



Cooperative Ecosystem of
Financial Technologies

v2.7 [en]

0. Abstract

Ecofintech Coop is a cooperative and activist ecosystem in financial technologies (guerrilla fintech). Various participants including freelancers, collectives and companies will be able to collaborate via this autonomous decentralised space in order to apply blockchain technology to distributed digital governance solutions (DAO - Decentralised Autonomous Organization and DC - Decentralised Cooperatives) and exchange cryptographic tokens, focused on social and collaborative economy networks.

Ecofintech Coop presents a technological financial transition program for development of sustainable and resilient local economies with three purposes:

1. To achieve **self-management** and independence of workers.
2. To offer free and associative access to **liberated markets** from corporate monopoly and over-regulation imposed by governments in some national jurisdictions
3. Allow channeling of financial capital towards infrastructures of the **common good** and mutual property.

To achieve such ends we propose a tactical line of work for the participants in the ecosystem focused on education and advice for the purpose of forming local nodes offering technical financial services and the deployment of DLT (*Distributed Ledger Technology*) infrastructure on three axes of sovereignty:

1. Digital Infrastructure: hardware and open source software. **Digital sovereignty** and data privacy, decentralised governance.
2. Financial infrastructure: access channels and exchange of financial instruments and cooperative crypto-economic strategies on blockchain. Financial sovereignty.
3. Eco-industrial infrastructure: decentralised, sustainable means of production based on renewable energy resources as poles of attraction of collective investment capital (crowdfunding) towards the circular economy, mutual property and the commons. Economic and productive sovereignty.

1. Background

Ecofintech Coop was born as a conceptual idea in 2017 as a result of long experience in projects and networks of alternative economy, fair trade, international cooperation and agro-ecological and artisan activities.

The idea that leads us to design Ecofintech Coop is the transforming potential offered by the implementation of new technologies of blockchain (Internet of Value) and peer-to-peer networks distributed for use in the field of social economy, sustainable productive economy and socio-economic models that facilitate digital direct democratic governance and the development of financial sovereignty for cooperatives, associations, projects and communities. Ecofintech Coop provides field coordination for different initiatives that already exist or those that will be formed in the next years.

"Similarly, blockchain technology has enabled the emergence of new projects and initiatives conceived around the principles of decentralization and disintermediation, offering a new platform for large-scale experimentation on the design of new economic and organizational structures.

Blockchain technology: toward a decentralized governance of digital platforms?ⁱⁱ

Social Economy, according to CEPESⁱⁱⁱ, generates around 8% of the EU's GDP, and in countries such as Spain up to 10%, made up of more than 43.000 companies that generate more than 2.000.000 direct and indirect jobs. Effects of economic and environmental crises, as well as increase in mistrust in official control bodies, together with the progressive extension of decentralised and free-access technologies, present us with a future projection of growth potential of these alternative economic and social sectors. Increased expansion of small economies interconnected in digital social networks that are new economic spaces and displacing the old financial order can be assumed to create new models of more participatory democratic institutional management around them. This change will lead to appearance of new internal structures of digital democratic governance within social movements, among citizens and associations, as well as within small business sector dependent on provision of services related to these spaces. The proliferation of digital self-employment aligned with these sectors will be especially relevant.

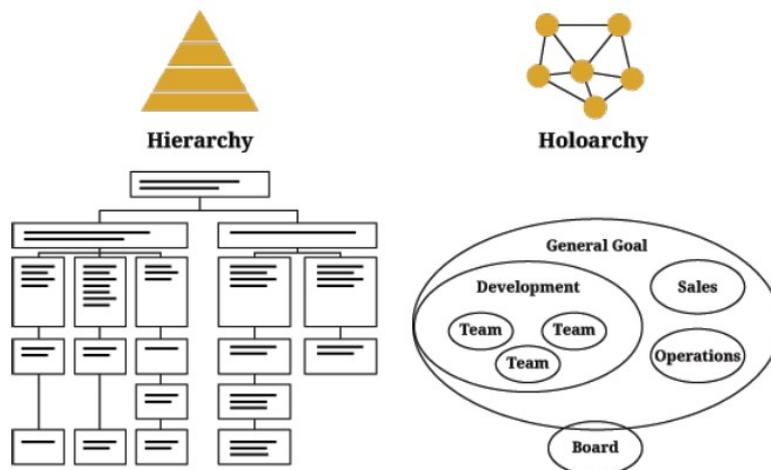
2. Structure

Ecofintech Coop is designed as a decentralised cooperative organisation following the most innovative and up to date engineering around systems of autonomous and distributed digital governance. The main models on which we focused our R&D (development and research) as inspiration for the construction of the Ecofintech Coop structure are:

- **DAO** (Decentralised Autonomous Organisation). Reference model: Bisq^{iv}.
- **DC** (Decentralised Cooperative). Reference model: Backfeed Economic Model^v.
- **DisCO** (Distributed Cooperative Organisation). Reference model: Guerrilla Translation^{vi}.
- **OVN** (Open Value Network). Reference model: Sensorica^{vii}.

The basic structure of the ecosystem is based on a holacratic/sociocratic cooperative entrepreneurial scheme, on which an organisational protocol of our own hybrid model will be developed. The final result will constitute an original value proposition for Ecofintech Coop, and the model that the ecosystem itself will offer and install in its applications of blockchain technology as a service for entities and clients interested in a transition towards these models (cooperatives, collectives, associations and ethical companies).

The self-administration and digital governance model put into practice by Ecofintech Coop serves as a template or reference for other cooperatives or entities, being a flexible model that allows its adaptation to the specific needs of each project. In addition, as we shall see, different entities will in turn build a common entity in the form of a cluster, business cooperative confederation or general DAO. An integral structure is presented in the form of an organism or, as we define in the corporate identity itself, an ecosystem.



3. Problem:

Small entities that carry out economic activities, whether cooperatives, associations, self-employed or artisans, entrepreneurs or small traders, face different barriers impeding their development and growth. This is especially the case of those initiatives which, instead of prioritising commercial business logic, prioritise the pursuit of a purpose. Instead of adapting their business models to what the market or demand dictates and seeking profit, they pursue capital solvency in order to achieve a social or cultural objective, preserve a traditional economic activity or develop an innovative idea.

Society as a whole would benefit if the main trend in business were to pursue ethical, cultural and cooperative goals. Eventually, these models have to compete with the trends dictated by the existing markets, controlled by the influence of large corporate monopolies that own media and have influence on political decisions and prices of assets.

In order to contribute to the development of an alternative model, these small entities must achieve financial independence, solvency and their own channels of exchange. To generate an own economical space.

We identify three main problems faced by small social and collaborative enterprises:

- **Financial:** due to lack of efficiency and commercial competitiveness, projects have liquidity and solvency problems.
- **Technical:** dependence of commercial services on intermediaries and oversaturation with advertising of different offers that generate barriers to access to the most appropriate technologies for each particular case. Lack of a proper digital infrastructure and lack of understanding of technological tools aggravates this dependence and causes inefficiencies in business operations and their incorrect adaptation to new conditions arising in the market.
- **Organisational:** The above problems are translated into limitations within business development and ability to redesign more competitive management models while maintaining and expanding the collaborative nature of projects.

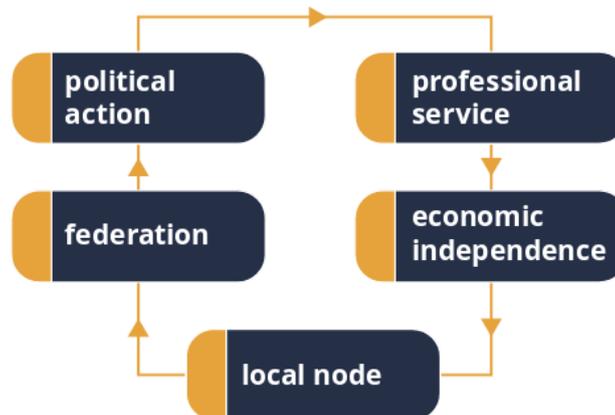
4. Solution:

Ecofintech Coop offers services in the following areas:

- **Education** for the extension of blockchain technology; **consulting** in the new field of crypto-economics. Conceptualisation and accompaniment for cases of use of financial technologies, use of CAD tools, p2p networks and consulting in encrypted and secure communications.
- **Facilitation** in the blockchain sector and available IT services offered by third parties and freelancers participating in the cooperative ecosystem or associates.
- Establishment of distributed and resilient hardware **infrastructure**.
- **Development** and administration of open source software for specific blockchain solutions (dapps). Development of tailor-made solutions for the formation of DAOs/DCs.

As part of the work plan around the described axes of sovereignty, the ecosystem will encourage the creation of local nodes similar to *hacklabs* and *fablabs*. These will be a local physical and permanent reference for entities and individuals interested in accessing this kind of knowledge and services. By organising workshops and meetings, we will carry out necessary training and promotion activities, thus building community and generating spaces for collaboration between different entities and initiatives.

Construction of communities will follow socio-technical design of SLOC^{viii} (small and local but open and connected), by means of which entities, organised according to DAO/DC models, simultaneously form new entities or DAO/DC clusters among themselves. These groups will internally benefit from collective intelligence and shared resources. They will be able to form a common corporate model to compete in the market and act as political/associative pressure groups against administrations and regulatory institutions, acquiring better conditions for the development of local collaborative and social economic activities.



4.1. Decentralized autonomous working sections:

The holacratic/sociocratic business model of Ecofintech Coop allows us to set up different sections on different axes, formed by different work teams and maintaining a common distributed management. Each section organises itself as an independent DAO/DC, with members acting as liaisons for intersectional coordination. The modular model allows new sections to be added as participants propose new conceptual ideas or specific solutions, both permanent and temporary. As we have previously analysed, Ecofintech Coop's structure will serve as a proposal and template for developing new decentralised CAD/CD cooperatives, with different sections and brands, adapting to specific needs in each case.



4.2. Collaborative Digital Tools

We use a variety of collaborative digital tools for coordination and communication between participants. Ecofintech Coop will promote the most appropriate digital tools and resources for collaborative work, both to entities receiving the services and its own core structures. We will pay special attention to the use of free software tools and encryption in communication, and decentralise the infrastructure as far as possible using our own servers, promoting spaces that allow participatory management and collective intelligence.

- Multi-platform community channels: Chat rooms connected by means of bridges between different platforms (Telegram messaging client, Matrix/Riot collaborative platform and the possibility of including IRC and others). The aim is to allow use of different servers in order to decentralize dependence and vulnerability of a single server and to provide anonymity or public identity of each member. Current research: [Zeronet](#).

Telegram: https://t.me/joinchat/lw2hxEoq_-vM2gB6q7EAO

Matrix: #ecofintech:matrix.org

- **Blogging, social networks and repositories:**

-Blog: <https://ecofintech.noblogs.org> (noblogs.org hacktivist server)

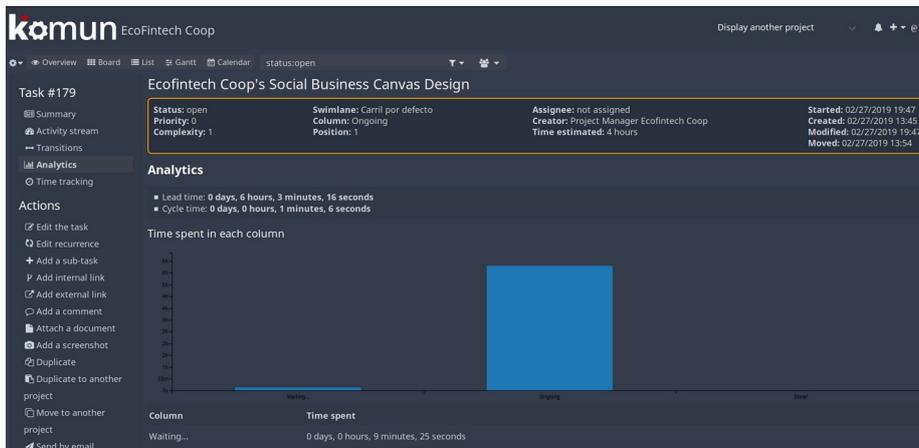
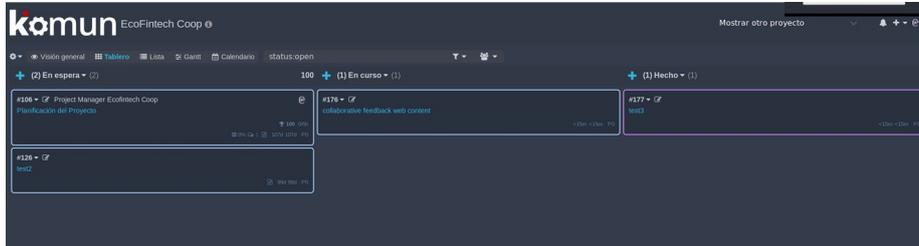
-Steemit: <https://steemit.com/@ecofintech>

-Twitter: <https://twitter.com/EcofintechC>

-Github: <https://github.com/ecofintech>

- **Collaborative Task Managers:**

-**Tasko** (<https://tasko.komun.org>) Among the free tools offered, we chose Tasko (Kanboard software, a service offered by our partners Komun) for managing internal tasks using Kanban methodology of efficient organisation.



Its control panel provides analytical and other teamwork tracking functions



Marked tasks and their progress appear in the social channels through another bot bridge. This way the community can follow the progress of the project, audit its correct execution and give feedback.

4.3. Tokenomic model for Decentralised Cooperatives (DC):

With the aim of developing full potential of the Ecofintech Coop project and at the same time offering a viable economic model that launches new decentralised cooperatives and open collaborative networks, we have designed a token-economic architecture that has the following functions:

- Bootstrap
- Mutual credit (open value accounting)
- Collective financing (crowdsale)
- Governance (DAO)
- Circular economy (digital currency)

By means of a consensual accounting of value for contributions to the cooperative space we will generate mutual credit with characteristics of monetary emission. In the initial start-up phase, the will participants receive cryptographic tokens in the form of credit for hours of work contributed (Proof of Value) or deposited capital. In this first phase the token has the characteristics of shares in crypto-equity.

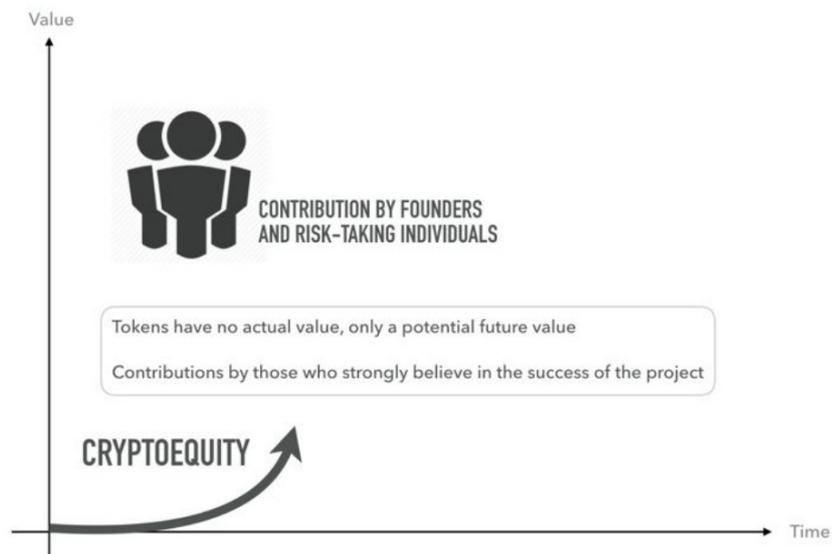
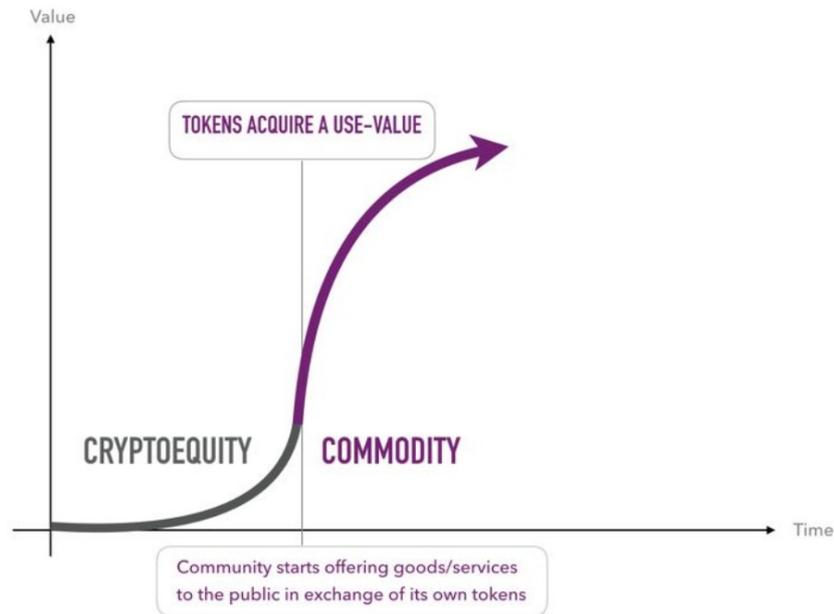
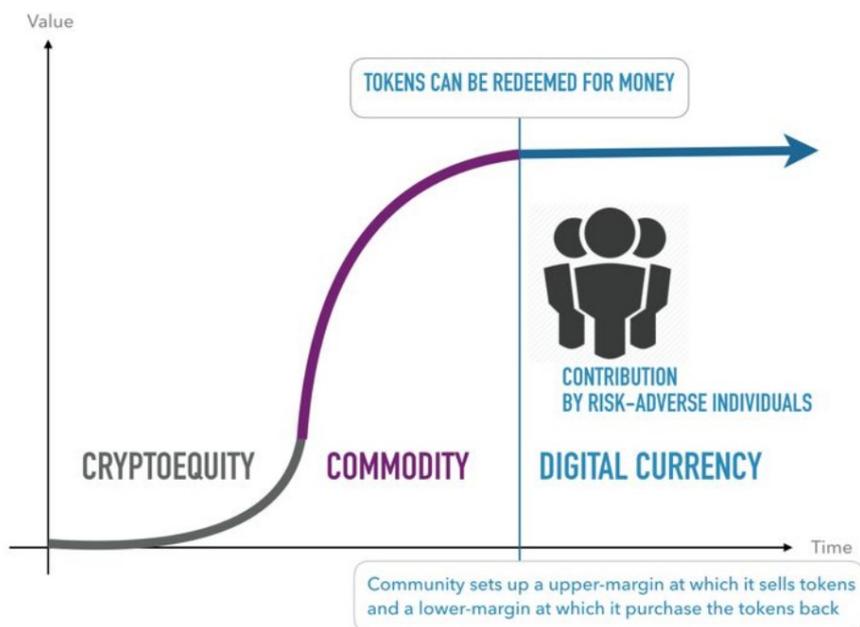


Image taken from the Backfeed Protocol white paper.

Throughout the second phase, the token will be used to access ecosystem services (utility) and will be listed in decentralized exchange houses. In this phase it will acquire commodity characteristics. It will also give rise to the appearance of an entry channel of external financing in the form of investment in currency supply (crowdsale).



In its third phase, once the ecosystem has consolidated and has started to generate its own liquidity reserve, the decentralised cooperative will offer an internal exchange point to redeem the token for cash. In this phase the token will acquire a clearer function as a bargaining chip and begin to stabilise its value thanks to upper and lower margins set by the ecosystem participants based on market research. Faced with speculative movements that generate rise in the price of the token in the bubble, the ecosystem will emit more money to the market, absorbing the surplus capitalisation. Faced with possible price falls, the ecosystem will mark a lower margin for repurchase. This way decentralised cooperatives acquire sovereignty over their own currency (digital currency), being able to relate to each other using a variety of tokens issued by different entities in the same trust network, giving rise to a true circular economy.



4.3.1. Commons Oriented Distributed Governance Protocol

The decentralised cooperative governance system allows us to adapt corporate DAO tool to open value accounting and mutual credit model for decentralised cooperatives (DisCO and DC). Decision-making on issues concerning jointly managed funds, as well as the minting or burning of mutual credit and reputation tokens, will be determined by the contributed working relationship and supervision of the community itself. In a distributed cooperative organisation and open value network we classify work into three categories:

- Commons oriented work .
- Subsistence work.
- Care or reproductive work.

Participants in the ecosystem will be able to carry out pro-common tasks based on their own initiative, contributing voluntarily to the growth of the project and the extension of its services for the common good. The subsistence works will be those imperatives for the development of the economic activities of the cooperative, previously entrusted from the circle of direction. All token assignments will have to be approved by the participants using the DAO voting tool.

As care or reproductive work we understand those tasks that are fundamental for the reproduction and good emotional health of the project, as the Feminist Economics^{ix} theory teaches us. Care work in the ecosystem is that of carrying out special effort or extra work in addition to subsistence or pro-common work. This is to say, organisational tasks more related to concretions, to making connections, and dealing with emotions that normally go unnoticed because they are difficult to measure and quantify by the means of culturally masculine methods, such as accounting, analytical thinking and productivity.

Commons oriented and subsistence work is rewarded using a work time accounting token with monetary characteristics in the form of distributed digital accounting of mutual credit. Participants will be able to exchange their tokens among themselves for goods and services, as well as access liquidity through the cooperative's decentralised internal exchange point (tokens received redeemed by the CD are "burned", thus decreasing their amount in circulation).

The process can be carried out directly or through exchange houses. Its price, although initially determined by the co-operative's consensus, may increase as the co-operative revalues (offering a higher exchange rate per hour worked) and market demand for the token/participation increases.

The cooperative's common funds, obtained through the benefits of its economic activity, are used to offer change to participants who receive working time tokens and require cash settlement:

- 75% destined to exchange for subsistence jobs.
- 25% destined to exchange for commons oriented work.

The decentralised cooperative will design mechanisms to encourage the issued token to remain in circulation rather than being liquidated, for example by charging exchange fees or offering a token support bonus. The very loss of voting capacity due to token liquidation will create a balance, encouraging participants to avoid liquidating all their shares for cash, thus extracting value from the circular economy.

A non-exchangeable token with functions of reputation and meritocracy will be used as a record of the care and reproductive work provided.

The relationship between both tokens, working time and care work, is equivalent to the weight of decision in the cooperative's decision-making processes, carried out using the voting DAO tool (Vote Weighting Holistic Protocol, see Tokenomic Whitepaper).

Different decentralised co-operatives acting in a trusted network within the same federation will ideally be able to use their mutual credit tokens to obtain goods and services from each other.

4.4. Confoederatio Platform

We set up an infrastructure blockchain of governance and exchange in order to interconnect and allow self-administration, both of them making up Ecofintech Coop, as well as of the different entities that in turn give rise to the confederated groupings or clusters. This infrastructure offers the DAO+DEX (decentralised exchange) functions of its own configuration, Confoederatio Platform. (Digital Infrastructure Axis and Financial Infrastructure Axis).

It is presented as the main development work of Ecofintech Coop and as a basic pillar on which to extend the network of nodes of the cooperative fintech ecosystem and associated independent actors. Within this structure, Ecofintech Coop is yet another federated cooperative, although it will maintain its own function of administration and maintenance service of the infrastructure as the technical-financial cooperative of the system, as well as functions of promotion and education for members of new decentralised cooperatives as described above.

The platform will promote establishment of fair and federated trade relations by creating an alternative digital economic space based on common values of decentralisation, fair business, sustainable economy, transparency, democratic autonomy and free market. It will enable creation of internal federated and OTC markets. At the same time it will act as a common unified corporate body for the global external market, allowing collective issuance of a variety of tokenised financial instruments.

The Confoederatio platform will be deployed using RSK Rootstock technology in order to offer the highest standard in security, decentralisation and resilience thanks to Bitcoin's mining infrastructure.

More info: <https://ecofintech.noblogs.org/post/2018/10/28/confoederatio-trade/>

The Confoederatio platform was selected as one of the finalist projects in the 1st edition of the Ledger The Venture Builder for Human Centric Solutions competition.



4.5. Pilot projects

From Ecofintech Coop we will develop several pilot projects of application of blockchain technology following the described model. This will be the beginning of the activity of the cooperative ecosystem of financial technologies, and will allow us to put the working model and methodology into practice, connecting the first DC entities that will create the federation under the Confederative platform, accompanied by Ecofintech Coop. It will also allow us to elaborate the first leaflet showing the variety and projection of services offered by the cooperative fintech. The first pilots are ideas launched by members participating in the ecosystem that have been taking shape following our technical-financial advice and conceptual design.

Complementary services such as [Ecophone](#) (hardware marketplace) as well as complementary services offered by participants are offered to all pilots.

See our [Projects](#) section in our blog for more.

5. Why Blockchain?

Blockchain technology allows us to create distributed value networks, ensuring that small entities previously isolated and absorbed by the trust money system now become nodes of a global network in their own economic space.

We can see a trend of transitioning from hierarchical organisational models to collective and decentralised models. Digital technologies and networks have marked a momentum in which new actors and entities can benefit from greater flexibility and organisational efficiency to undertake projects competing with and replacing conventional organisations. Hence, their value systems and the egoist market dynamics they have developed can also be replaced.

The "internet of value" will allow us to generate these new collaborative economic spaces and establish protective membranes, carrying out an effect of value transfer from the outside - the global capitalist market - to the inside - the cooperative social economic space itself^x. The entities and nodes participating in the network will thus have new tools and digital financial instruments at their disposal that will enable new forms of economic growth and establishment of circular economy systems.

- i This strategy is part of the Economic Democracy proposal. See wikipedia: https://es.wikipedia.org/wiki/Democracia_econ%C3%B3mica
Specifically, three development axes coincide with three main characteristics defined by Scheweickart:
 - 1. Workers' self-management: Each productive company is democratically controlled by its workers.
 - 2. Free Market: These companies relate to each other – and to consumers – in a system that does not normally have price control by the State. Raw materials, means of production and goods (assets) are sold and bought at prices generally determined by the law of supply and demand.
 - 3. Social control of investment: funds for new investments are returned to the economy through a network of public investment banks (in this case the networks replace banking institutions, although ideally the nodes could form credit cooperatives or other fiscal figures).
- ii Academic research work carried out by Primavera de Filippi and Xavier Lavyssi re for the Centre d' tudes et de Recherches de Science Administrative CERSA, Universit  Paris II and Le Centre National de la Recherche Scientifique CNRS. Full text available at: <https://ecofintech.noblogs.org/post/2019/04/18/blockchain-technology-toward-a-decentralized-governance-of-digital-platforms/#more-393>
- iii Confederaci n Empresarial Espa ola de la Econom a Social <https://www.cepes.es/>
- iv Bisq: <https://bisq.network/dao/>
- v Backfeed Economic Model: <http://backfeed.cc/assets/docs/BackfeedEconomicModel.pdf>
- vi DisCO: https://wiki.guerrillamediainitiative.org/index.php/Commons-Oriented_Open_Cooperative_Governance_Model_V_2.0
- vii OVN: http://wiki.p2pfoundation.net/Open_Value_Network
- viii See “Ezio Manzini: Diffuse Design”: <https://medium.com/@allisonyhuang/ezio-manzini-diffuse-design-85421b79490>
Also “Small, Local, Open and Connected: Resilient Systems and Sustainable Qualities”:
<https://designobserver.com/feature/small-local-open-and-connected-resilient-systems-and-sustainable-qualities/37670>
- ix Feminist Economics: https://en.wikipedia.org/wiki/Feminist_economics
- x “Transvestment”: <https://wiki.p2pfoundation.net/Transvestment>