# Bitcoin Transaction Ecosystem

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## 1. Problem Overview

In traditional business model, the movement of product through the supply chain is tracked individually by the respective parties. Each party has its own database and keeps its own record. There are several problems with this model: human error, fraudulence, vulnerability and low efficiency. For our project, we propose the development of a multi-party bitcoin transaction ecosystem, which provides early detection of human error, safety and high efficiency. The system could guarantee each transaction is valid and settled in seconds.

## 2. Application Key Functionalities

1. Investor

* Buying and selling digital currencies.

1. Broker

* Trade owned digital currency on behalf of investors

1. Exchange

* Match the buying and selling trade from Brokers
* Keep record of bitcoin ownership
* Keep record of deposit

## 3. Proposed Entities

1. Investor enterprise

* Admin organization: user account management, employee management
* Investment organization: make buying or selling decision
* Accounting organization: manage financial account
* Analysis organization: report and analyze

1. Broker enterprise

* Admin organization: user account management, employee management
* Customer service organization: provide service to investor
* Accounting organization: manage financial account
* Analysis organization: report and analyze

1. Exchange enterprise

* Admin organization: user account management, employee management
* Transaction organization: match trades
* Accounting organization: manage financial account
* Analysis organization: report and analyze

## 4. Additional features

1. Business analysis

* Best investor for each broker
* Best Broker for each investor
* Most profitable investor
* Most profitable broker

1. Market behavior

* Dynamic bitcoin price
* Enable negotiation between investor and broker

1. Enterprise management

* Best investment assistant
* Best customer service employee

## 5. References

1. <https://en.wikipedia.org/wiki/Blockchain>
2. <https://en.wikipedia.org/wiki/Bitcoin>