

# Blockchain-based Crowdfunding Platform

Le Hoang Tuan

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This is timetable task scheduler of project:

| Time                                 | Task  | Progress |
|--------------------------------------|---|----------|
| Sep 2018 –<br>Dec 2019<br>(2 months) | <ul style="list-style-type: none"><li>- Complete description of project (issue, background, milestone)</li><li>- Understand the knowledge related to the project.</li></ul> |          |
| Jan 2019<br>(1 month)                | Design system (diagrams, flowchart)   |          |
| Feb 2019<br>(1 month)                | Design front-end  |          |
| Mar 2019 –<br>Apr 2019<br>(2 months) | Buid back-end   |          |
| May 2019 –<br>Aug 2019<br>(4 months) | Testing and complete  |          |

*Table 1. Project's plan*

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# 1 Introduction

## 1.1 Mission

The project's mission is makes the system serves for the entrepreneurs and the investors. It makes entrepreneurship accessible to everyone, everywhere and trustable for investors.

## 1.2 Importance

Crowdfunding has quickly become a popular avenue of funding for investment, seed money and start-up funding. The growth rates have been astounding over its short life span. In 2015, a worldwide estimate totaling over US\$34 billion was raised by crowdfunding [1], more than double from the year before. Fred Wilson of Union Square Ventures predicted that crowdfunding could grow to US\$300 billion.

Notable crowdfunding campaigns include the Oculus Rift, which effectively launched the modern virtual reality industry and sold to Facebook for US\$2 billion after just two years, and the Pebble Smartwatch, which similarly jumpstarted the smartwatch industry and collectively raised over \$30 million from backers.

The crowdfunding platform serves an immense need with important future economic and social potential. However, today's centralized implementation of the model is failing to meet the changing needs of the global market. Therefore, there should be a decentralized system, reducing dependence on third parties.

## 1.3 Definition

The concept of crowdfunding comes from the broader concept of crowdsourcing, which involves using the "crowd" to obtain ideas, feedback, and solutions to develop corporate activities. Crowdfunding is the practice of funding a project or venture by raising many small amounts of money from a large number of people, typically via the Internet.

## 1.4 Business models of crowdfunding

There are four major models of crowdfunding divided by investor profitability [1]:

- **Equity-based** - investors will receive an equity portion of the fundraiser's company.
- **Lending-based** - investors will receive an interest based on the amount invested by the project.
- **Reward-based** - investors may receive tangible or intangible rewards.
- **Donation-based** - The role of donation-based crowdfunding is to support humanitarian and artistic projects. Funders on donation-based crowdfunding can be seen as philanthropists. And they may not receive anything.

## 1.5 Crowdfunding's process

The crowdfunding process has three main actors [2]:

- **Platform** – is the central role of the intermediary, who serves as a matchmaker between promoters and funder.
- **Fundraisers** (also can be entrepreneurs and other) – is raising funds via a crowdfunding platform. These fundraisers use crowdfunding to get direct access to the market and to gather financial support from truly interested supporter.
- **Investors** - who decide to financially support projects of the fundraisers.

The sequence diagram of process overview is detailed in **Error! Reference source not found..**

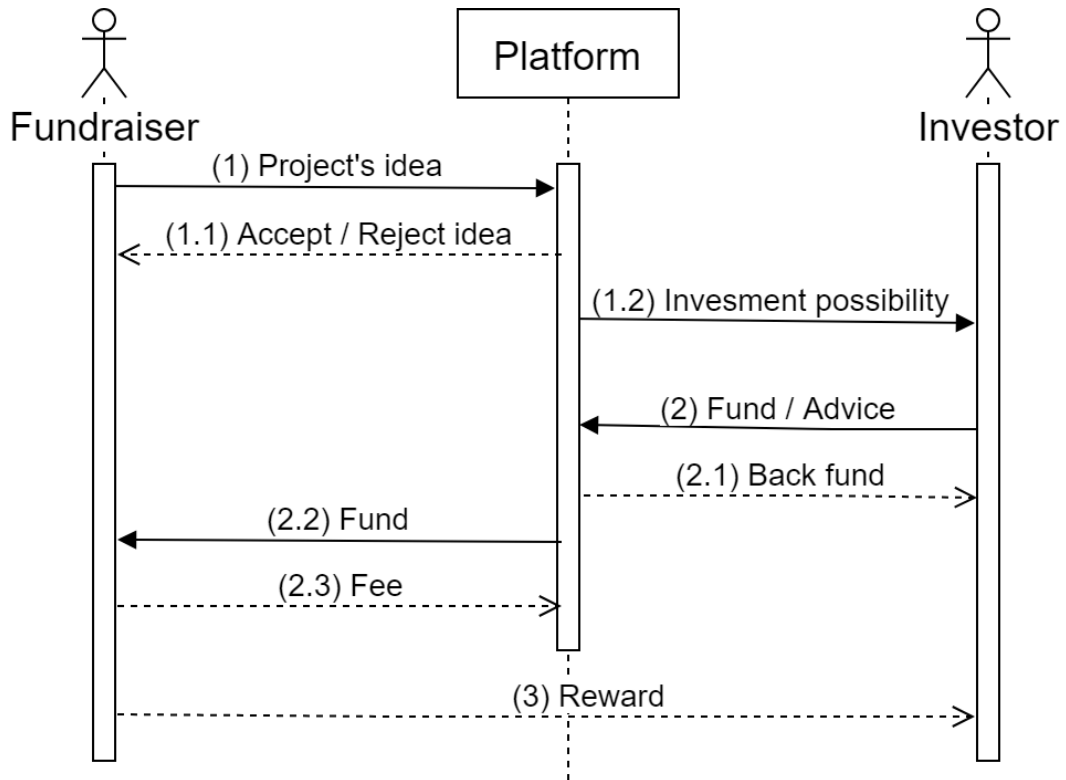


Figure 1. The crowdfunding process overview

The existence of crowdfunding platforms allows fundraiser (startups) to present ideas (step 1 in diagram) for the wide public and ask for funding. Crowdfunding platforms will consider the ideas (step 1.1 in diagram) to be public and then create an investment possibility (step 1.2 in diagram) for investors – ordinary people, who most likely would not have a chance to invest using any other way.

Investors analyse proposed ideas and choose the ones they like and believe in to fund (step 2 in diagram). Also, as investors like and believe in the funded idea or project, and, moreover, desire for it to succeed, they tend to (if there is such a possibility) provide advice from their experience for the startup. When the deadline ends, if the goal is completed, all funds will be transferred to the fundraiser (step 2.2 in diagram); then fundraiser pay to the platform a fee (step 2.3 in diagram). Otherwise, the investment amount will be returned to the investor (step 2.1 in diagram).

Startups offer investors something in return for a reward (step **3** in diagram): a small gift, product/services, equity, a percentage of revenue or nothing.

## **2 Current platforms and its problem**

### **2.1 Non-blockchain**

In current, there are some largest crowdfunding platform as Kickstarter, Indiegogo,...

The main problem facing crowdfunding is an issue of trust. Backers are burned repeatedly by creators who fail to follow through on their promises. A lack of security mechanisms and transparency provides backers with little protection.

A Wharton University professor researching the leading crowdfunding platform, Kickstarter, found that up to 85% of projects delay while 14% ultimately fail to deliver what was promised. Notable projects that raised millions but stumbled in fulfillment include the Ouya (raised US\$8.5M), Zano Drone (US\$3.5M), Skully (US\$2.4M), and the Coolest Cooler (US\$13M). In each of these cases, the project creators were paid in full immediately after funding concluded. Backers, on the other hand, waited months (and sometimes years), to receive nothing but excuses for their money and trust.

### **2.2 Blockchain**

## **3 Solution**

### **3.1 Requirement**

### **3.2 System Analysis**

### **3.3 System design**

### **3.4 Blockchain**

## **4 Installation**

### **4.1 Preparation**

### **4.2 Install**

## **5 Testing and result**

## **6 Conclusion**

## **7 Bibliography**

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