

BlockRate

a market-place for ICO-ratings

- Short paper -

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Base Concept

BlockRate is a smart contract facilitating a **market place** for ICO-rates with DAO governance.

The smart-contract allows raters to sell their rates to users (ICO Investors) in a peer-to-peer fashion. Users commit to a subscription plan set by any individual rater. The BlockRate signal-finder DAPP allows any investor to search for her/his individual signals within upcoming ICO's to suite her/his own investment style.

Motivation

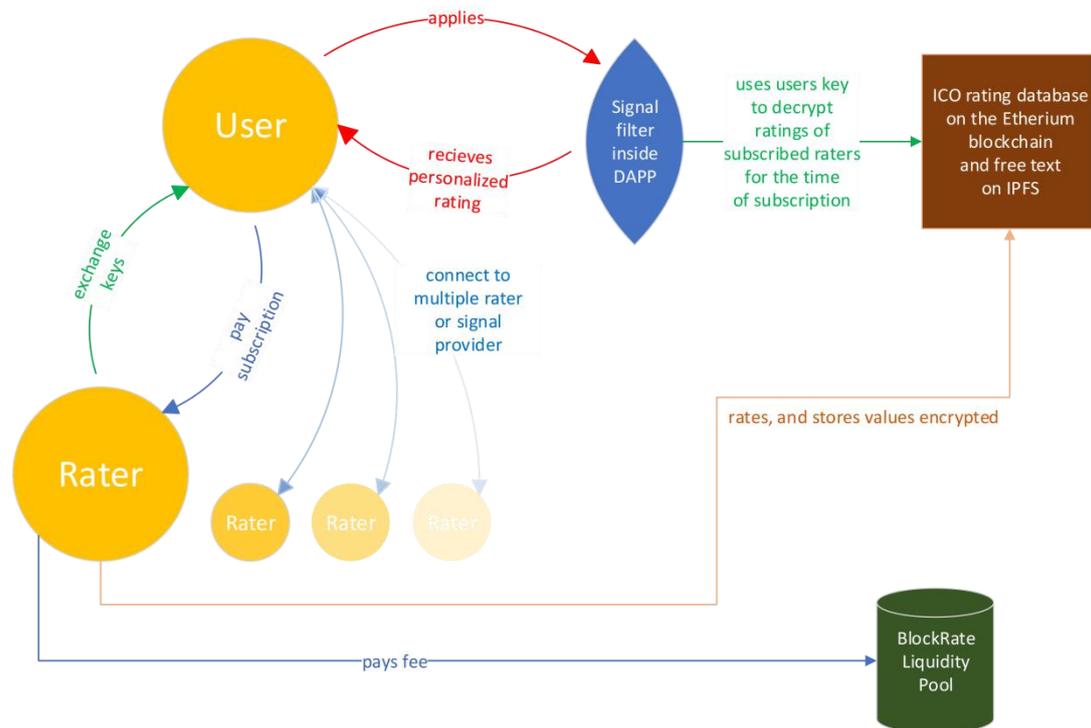
Once raters generate enough income from users there should be no reason for raters to seek compensation from ICO's, which is resulting in the solution of a conflict of interest that we see often these days. By facilitating a market where users pay for rates, raters with better and less biased rates will attract more user (hence income). The intention of BlockRate is to incentivize for better quality and less biased ratings. Which ultimately results in a cleaner ICO market, where investors have better vision on the quality of DLT-projects in the market.

Governance

To make sure that the market-platform itself is not biased, BlockRate should not be owned by any individual or minority. Therefore BlockRate is designed as a [DAO](#) (Decentralized Autonomous Organization) with a voting-based governance system in which all token holders together decide how the platform develops.

To underline that statement BlockRate will issue no founder-tokens.

Rating market-place

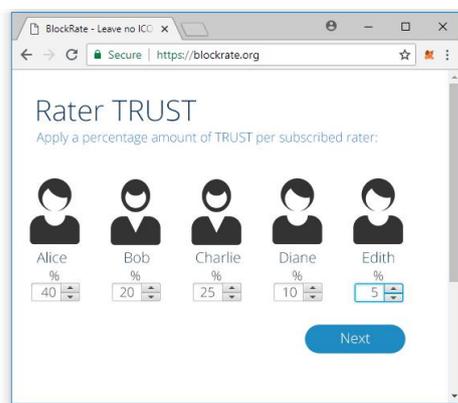


Raters rate ICO's based on a system-set evaluation-matrix of about hundred different evaluation-points. Additionally, raters can also fill in free-text, charts and images to individualize and create further value for their ratings. Once the rater submits a new rating through the DAPP, the rate itself gets written encrypted onto the block-chain, while the free-text and images will be written encrypted into IPFS. Because the complete rate is now encrypted, only the rater 'owns' her/his data. Raters can now create market offers for subscription periods along with pricing.

Users interested in a raters rates can then send a subscription-request to a rater by transacting the subscription fee. In return the users DAPP receives a custom-made key from the rater that allows only the specific user to see all rates done by the rater. This trade will be facilitated by a smart contract. Token holders (raters as users) get identified through Metamask wallet, thus installation of Metamask is mandatory.

User Perspective

Users can see raters reputation¹ through the DAPP and can search and select for certain type of raters. They can also search for active or upcoming ICO's and see which raters rated it. Users can leverage the risk of 'listening to the wrong rater' by subscribing to a multitude of raters.



After subscribing to several raters, the user can set the TRUST-level for each rater. This reflects the users confidence in the raters ability and sets the weighting for the volume of the rates of the raters towards another. Signals from raters with higher trust value will be listed higher.

In the next step users can set their individual evaluation preferences. They review all evaluation points of the rating-matrix and set which points they are more or less interested in. This will then reflect the users personal investment patters in the rate-interpretation process.

The final result for the user is a list of upcoming or ongoing projects (ICO's) of all rates conducted by the subscribed raters prioritized for the user based on trust for the rater and

¹ Find details in section 'Reputation System'

personal investment preferences.

Any user can generate an infinite amount of lists with different properties without paying extra fees as long as there is at least one rater's subscription period active. Within the final output list users can click on any item (ICO/project) and can then see the individualized rates of all subscribed raters who have evaluated the respective project. This is where additional free-text or images that the rater has annotated makes a difference for the user.

Raters

Whether individual or company, any token-holder can start rating projects (ICO's) at any time. Purely the market decides who sells better than others. Raters have the option to stay anonymous (just a wallet address and user name) or they can present themselves transparently in their public profile within BlockRate. Raters can also choose to indicate whether they are invested into any rated project or actively participating (advertiser, adviser a.s.o.) in the project to indicate biasedness to the users. Some users may appreciate a maximum of transparency and may be willing to pay higher fees for more unbiased rates. Also raters with a high reputation outside of the platform will want to try to convert existing followers to subscription-users on BlockRate. Referral incentives may enhance user adoption.

Signal Providers

Signal providing services (centralized as decentralized) can offer their signals the same way as raters do. The only difference is that they don't sell complete rates, but only individual signals that the user can utilize inside their DAPP to filter for the best ICO to invest in.

ICO Registration Process

How do new funding projects get into BlockRate? Basically, any token-holder can submit a new ICO to the database. It is expected that projects will be signed up either by raters who found new projects or the projects themselves. In the process of rating projects after first entry, the raters will be asked to research some of the entered base values of the ICO. A smart contract will then compare the first entered values with the checking-values from the rater and flag any discrepancies. BlockRate will pay direct premium to users/raters who sign up new projects, and as well the first n rates on new projects.

Reputation System

To give users the option to evaluate raters before subscribing to them, BlockRate employs several different mechanisms for raters' reputation.

- a) Raters own Profile
gives an introduction into raters' work and motivations on their profile page, refer to their own (centralized) services or web-pages. It is encouraged but not mandatory for the raters to reveal their real world identity.
- b) Commitment to 'non-kickback clause' and/or 'non-invested clause'
- Raters can choose to guarantee that they did/will not receive any compensation from projects they are rating. This is a global commitment over all rates that the rater does on the platform.
- Alternatively raters can indicate if and how high they are invested in the projects they are rating. (Point b) only adds value if the rater also chose to reveal their real world identity, because then the contract would be enforceable in a real-world court.)
- c) Amount of Subscribers
will be indicated to give users a sense of the popularity of a rater.
- d) User 'Trust' towards Rater
Users are setting the trust level of each subscribed rater in their DAPP. These values will be anonymously submitted to a (centralized) server that writes the daily values for each rater on the block-chain. This value gives users insight about the trust that users put into a rater.
- e) Amount of rated projects
indicated will be both the amount of all projects rated and the amount of currently active projects. The numbers are 'clickable' and lead to a list of these project names.
- f) ICO-gains Predictions
attached with every rate raters submit, they are also asked to predict the future value of the coin. These predictions are made for particular time frames (for example 'when the coin gets listed on exchange', after 1 month, after 3 months...). When these events fill, an oracle will be called and the results will be compared by a smart contract with the predictions. The closest raters will earn prediction-points.

g) Labor for the platform

several types of contributions to the platform will be rewarded with reputation points. Those include signing up new ICOs, reviewing input data or being one of the first n raters to rate a new project.

h) Reputation Score

b) to g) will be combined by an algorithm and result in a score that will be seen as a number next to the raters icon. Negative influences on the reputation score are: faulty information during ICO-sign-up, getting flagged by users or curators for bad conduct and user complains.

Platform Fees

A fee that decreases over time with the increasing amount of overall platform-transaction-volume occur for the rater when a user subscribes to their rates (transaction). Funds will be transacted from user to rater directly through the smart contract and pushed into the DAO's liquidity pool.

Gas Fee

Users and Raters will need to pay their own Ethereum Gas fee when transactions occur, since the platform is built as a DAPP on the Ethereum block-chain.

Transactions are:

- User submits subscription request to rater
- Rater confirms subscription request
- Rater submits a new rate or new project to the block-chain
- User votes

In case a user commits her/his signal finder to receive a rating reading through the DAPP, no gas fee occurs, which means that the user can tweak her/his filter settings as often as she/he likes within the subscription period without paying any gas.

Currencies

BlockRate utilizes two different currencies.

RATE tokens are security tokens and represent the value of BlockRate. RATE will be minted during the ICO when the DAO contract is published the first time on Ethereum's Mainnet.

ETH will be used for all service payments within the rating platform. ETH will be less volatile than RATE tokens and therefore be of more use for raters and users as an exchange of value. For long-term it is recommended to employ a decentralized stable-coin for all payments within the platform. At the time of writing the development team is not yet convinced that any of the stable-coins available today is technically or financially 'usable enough.

Platform Development Plan (Roadmap)

Month 1-3	System Architecture, DAO Design, Governance, first code tests for DAO
Month 4-6	Legal pre-evaluation, preparation of investors pitch, connecting with potential partners
Month 8	SEED Investment through private sales as SAFT. (high risk, because legal hasn't finished the evaluation of the DAO, yet)
Month 9-11	Legal Evaluation of DAO and Rating, Dev-Team Building, Setup of BlockRate Foundation, onboard selected influencer and rater to trial and feedback early test versions of MVP.
Month 12	Small ICO (20% of ICO Token) funds will be used for Marketing and Community Building
Month 12	Test-Version goes on test-net, Community Building, Code Auditing and Marketing for ICO Release of the smart contracts on the Ethereum main-net along with BlockRate's own ICO. ICO will fund the treasury of the BlockRate DAO smart contract directly.
After ICO	DAO will vote for Curators, DAO will vote for roadmap entries, DAO needs to enlist on exchanges.

Governance through Decentralized Autonomous Organization (DAO)

To insure the platform is always free of conflict of interest as well as minority opinions, BlockRate is built on a DAO core structure, through which token holders vote for decisions of BlockRate's development. To insure a most wide-spread and equal distribution of voting power, wallets are restricted to a maximum of 3% of overall voting power, even if they hold funds greater than 3%. A second approach to spread distribution is through whale protection during BlockRate's own ICO.

Although, the DAO is only a smart contract on the Ethereum block-chain, it competes in a dynamic market. To keep being competitive and insure development the DAO outsources work. This can include code development, marketing, bounty-programs, legal and many other tasks and services BlockRate may need.

The DAO will employ (and pay) CURATORS to function as gate-keeper for the community towards these suppliers. Curators are elected, stake incentivized and community controlled. Their main role is to check suppliers work proposals for code fraud. Curators also protect from other attack-vectors and mediate between token-holder in dispute on the rating platform.

After a supplier's smart-contract is checked positively by curators, it will be put out for vote within the token-holder community.

Suppliers who need invoices for taxing will bill the DAO through it's real-world equivalent the 'BlockRate Foundation'.

The DAO utilizes 3 contracts as Treasuries. ICO-RESERVES are the collected ETH of the ICO. These funds stay locked

and are for special, larger work proposals which have to go through special votes and approval to be released. Projects like these could be for example to develop a larger code upgrade for the rating platform or the development of a new (desktop/mobile) client.

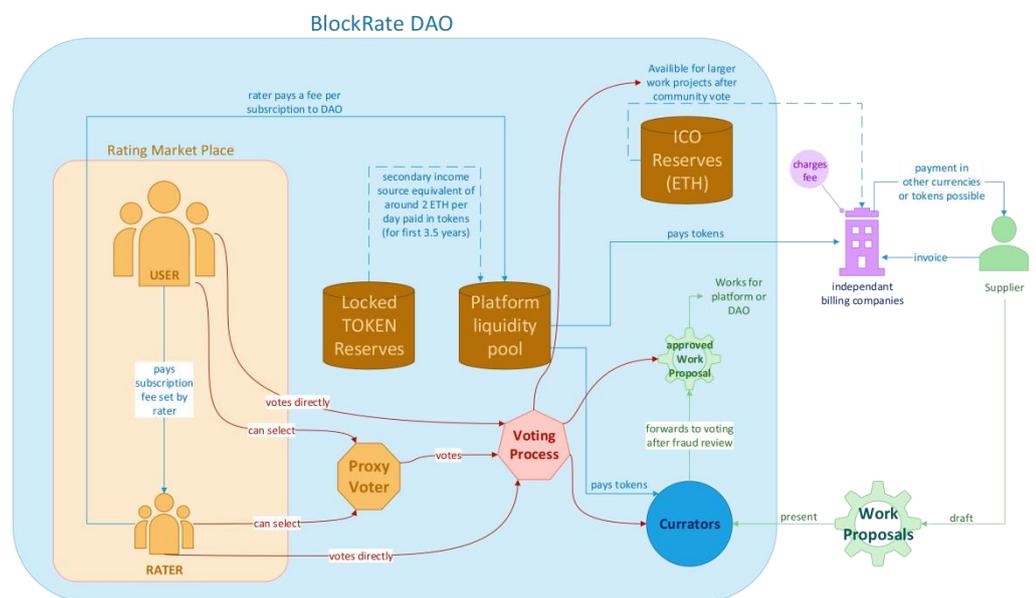
LIQUIDITY POOL is the daily household wallet of the DAO where income from the raters is collected and payouts to the curators and suppliers are made.

LOCKED TOKEN RESERVE is a simulated secondary income source for the DAO. 16% of tokens are locked here at ICO. Every day an equivalent of about 2 ETH in token will flow from reserve into the liquidity pool, as a second income source. This lasts for roughly 3.5 years. Until then the user base has to be matured for the DAO to run profitable without the token reserve.

DAO Governance insures that the platform stays unbiased and free of single opinions. There are no founders, no C-Level team and no owners of the platform other than the token holders themselves.

Smart Contract called 'Roadmap'

Because BlockRate DAO is a leaderless entity investors and users will have a hard time to recognizing what the future of the organization will be. Therefore one of the smart contracts involved in governance will be designed for roadmap-entries. Those have to be voted on by the token-holder-community, and they define directions of development of the organization. The entries will visible through the DAPP to all token-holders. Roadmap entries are also part of the security protocol for the ICO-funds that will be locked in the DAO-treasury. Before a larger sum can be paid out to a supplier the undertaking has to be written for at least 6 month onto the roadmap.



Development Team

Before BlockRate's own ICO there will be a centralized development team that will setup and launch the smart contracts. During this phase decisions will be taken by the development team with the support from a growing community. Once BlockRate goes main-net all decisions will be taken by community-votes through the DAO. The development team has declared that it will not receive any founder-tokens to insure that the DAO will in fact be operated entirely by the community. From ICO onwards the development team is no longer able to take any decision for BlockRate. The development team will be available and happy to consult the DAO in case of any questions around design, code and governance in case the community wishes that. The development team spent about a year of full-time work into BlockRate and in return asks for a one-time payment of 15% of the ICO-collected funds after the ICO is completed.

The development team consists of the following people:

Marten Rauschenberg ([LinkedIn](#))

is a serial entrepreneur with history in system architecture and media. In the BlockRate-Project Marten has designed the governance and the rating platform system, as well as taking care of media and funding issues. He also discusses legal.

Thorsten Schmitt-Rink ([GitHub](#))

is a senior developer with 15 years background in He wrote the smart contracts for the ticketing ICO eventchain. Within the BlockRate-Project he is responsible for overseeing the developer base, code-auditing processes and implementation of the MVP as well as the final contracts.

Carl-Luis Rieger ([LinkedIn](#))

is working as VC-analyst and sees dozens of startup's every week. He came up with the idea to build an application that sheds more light into the ICO-market. Carl-Luis is involved in designing the evaluation matrix of the rating platform. He also brings valuable insights to all documentation and contractual issues to the table.

Legal

Even though the DAO and the rating platform are trust-less entities it is difficult, if not illegal, to operate them without a real world equivalent. The development team for BlockRate decided to setup a foundation in Germany to fulfil the need for a real-world entity. The key-reasons are:

- The BlockRate smart-contracts get a real-world legal equivalent WITHOUT getting single ownership. The benefiting point in a foundation setup under German law is that the foundation does not need to be owned by anyone, which relates elegantly to the nature of a smart contract.
- The foundation can handle taxation for the smart contract. Without a setup like this, the investors of a DAO are legally the ones who have to tax the DAO with their own investment percentage, which is not intended.
- German government tax offices usually only care about money in wallets (because only those got legal representatives in the real-world). But during the ICO, the investment will be send from investors wallets into the DAO-smart-contract and stay there for potentially long time. For many countries governments this will smell like money-laundry (because the money is sent into a non-ownership-black hole form legal point of view). But with a foundation owning the DAO, the funds are orderly accounted within the foundation, which makes the undertaking legal.
- Even though the foundation is legally the 'owner' of the funds within the BlockRate smart contracts, the foundation will not be able to spend any of these funds without the community, because the DAO has to vote among the token-holders in order to send funds out of the smart contract.
- If the DAO is represented by a foundation, the foundation can be billed by suppliers without additional layer systems making taxation, and real-world contracting much easier, as most companies cannot write an invoice to a smart contract and make it tax valid.
- Building a foundation is going to make the setup more centralized, but ultimately, it makes the operations of the smart contract legal, and should therefore be in the interest of all involved stakeholders (users, investors, advertisers and raters alike).

COMMUNITY

BlockRate is built for its users by users. Key motivation is to bring the advantage of the platform to as many users as possible. The DAO structure insures that the community not only uses the platform, but also governs it. Building, engaging and maintaining this community is key.

Raters

The key motivation for raters to rate on BlockRate, is to gain reputation and actually earn tokens by user-subscriptions. Raters earn when users open a subscription with them. The price of the subscription is set by the rater. This incentivize the rater to attract their followers (that she/he may have outside of the platform) onto BlockRate. At the same time, the rater will also try to increase rating quality and reputation to attract even more users within the platform.

Blockchain Associations

BlockRate, even in its infancy already got interest signalized from several big block-chain associations to cooperate. These associations are looking for solutions how to self-regulate the market as an alternative to hard-regulations by governments. Offering an affordable tool to ICO-investors that detects fraud and signals for good projects is a common goal that BlockRate and these Associations share and that can be built upon in the future.

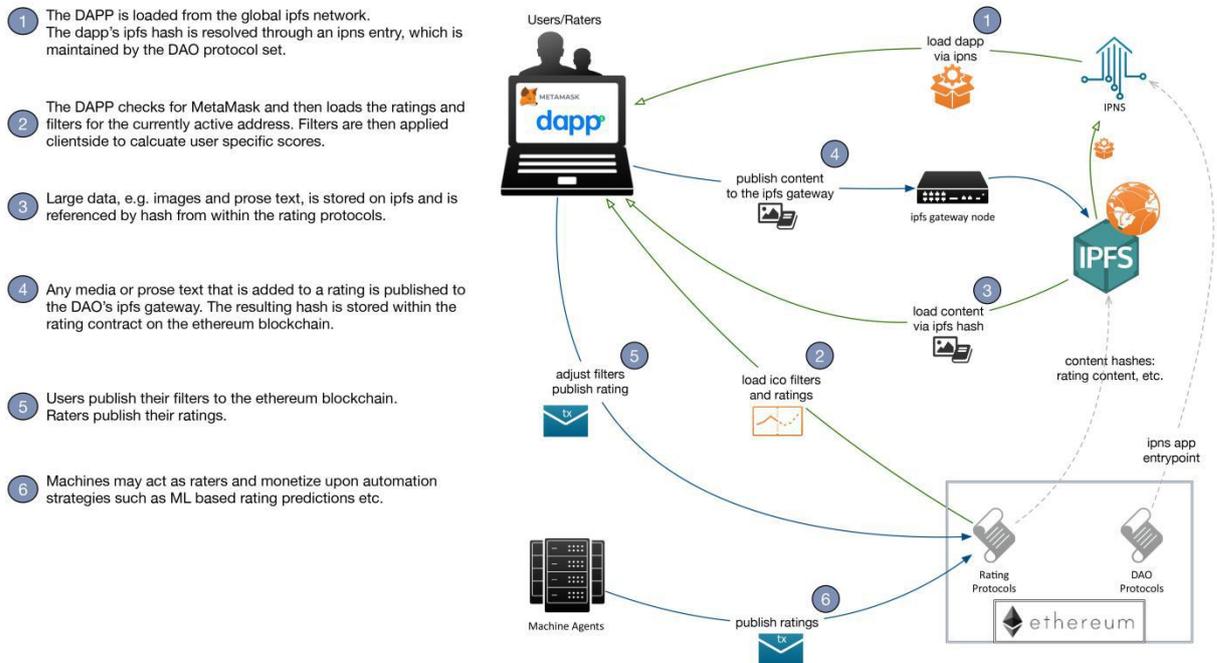
User

To users (ICO-investors who wants good ratings) the service provided is quite attractive. Among the above mentioned there are these two main USP's: *Independent ratings* and *personalized signal search*. Besides this the BlockRate will run an affiliate program, a marketing-bounty-program and a KOL/Influencer campaign. Also the help from above mentioned Blockchain Associations is expected to help user on-boarding. On top of all this, the pricing for users is much more attractive than known centralized commercial competitors.

TECH

BlockRate will run as a browser based [DAPP](#) (Decentralized Application) on the Ethereum Blockchain.

BlockRate - ICO Rating platform: Coarse grained architectural overview



Development road-map allows for development of the DAO Protocols first. Secondly, the DAPP. Once the DAPP is deployed on the test-net a bounty-based crowd hack/development will start to perfectionize the software for it's main-net start.

The development of a client-based DAPP is possible and need to be voted onto the DAO road-map agenda by the community after the browser-based client is online.