

Supportroops: Crowdfunding Using Blockchain

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Abstract- After the COVID-19 pandemic hit across the globe, the economy of most countries got tampered. Since then, online engagement is at its peak and people discovered social media as a new weapon to invest and promote their business and skills. This led to the advancement of a potential concept of funding, known as crowdfunding. Crowdfunding is an online fundraising system that started as a route for common society to give modest quantities of cash to help innovative people, start-ups, NGOs, charity to fund their activities. Crowdfunding these days mostly raise funds for business start-ups, because it is relatively inexpensive and uncomplicated in nature. The use of social media platforms to connect investors with entrepreneurs is used to raise capitals. Hence, social media and internet plays a vital role in raising funds through such a medium. Blockchain as we know is the foundation of cryptocurrency. In the future most technologies around the world are expected to use blockchain to make secure online transactions. Crowdfunding is one such area where blockchain can be applied so that the common problems people are facing with regards to crowdfunding such as frauds and non-regulated campaigns can be resolved.

Index Terms- Crowdfunding, Cryptocurrency, Blockchain, Ethereum, Smart Contracts.

I. INTRODUCTION

Everyone might have come across little children on streets begging for food or money. These children barely have good quality of clothes on their body, remain hungry most of the days and education is a luxury they can't even think of affording. When our group encountered such children near our college campus, we thought of helping them.

We contacted some NGOs and similar organizations nearby and noticed how crowdfunding is widely being adapted by people to raise funds for NGOs and other purposes also. Although some people are still not sure about the working of crowdfunding platforms. After doing some research on this we came to know about the common problems faced by people. These include how most of the crowdfunding platforms are not genuine, and the projects remain incomplete. We saw this as a social problem and came up with a solution which will provide a technical edge to mend the problems faced by people. Hence, we thought of building/ developing a Crowdfunding Platform that facilitates donation over Cryptocurrencies.

Crowdfunding is a process of raising small amounts of cash from groups of individuals. Businesses and products that may have otherwise not been capable of raising capital are often the most successful on crowdfunding platforms. Supportroops provide a platform for businesses, entrepreneurs, NGOs, and customary people to host online fundraising campaigns with the assistance of blockchain technology which may be of any nature (non-profit cause, personal cause, business related). It'll be a

donation based crowdfunding platform which can be used for charitable initiatives, social causes and businesses can cash in from the platform as well. This can be an excellent option for non-profit organizations and businesses that have service-based initiatives. Crowdfunding, despite having many advantages has several flaws too. Like increased number of fraud cases, delay in the completion of projects, campaign initiators cease communicating with their backers and not delivering the promised product. To improve the current flaws in the crowdfunding system, we implemented blockchain technology that can be defined as a combination of several structures that store transactional records (blocks) in several databases, known as the chain in a network that is connected through peer-to-peer nodes.

The security of the crowdfunding platform is increased by the implementation of smart contracts, which basically runs on blockchain. They are stored in public databases and cannot be changed as the transactions that happen are processed by the blockchain; they can be sent automatically without a third party. The transactions happen only when the conditions are met according to the agreement, and since there is no involvement of a third party, the trust and security issues are much lower. Hence smart contracts are decentralized because of blockchain and hence the transactions taking place within the crowdfunding platforms will not be controlled by central bodies like the bank, broker, etc.

Our crowdfunding platform will also enable the conversion of the donations made through different cryptocurrencies into stable coins. Stable coins are basically a form of cryptocurrencies that limit their market values to some extent. They are useful as they are very less volatile than other cryptocurrencies and provide price stability by maintaining reserve assets through algorithmic formulas that control the supply.

II. PROBLEM DEFINITION

People always have been insecure about the risks crowdfunding platforms come with. The most common problems they face are most of the campaigns around the world are not regulated and some of the crowdfunding campaigns turned out to be fraud. Besides the completion of some projects was significantly delayed. To solve the above listed problems, we came up with the solution as our project. Crowdfunding Platform that facilitates donation over Cryptocurrency.

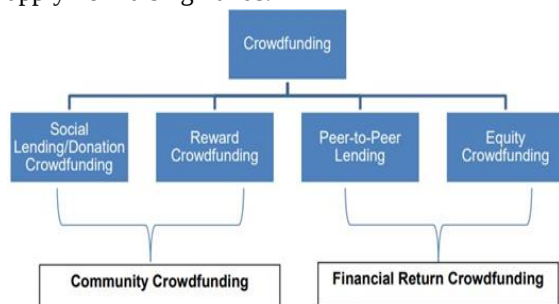
III. LITERATURE REVIEW

As a result of existing literature research on crowdfunding platforms, we have concluded that there is always a trusting relationship between the

product team and the supporters. This type of system is known as a centralized crowdfunding system. In this type of system, product team funding is paid based on the progress of the project. That is, when the event is over, the sponsor pays. In return, supporters expect their discoveries to proceed to the right project. Or, if the project crashes prematurely, they regain the discovery from the product team. The crowdfunding platform acts as the middleman by taking considerable charges from both the supporters and product team. Hence, this maintains the risk factors like project might not get completed, supporters may claim not to support the project further.

Blockchain Revolutionizing Crowdfunding:

Crowdfunding is steadily growing as an alternative to venture capital financing. A growing SME allocates the type of funding that an investor provides to a start-up or SME. Meanwhile, blockchain is gaining momentum around the world. When such a concept is combined with the most innovative financing concepts that are on the road to becoming viable in a startup culture. Crowd Funding is the extreme of venture capital financing. It is growing steadily as a good alternative. Non-traditional projects are attracting a new audience to apply for raising funds.



Source: IOSCO Staff Working Paper - Crowd-funding: An Infant Industry Growing Fast, 2014

IV. REVIEW OF EXISTING MODELS, APPROACHES AND PROBLEMS

Although crowdfunding has many advantages, but as said, everything comes at a cost and so does crowdfunding. Following are some of the limitations and disadvantages of crowdfunding with the centralized system-

- **High Price:** Existing platforms are not cost efficient as they are dependent on many platforms. Hence, they demand high fees from people as well as from the supporters and contributors for joining their projects. No free opportunities are provided; hence it is a major drawback.
- **Rules and Regulations:** The crowdfunding platform acts as the decision-making body for the project's underneath. Therefore, the project must comply with many rules and regulations. This may include restrictions on funding arrangements and stock offerings.
- **Marketing and advertising:** the outcome of a good idea is only possible when it reaches a hundred people. Therefore, only a good project under the crowdfunding platform will be of no use and won't even guarantee success. Thus, the

crowdfunding platform needs to be more visible. These days social media play a big role for promoting brands and advertising also. Hence marketing strategies, advertising, paid promotions, branding are some of the necessary steps that require extra and additional time and principal apart from the actual project to make it more useful and popular.

- **Copyright vulnerability:** Some inventors and authors have seen the entire project crowdfunded before starting production. If someone sees the project on a crowdfunding platform, they can steal the concept without applying for a patent. Under the crowdfunding platform. This usually happens because entrepreneurs and businesspeople are familiar with the idea and are rushing to launch the product without claiming copyright. Therefore, such ideas are useless and can be lost in competition.

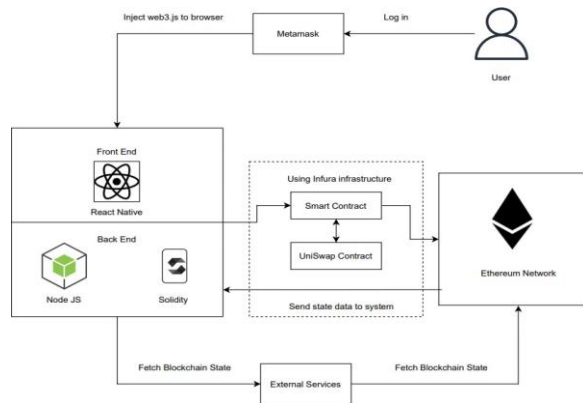
V. REQUIREMENT SPECIFICATIONS

Customers can first sign-up into the system, and once authenticated can login into the system using user id and password. They can browse the various campaign listed and can even create their own campaign under our website. If they are willing to contribute, they can proceed with the further steps. They can also view their campaign transaction history.

- **Target Audience**
Non-Governmental Organizations: Online crowdfunding has become an effective financing mechanism for many non-governmental organizations. This opens new opportunities for small and local NGOs to increase the visibility of plastics and build trust with donors. The online crowdfunding platform also allows donors to comment on crowdfunding campaigns. The platform also allows creators to post campaign updates in the form of videos, images, and messages to keep donors informed of their progress. Even after the campaign is over, activists often post updates and success videos to build trust among donors.
- **Social Workers:** This enables fundraising for medical emergencies, personal needs, creative projects, or any social cause – be it big or small. The aim is to bring forward the generosity and the need to maximize the potential to do good.
- **College Students:** A crowdfunding platform that uses blockchain will help maximize the success of the project, as blockchain secures the funding process and provides completely transparent access from anywhere in the world. Students interested in this subject can make many contributions to such projects.
- **Business:** Business usually launches new products using crowdfunding, not to maintain the business. However, extreme action is required at extreme times, and many of the benefits of crowdfunding for product launches also apply to crowdfunding for business capital.

VI. PROPOSED SOLUTION

Crowdfunding (Supportroops) is a donation-based crowdfunding platform used for charitable initiatives and social purposes, and businesses may also benefit from this platform. This is a great option for nonprofits and businesses with service-based initiatives. We develop the solution as a project and apply Ethereum Smart Contract to the crowdfunding site to execute the contract completely automatically, prevent fraud and ensure that the project is delivered within the specified period. As we know, blockchain is the basis of cryptocurrencies. In the future, most technologies around the world are expected to use blockchain to perform secure online transactions.



VII. RESEARCH METHOD

All the details will be stored and listed under deployed contracts. For every new campaign, a new contract will be deployed. All the donated amounts will keep fixed and secured. This will enhance security and transparency. Currently the conversion will be done only into a single stable currency.

VIII. FUTURE SCOPE

The future scope of this project aims to minimize the transactional slippage while converting different cryptos to stable coins by devising an algorithm to convert stable coin with the highest out amount within a given time frame. Since at the beginning the fess is expected to remain high, we will therefore aim to reduce the transactional fess in the future. The transactions taking place in Ethereum network will be enhanced to other networks and ecosystems. Cryptocurrencies build on other ecosystems will also be included for making transactions. Soon we will be enabling transactions to take place on PancakeSwap as there is a wide availability of cryptos on that platform, since on Uniswap the fees are comparatively much higher in accordance with the availability of cryptocurrencies, than on PancakeSwap.

IX. CONCLUSION

Blockchain technology is revolutionizing crowdfunding. It promotes an interface between innovators, funders, and consumers. Thanks to smart contracts, donors can contribute safely through their favorite projects. Consumers can support anycreator and buy digital products. Blockchain based crowdfunding ensures more transparent transactions in a decentralized manner.

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