Crowdfunding Platform Powered by Blockchain

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Abstract: *In the situation of the Covid-19 plague, many organizations are raising funds to help local governments to obtain additional sources of funds that will be distributed to those in need. Trust is an important factor for the parties involved in raising these funds, both in terms of the funder, the service provider of fundraising platform and even the fundraiser. On this occasion, the author tries to analyze how to implement blockchain technology and smart contracts in the dominant schemes of crowdfunding process. the results of this study indicate that blockchain-based smart contracts can be applied to the dominant schemes of crowdfunding process.*

Keywords: Cyber-insurance, Blockchain, Crowdfunding, Sealed-bid auction

I. INTRODUCTION

In this industrial era 4.0, almost all industrial sectors apply technology to support their business, from businesses that are for-profit to businesses that are non-profit. Non-profit organizations (non-profit) have characteristics that are almost the same as profit-oriented organizations (profit) profit-oriented, but between these two organizations have different problems. In the current situation of the Covid-19 plague, almost every country has the same problem in dealing with this problem, especially in terms of the funds needed. Many strategies carried out by the government how to manage government funds in tackling this Covid-19 plague outbreak. This situation also triggered the community to raise funds to help the government in tackling this Covid-19 plague outbreak. In the process of raising funds, of course it is not easy, because it requires trust between many parties, both the funders, intermediaries or organizations as a place to store temporary funds to the recipient of funds. That trust is the main capital for fundraising organizations to attract funders to donate their funds to recipients of funds. Lots of non-profit organizations play a role as fundraisers, especially in the condition of the Covid-19 plague. Trust is their challenge in attracting donors to donate their money to the organization. Not a few also a non-profit organization that uses technology to make it easy for donors to donate funds through them. So from this it can be concluded that in addition to trust which is the main factor to get as many funds as possible, technology also plays a big role in this as well input and control from humans. Can be enforced both legally in the enforcement of rights and the implementation or execution through computer code that cannot be changed or approved . Smart Contract can be deployed on top of blockchain technology to automate complex transaction. The Smart Contract is a code that can be executed and executed on a blockchain platform that is used to facilitate, execute and enforce the terms of a contract or agreement. The main purpose of the Smart Contract is to fulfill the agreement after the terms of a contract have been fulfilled.

II. LITERATURE REVIEW

Reference No.	Author(s)	Content	Method	Source
1.	Fink	Relationship between employment and crowdfunding.	Legal analysis	Securities Act, JOBSAct
2.	Mollick	Success factors in crowdfunding.	Quantitative	Kickstarter

Impact Factor: 6.252

3.	Stemler	Equity-based crowdfunding before and after the JOBS Act	Literature analysis	36 crowd-funded social cases

III. METHODOLOGY

A literature study is another term for literature study, literature review, theoretical study, theoretical foundation, literature review, and theoretical review. What is meant by library research is research conducted only based on written works, including research results both those that have been and that have not been published. Based on the explanation above, the methodology used in this paper is the method of library research. This writing relies on sources from journals that have been published both internationally and nationally along with other relevant articles so that they can be used as a reference from this writing.

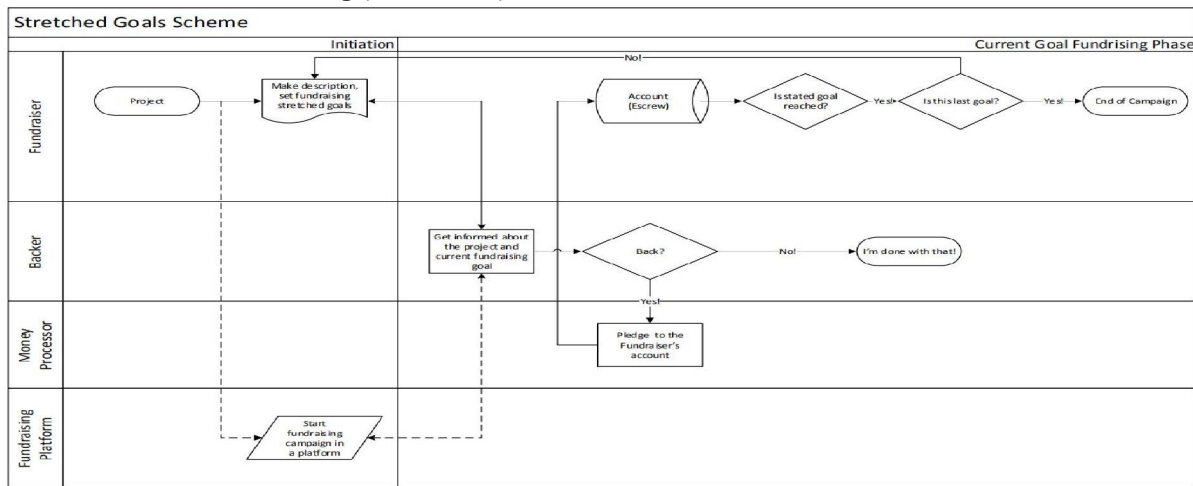### 3.1 Flow Process of Crowdfunding (Traditional)

Figure: SGS Crowdfunding Process Scheme

A. Registration - Fundraiser

Before submitting a proposal to a fundrising platform, of course fundraisers must register to a fundraising platform service providers. of course, each service provider has its own rules who can submit proposals to find funds in their organizations. In general, the fundraiser registration process only involves two entities, the fundraiser and the service provider of fundraising platform itself.

B. Registration – Funder (Backer)

Similar to the fundraising registration process, donors certainly need to register with a fundraising platform service provider, both offline and online. This is needed so that fundraising knows the source of funds provided for fundraising. Data from this fundraising course is also stored in the fundraising database and can only be accessed by parties who have been determined by the service provider. This process also involves 2 entities, namely the funder and the fundraising platform service provider. all historical transactions are stored in a system provided by the fundraising platform service provider.

C. Fundraising Campaign

To raise funds, a fundraiser must submit a proposal to the fundraising organization. each fundraising organization certainly has its own rules for publishing proposals from fundraisers. Every proposal that enters the fundraising organization certainly goes through a very strict verification using smart contract and blockchain technology. Things that can be applied to this process are the process of verifying data from seekers and funders, eliminating dependency with third parties (banks) and shortening the submission and disbursement of funds

IV. RESULT AND DISCUSSION

Each fundraising organization must have different mechanisms and rules. However, the entity within the organization is inseparable from the 4 main entities namely the funder, fundraiser, depository fund (Bank) and the predetermined additional values to products and services, if the fundraising goal is achieved, then the fundraiser can take all the actions needed to add that value . the model of this scheme (figure 9) can be described as follows: Based on 3 dominant crowdfunding process schemes. The author takes the example of the main usecase of fundraising mechanisms, namely fundraising registration, funder registration, fundraising process, fund donation process and fund disbursement process. [1]. Registration - Fundraiser Before submitting a proposal to a fundrising platform, of course fundraisers must register to a fundraising platform service providers. of course, each service provider has its own rules who can submit proposals to find funds in their organizations. In general, the fundraiser registration process only involves two entities, the fundraiser and the service provider of fundraising platform itself. The fundraiser will register to service provider of fundraising platform. In this case, the data from the fundraiser is stored in the service provider database and can be accessed by certain parties in accordance with the rules that apply to the service provider of fundraising platform. All transaction or historical data of fundraiser only can be consumed by service provider. [2]. Registration – Funder (Backer) Similar to the fundraising registration process, donors certainly need to register with a fundraising platform service provider, both offline and online. This is needed so that fundraising knows the source of funds provided for fundraising. Data from this fundraising course is also stored in the fundraising database and can only be accessed by parties who have been determined by the service provider. This process also involves 2 entities, namely the funder and the fundraising platform service provider. all historical transactions are stored in a system provided by the fundraising platform service provider. 3. Fundraising Campaign To raise funds, a fundraiser must submit a proposal to the fundraising organization. each fundraising organization certainly has its own rules for publishing proposals from fundraisers. Every proposal that enters the fundraising organization certainly goes through a very strict verification using smart contract and blockchain technology. Things that can be applied to this process are the process of verifying data from seekers and funders, eliminating dependency with third parties (banks) and shortening the submission and disbursement of funds. [1]. Data verification of funder and fundraiser It is natural for fundraising platform service providers to repeatedly verify fundraising and donatur. This is done to ensure that funders or funders are clear individuals or organizations. Specifically for funraiser, to ensure fundraiser is a person or organization that is suitable for submitting data submission proposals. Based on 3 dominant crowdfunding process schemes, there is a process whereby the fundraising does not reach the target with a certain amount and time then the funds collected will be returned to the fundraiser either directly or indirectly and there is also the possibility to develop the fundraising with certain term and conditions. In this case, block chain technology can be used, so that data that enters the fundraising database can be trusted. Based on the block chain category, the appropriate category is applied to the fundraising process, according to the authors, the blockchain can be applied is categorized as a consortium, where only certain data can be seen by the public. In the case of the AoN and KIA schemes, where there is a possibility of a refund, with blockchain technology all transactional historical data carried out between related parties is stored securely and cannot be changed so that from here it can be used as a reference for direct refunds to funders . Whereas in the SGS scheme, where the fundraising can be developed with the terms and conditions that have been determined, with this blockchain technology can be tracked from the beginning of this fundraising activity to the final destination of the fundraising. So, if there are additional entities in the future, then the data can be used without having to re-verify. This is in accordance with the principle of the blockchain that applies historical storage of stored data. So, it is almost certain that data stored with this concept is more trusted. [2]. Eliminating dependency on third parties One of the main objectives of implementing this block chain is to eliminate dependence on third parties or intermediaries in the fundraising process. in this case, the third party commonly involved is the bank, the fintech company, of course, legal services if a problem occurs. In this case, by applying block chain technology, fundraisers can remove this dependency. For example, the banks, with the application of block-fighting technology, fundraisers can utilize cryptocurrency that is commonly used by smart contract and blockchain service providers. Thus, funds are stored in a secure system and the verification process is arguably unique. Where every transaction carried out of course, required a unique code, so that transaction data will not be lost or overwritten. Another example is the use of legal services. There is still the possibility of funders entering data that is not in accordance with the facts, so that with this block chain technology, it can reduce cases like

this by means of only verified data that will be stored and if there are changes in Based on this, the author tries to do an analysis the processes that are generally contained in this fundraising organization by applying blockchain technology that can be an alternative solution to increase the trust of funders which will certainly affect how much funds will be obtained by the fundraising organization. these funds as well as smart contract technology that makes it easy for recipients to get these funds if all the conditions are met. Based on previous research, this technology can be used in the telecommunications and medical industries[14, 15] The application of blockchain technology not only increases trust in fundraising organizations, but can also be used as validation from funders to ensure that funds are obtained from reliable sources and also to validate recipients of funds, whether the recipients can be trusted or not

V. CONCLUSION

Smart Contracts based on Blockchain technology are very suitable to be implemented in 3 dominant crowdfunding process schemes. Beside increasing trust due to blockhain, with smart contract also shorten main process in fundraising Implementation of Smart Contract based on Blockchain technology, requires high-cost if the organization takes the initiative to implement this technology using their own resources. In general, smart contract service providers use cryptocurrency, where not all governments legally recognize the use of these currencies

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