent project named CollectiveOne-DB, with its dedicated pool of participation points. Project that opt-in, receive participation points (their contributors) of the CollectiveOne-DB project in exchange for the data they contribute. This gives them proportional ownership and control over the data.

If data stored is private data of a project's user, CollectiveOne-DB will provide tools to give full visibility and control to each user on how its data is used within the CollectiveOne platform.

The extent to which projects will chose to share their data through CollectiveOne-DB is an open question. However, since projects in CollectiveOne are open and soft-owned, they may have strong incentives not to compete against each other, but rather cooperate, sharing data with other projects.