

# WHITE PAPER



DECENTRALIZED  
ADVERTISING ECOSYSTEM

# CONTENT

<b>3</b>	<b>INTRODUCTION</b>
<b>4</b>	<b>VISION AND PURPOSE</b>
	MARKET OVERVIEW
<b>6</b>	<b>CURRENT PROBLEMS ON THE MARKET</b>
<b>8</b>	<b>BIGBOM ECO - DECENTRALIZED ADVERTISING ECOSYSTEM</b>
	What is Bigbom Eco?
	BBO Token
<b>9</b>	Ecosystem
<b>11</b>	<b>TECHNOLOGY</b>
<b>12</b>	Smart Contract Execution
<b>13</b>	Main contracts on the Bigbom Marketplace
<b>14</b>	Bigbom Marketplace's Workflow
<b>15</b>	Bigbom iAds
<b>19</b>	<b>COMPETITIVE ANALYSIS</b>
<b>20</b>	<b>TEAM</b>
<b>22</b>	<b>ADVISORS</b>
<b>24</b>	<b>PARTNERS</b>
	ROADMAP
<b>25</b>	<b>MARKET EXPANSION</b>
	TOKEN
	Token Sale
<b>27</b>	Token Allocation
<b>29</b>	<b>BUSINESS MODEL AND EXECUTION PLAN</b>
<b>31</b>	<b>MARKETING CAMPAIGN AND PR</b>
	REVENUE FORECASTS
<b>33</b>	<b>RISK ANALYSIS</b>
<b>35</b>	<b>FAQS</b>
<b>38</b>	<b>SOURCES</b>

# 1. INTRODUCTION

Bigbom Eco serves as a decentralized advertising ecosystem for all parties involved in online advertising, inclusive of advertisers, service providers, content publishers, advertising channels, platforms. Bigbom Eco is being developed using smart contract, running on Ethereum blockchain. We are proud to say that all data linked through Bigbom Eco is transparent, accurate, automated and immutable.

The Bigbom Marketplace concentrates on all service suppliers, who are rated and evaluated by Bigbom Eco, and service buyers transparently. The Buyer or Advertiser is able to choose the most suitable service supplier basing on the rating and reviews.

Bigbom iAds utilizes an auto-optimized advertising system on an array of channels, such as Facebook, Google, Instagram, and Twitter. This system has been developed with a self-developed algorithm which facilitates the automatic optimization of advertisements, thus removing intermediaries in the decision-making process. Bigbom iAds will automatically deactivate those ads that exhibit a relatively lower conversion rate, or incur higher cost prices than expected. Advertisers will be able to manage ad campaigns according to KPIs, and the system will then automatically allocate the budget towards efficient ads, campaigns and channels. This helps advertisers conserving up to 80% of the campaign implementation effort while decreasing the costs by as much as 20%. In return, this helps them increase their return on investment (ROI).

The goal of companies and advertisers is to maximize their marketing impact while minimizing their marketing costs. In order to reach this goal, they have to target the right audience, who needs or matches the ad and using the right channel at the right time.

## 2. VISION AND PURPOSE

Bigbom Eco is the first digital advertising ecosystem built as a decentralized application platform (DApp), which links ad platforms and publishers to advertisers globally. We aim to solve the trouble of truth between advertising buyers and sellers by using blockchain technology. We aim to free up human resources in online marketing optimize costs and increase the effect of advertising campaigns through the development of Bigbom iAds, an advertising automation utility which abilities to self-learning and optimizing ads bidding on many popular platforms.

In next 5 years, Bigbom Eco aims to become an ecosystem with a significant influence on the global online advertising industry.

## 3. MARKET OVERVIEW

Approximately 50 million new businesses are established around the world (by Moyak, 2016). This leads to an increased level of competition in all fields day-by-day. As the competitiveness increases, the advertising/marketing demand increases sharply. Simultaneously, online advertising technology has dramatically evolved in recent years, thanks to preeminent advantages over traditional advertising, such as the possibility to target ads more specifically, a higher measurement accuracy and lower costs. As a result, annual revenue of the online advertising industry continues to grow strongly. In 2017, online advertising accounted for 41% of global advertising expenditure and is forecasted to increase in the coming years (Magna, 2017). According to Magna (2017), worldwide advertising expenditure for digital channels represents a \$209 billion market, accounting for 41% of the advertising industry. It has overtaken traditional advertising channels such as TV ads \$178 billion (accounting for 35% of the market). The shift towards digital advertising spending demonstrates that brands and advertisers recognize the growing influence of online advertising channels.



## MARKET OVERVIEW

Given the growth rate, Magna projects the expenditure of digital advertising will grow by 13% to reach \$237 billion in 2018 and \$300 billion by 2020

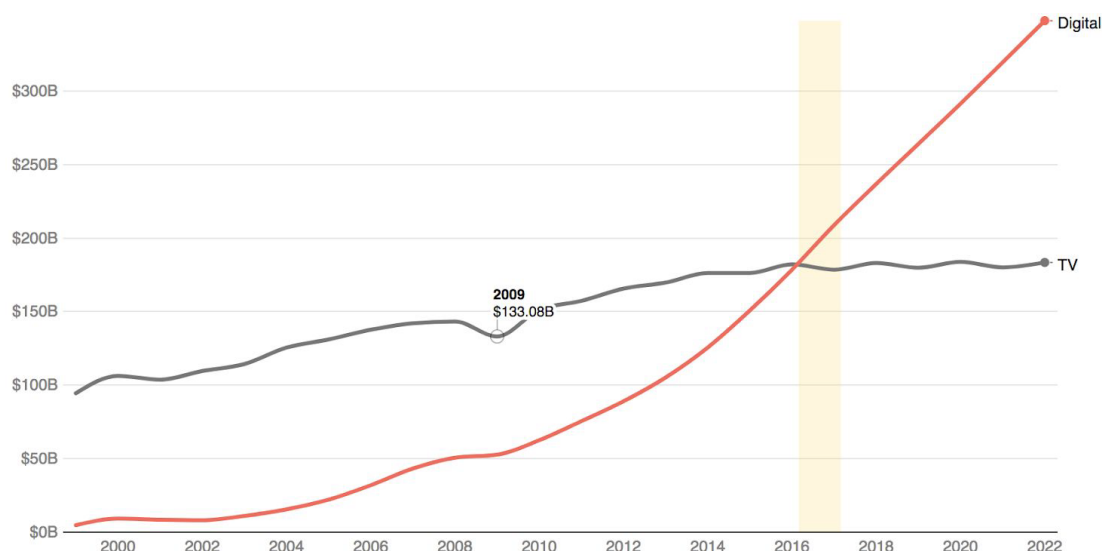


Figure 1: Data for 2017 and beyond are forecasts (MAGNA)

Another source, Statista.com estimates that digital advertising spending will reach \$269 billion in 2018 and \$335 billion in 2020.

Figure 1 further demonstrates that advertisers are shifting budgets from traditional advertising markets to digital advertising market, and the level of spending on digital advertising keeps rising rapidly.

According to global statistics, Google and Facebook are the leading providers of online advertising worldwide with revenues \$95.38 billion and \$33.84 billion in 2017, respectively (Statista.com, 2018). The figures show that Google and Facebook account for nearly 20% of total global online advertising revenue. In addition, other channels such as Twitter accounts for \$3.26 billion in 2017 and estimated to have speedy growth in the coming time (Statista, 2018).

## 4.CURRENT PROBLEMS ON THE MARKET

The online advertising industry has grown exponentially in recent years, and is projected to keep doing so in the coming years. Though, the team behind Bigbom Eco found that the problems it had to deal with on a daily basis, were still the same ones as the problems it had to deal with during the industry's infancy.

### Trust between advertising buyers (advertisers) and sellers (ads platform publishers):

**Buyers:** Buyers often waste time on selecting the right ads platform and suitable publishers. Moreover, they are unable to evaluate the effectiveness and quality of advertising before actual implementation. This leads to uncertainty about the level of efficiency and whether the KPIs promise by the sellers will be met.

**Sellers:** For sellers, there is a risk of non-payment, as they generally provide the service before payment is completed. For instance, Google, Facebook and similar platforms hosting ads are forced to lock their customers accounts, due to them not having enough funds to cover transactions on due date. This may results in these customers being in debt to the platform, with debt collecting fees negatively influencing the platform's profit margin.

### Lacks of support for DApps through traditional marketplace solutions:

With the emerging popularity of blockchain technology and cryptocurrency, the transition from traditional application to DApps occured in multiple industries, such as entertainment and financial technology etc. However, the amount of marketplace for advertisers and advertising platform/content provider is very limited. This reduces the ability of expansion to potential customers in the digital money economy.

## CURRENT PROBLEMS ON THE MARKET

### Manual management of ads is time-consuming and ineffective:

Managing ads across multiple campaigns on multiple channels is time and labor intensive. Clients may be able to reach thousands of users by setting up an ad on Facebook, Google or Twitter, though there is a little control on the performance of these ads without manual adjustment. In addition to manual adjustment being necessary, advertising agencies are usually not working around the clock, which means that there is no possibility of adjustments outside working hours.

### Suboptimal Advertising Budgeting

Advertisers usually are able to measure and adjust their online ads spending only inside the ads platform/publisher that their campaign is running. This does not guarantee the budget is fully optimized. For example, when an advertiser evaluates their results on the multiple platform such as Facebook & Google, there are some ads is not having good performance on each platform. As a result, budgets will not be optimized for these specific ads. This means that the campaign is not as successful as it could have been.

### These lead to the following questions:

**How to optimize budget when investing in advertising?**

**How are the budgets among the different ad channels optimized?**

Bigbom has run over a thousand campaigns each year for many large companies, including Baskin Robbins, Jockey, Lazada and VNG. Through their business, Bigbom experienced first-hand which difficulties clients and users within the advertising industry have to deal with. Even though talented teams and companies invest significantly time, effort and money into their advertisement, the structure disallowed them to reach a maximized return on investment. That is the reason why Bigbom Eco was started.

## 5.BIGBOM ECO - DECENTRALIZED

### ADVERTISING ECOSYSTEM

#### 5.1.What is Bigbom Eco?

Bigbom Eco is a decentralized advertising ecosystem for all parties involved in online advertising, including advertising, content publishers and advertising channels. Bigbom Eco is developed using smart contracts, running on the Ethereum blockchain and Tomochain. All connected data via Bigbom Eco is transparent, accurate, autonomous and immutable when data is posted on blockchain.

#### **Tomochain:**

Tomochain is an innovative solution to the scalability problem with the Ethereum blockchain. Tomochain plans to support horizontal scaling via adding more second layer blockchains with good performance integrated with Ethereum for backup and atomic cross-chain transfer. Bigbom has signed a Memorandum of Understanding (MOU) with Tomochain. With this MOU, Bigbom Eco will receive advisory and technical support from Tomochain in the development phase of Bigbom Eco. Bigbom Eco will experiment itself on Tomochain for comparison about transaction speed, network fee and stability against Ethereum.

#### 5.2.BBO Token

BBO, implements using ERC-20 standard, is the main utility for transactions under Bigbom Eco's ecosystem. The reason we have our own token is we wanted to have better ownership, and make it easier for users on the ecosystem. Relying to other cryptocurrencies/tokens brings a lot of risk to Bigbom, since they can change their own policy. advertisers can buy BBO tokens during the ICO or purchase it on exchanges after the ICO is completed, or buying it directly from our reserve using credit card (explained in next section).

### 5.3.Ecosystem

Any platform, service or product related to digital advertising around the world can become a part of Bigbom Eco. They may be advertisers and publishers, and even ads platforms may opt to integrate the Bigbom Ecosystem.

The infographic below describes the relationship between all parts of Bigbom Ecosystem. Each member will have a specific benefits by joining into this ecosystem.

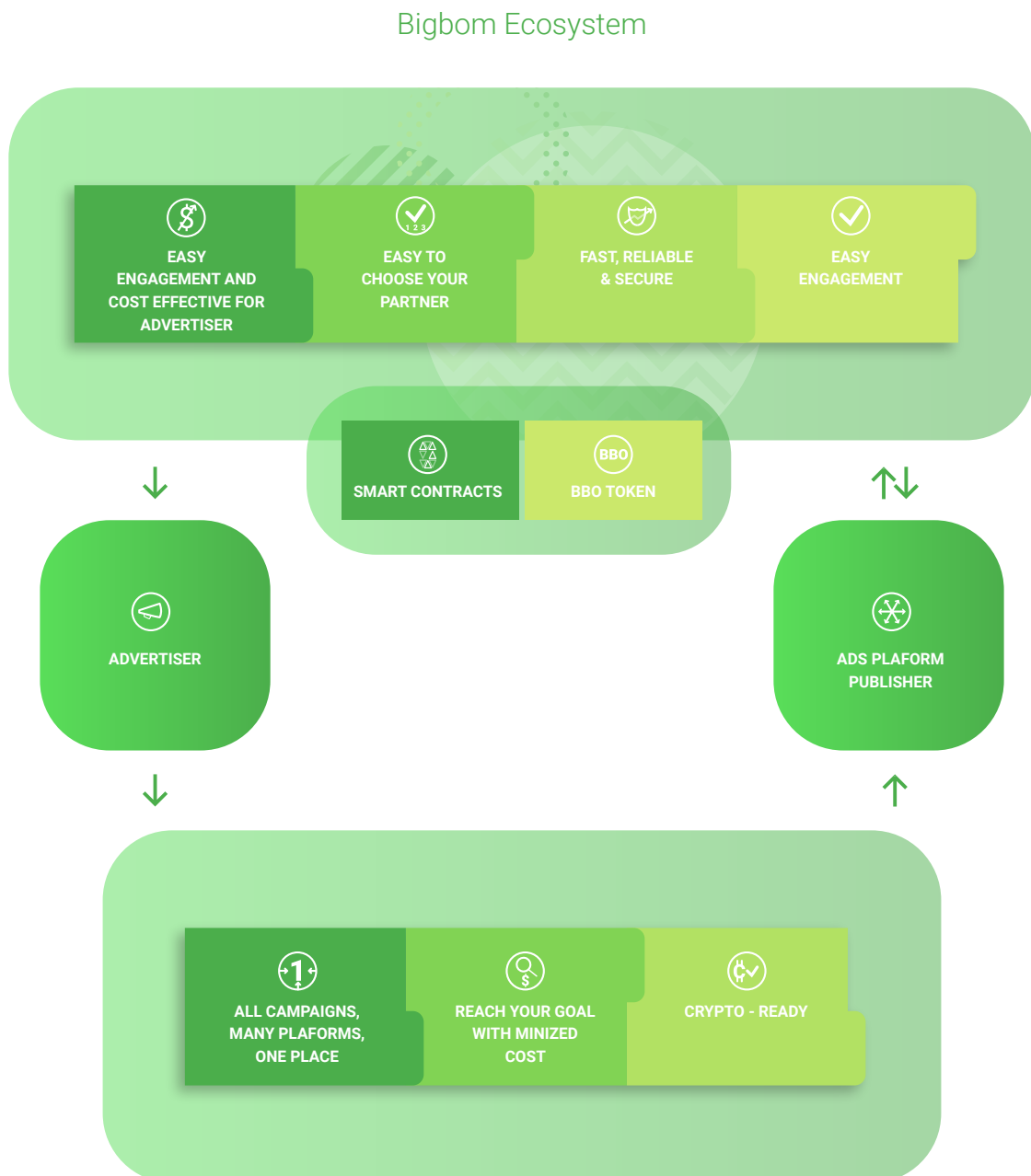


Figure 2: Bigbom Ecosystem

**Easy engagement and cost effective for advertiser:**

Establish a contract with a few clicks.. No extra fee. The only fee is a small transaction fee for the execution of the smart contract.

**Easy to choose your partner:**

Through ratings & reviews on smart contracts, advertisers can decide which publisher is the best fit for their business Bigbom Eco Marketplace also provides rich and transparent provisioning for each ads platform/publisher joining the marketplace

**Fast & Reliable & Secure:**

With Ethereum network, a transaction usually takes around 15-30s for confirmation. On Tomochain, this is less than 2 seconds. This is totally comparable with credit card, but the fee is much less. With large transaction, one common method is wired transfer, but it takes 3-5 days depends on many factors. Compare with Ethereum/Tomochain, the transaction time is x 216,000 faster.

Decentralized network is a network consisting thousands of nodes, although there are still some limitations in the implementation regarding the consensus protocol, but project such as Ethereum and Tomochain is currently actively working on more stable consensus protocol, such as Proof of Authority and Proof of Stake, which provides more scalability and fault tolerance. Blockchain is secure by nature. Record in blockchain is immutable, meaning no one could change it by any method. Users also own their private key, the only method to access their account on blockchain.

**Easy Engagement:**

The marketplace allows you to actively engage with advertisers, using Direct Offer or partici

pate to a Client Bidding Offer . In addition, our recommendation engine will select and give best suggestions about which customer you should engage.

### **All campaigns, many platforms, ONE place:**

Bigbom iAds allows you to connect with multiple different ads platform within a single account. All your campaigns are now available under a single overview on your computer.

### **Reach you goal with minimized cost:**

Bigbom iAds allows you to connect with multiple different ads platform within a single account. All your campaigns are now available under a single overview on your computer.

### **Crypto-ready:**

Bigbom Eco allows users to pay with their traditional payment methods, such as creditcard. In practice, they will essentially buy BBO tokens from the BBO Reserve at a rate 5% above market price, therefore minimizing impact on the overall value of the BBO-token. In addition, these BBO tokens will be directly used within the system, thereby further decreasing supply of the BBO token.

## 6. TECHNOLOGY

### **Ethereum & Tomochain**

The Ethereum network provides distributed ecosystems and smart contracts that have been proven and widely used by many companies, including JP Morgan, Cisco Deloitte Credit Suisse, HP Enterprises. Ether (ETH), the Ethereum token has become popular in recent years. Ethereum is the second largest coin in terms of market capitalization, just after Bitcoin. Ethereum is also the largest smart contract platform with the largest number of deployed contracts, approximately 18,000 smart contracts (according to etherscan.io).

In addition to Ethereum, Bigbom will develop its system in parallel on Tomochain. Tomochain aims to solve the scalability problem within Ethereum, and plans to support horizontal scaling. It does so, by adding more second layer blockchains, allowing cross-chain transfer. Bigbom will work directly with Tomochain on this integration. After pilot testing, Bigbom will opt which of the 2 solutions is the most effective for its business.

### 6.1.Smart Contract Execution

The majority of the features on the Bigbom Marketplace are operated by smart contract. When a party (advertiser) needs to use online advertising services from service provider (ads platform/publisher), both parties will agree on the price and specific commitment (KPIs) at the time signing smart contract.

A full overview of the various stages incorporated into the smart contract can be found below:

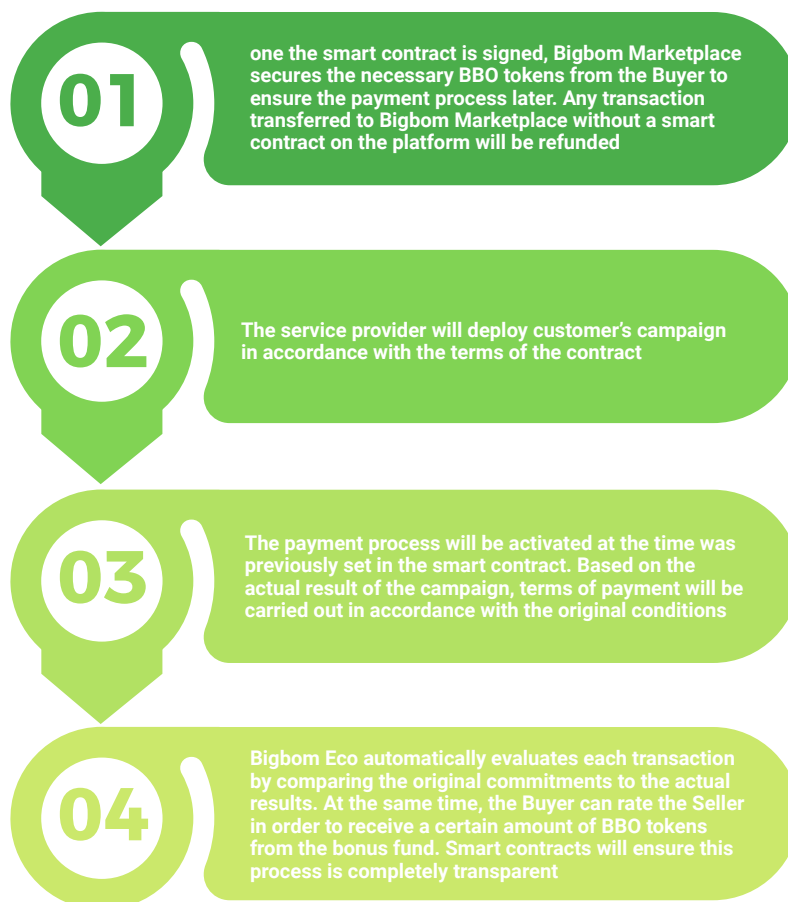


Figure 3 : 4 steps of smart contract execution



## 6.2. Main contracts on the Bigbom Marketplace:

### **Service Offer Contract:**

When the ads platform or publisher offer their services to customers, the Service Offer Contract is used to set start and end dates, KPI terms and payment terms between both parties. Buyers will be able to review the information in advance, and make a decision on whether they would like to move forward with the deal.

### **Service Bidding Contract:**

Both advertisers and ads platform/publishers have the ability to create a Service Bidding Contract. With the same type of service as in the Service Offer Contract, participants will be able to make offers at the best prices, based on the term. After the Service Bidding Contract is validated, whoever makes the highest bid will be selected to execute the contract.

### **Payment Contract:**

When an ads platform/publisher executes an advertising campaign for their customers, all KPIs promised in Service Offer Contract/Service Bidding Contract will be tracked and recorded by Bigbom Eco. Ads platforms/publishers can only request their customers to pay for BBOs when the KPI conditions have been met, and did not exceed the time specified on the smart contract.

### **Review/Rating Contract:**

In order to evaluate the quality of both parties, the Rating Contract will be used to evaluate advertisers and ads platform/publisher. The evaluator will receive a bonus with a certain amount of BBO as a reward.

### 6.3. Bigbom Marketplace's Workflow:

The Bigbom Marketplace is a place where all service providers are evaluated and ranked by Bigbom Eco and serves buyers fairly and transparently. Advertisers are able to select their service provider based on their ratings and previous reviews.

When the contract ends, advertisers are encouraged to rate and review the service providers. Advertisers who give reviews are rewarded a certain amount of BBO tokens from the bonus fund. Only those who use a service provider, which can be tracked through smart contracts, can give them a rating, which makes the ratings far more accurate than other review platforms.

The advertisers can see ratings and reviews on the Ratings page. The advertisers can compare between ratings left by other Buyers and ratings that are automatically generated by the system. The thorough and unbiased rating information helps Buyers selecting better quality service providers.

The higher the service provider is ranked, the higher they will appear on the Ratings page. Being listed higher helps the Seller attract more customers and motivates the Seller to improve their services and advertising effectiveness.

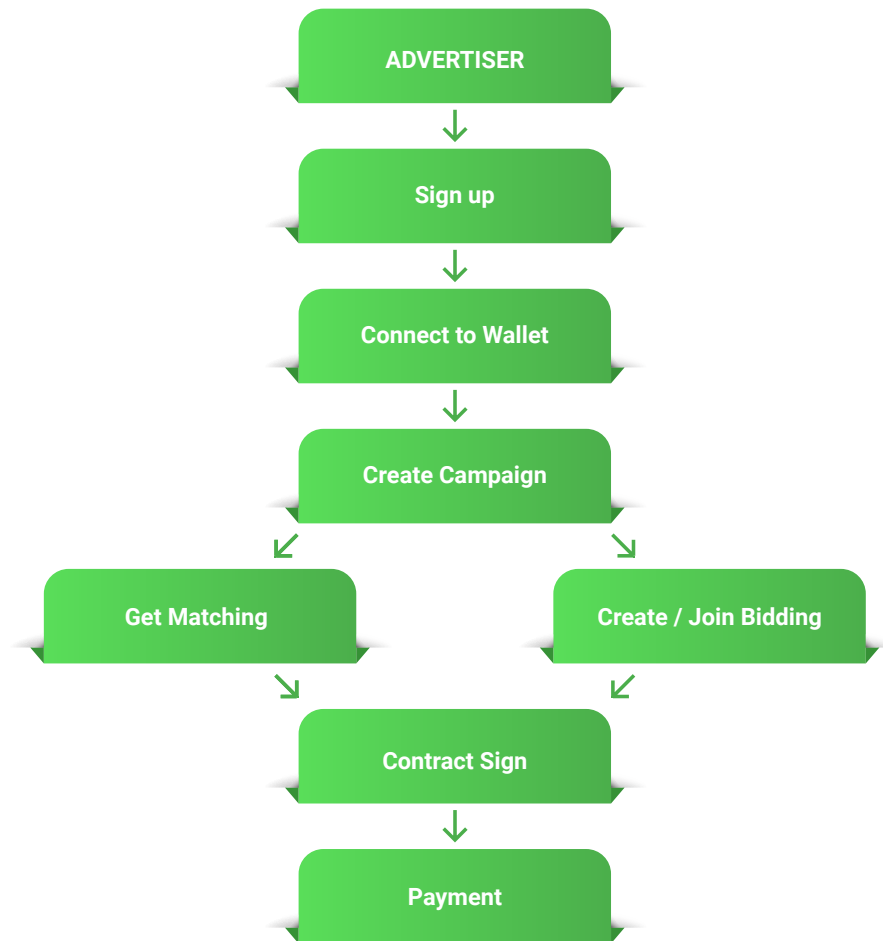


Figure 4 : Bigbom Marketplace workflow

## 6.4. Bigbom iAds

### Key technologies used on Bigbom iAds:

- Microservice architecture & docker
- Ad campaign synchronization system using asynchronous batch processing system based on NodeJS and Redis
- NoSQL database with low latency, high scalability.
- Connected to blockchain for secure transactions
- Self-developed algorithm to continuously updates the results of advertising campaigns for optimizing bidding price.

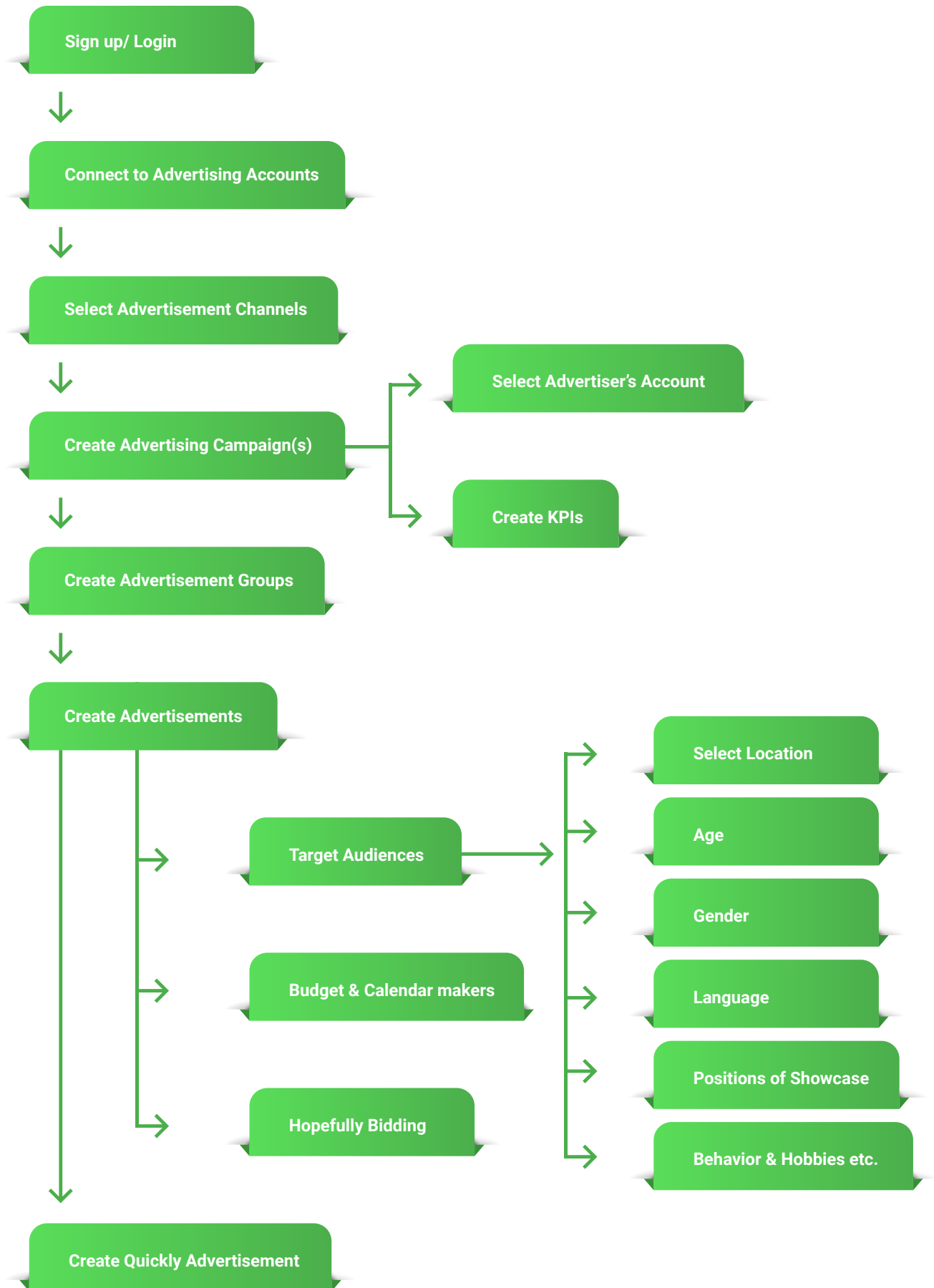
### Bigbom iAds will tackle difficulties on the same platform:

- By using a self-optimized algorithm, Bigbom iAds works as an assistant robot for advertisers 24/7: during working hours, at night, in the weekend and during public holidays.

## TECHNOLOGY

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- Managing campaigns according to KPIs and optimized ads based on expected bidding price of advertiser across multiple channels.
- Scanning thousands of ads in each account, every 15-30 minutes and automatically adjusts them in real time.
- Automatically raises and lowers bidding on ad channels.
- Automatically turns off ads that are not performing well or have a low conversion rate.
- Automatically allocates budget between channels in real time, based on campaign performance.
- Tailoring ad audience suggestions.
- Automatically performs A/B testing over hundreds of ads to find the best ads, landing pages, and ad objectives.
- Making it easy for advertisers to manage and compare multi-channel data by providing synchronized, real-time reporting on all channels.
- Managing thousands of advertising accounts on a single Bigbom account.
- Creates hundreds of campaigns across multiple accounts under one Bigbom iAds campaign.



**Close your laptop! The Bigbom Auto will be automation Optimizing "Off/On" advertisement and adjust bidding like a human!**

Figure 5 : Bigbom iAds Workflow

## How does Bigbom iAds reduce up to 80% of human costs and decrease the advertising costs by as much as 20%?

Other systems on the market rely on simple “if, else” rules for optimizing their advertisements. With Bigbom iAds, advertisers only need to enter their desired bid and Bigbom will automatically optimize campaigns using clever and sophisticated algorithms.

Bigbom iAds will create multiple ad placements at the same time, reducing ad creation time by 80%.

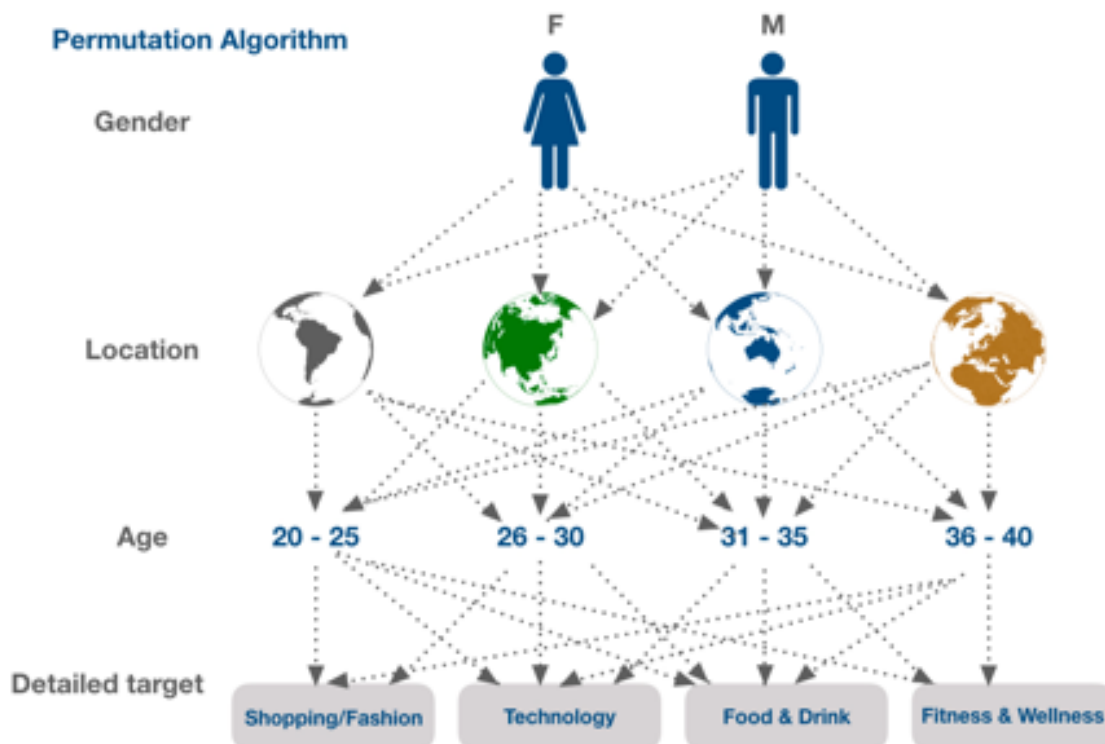


Figure 6: Bigbom iAds's permutation algorithm

Bigbom iAds uses a series of smart algorithms to make the most cost-effective and optimal bids for each ad.

A/B testing helps advertisers find the right audience for each ad. Based on the results from this test, the system automatically allocates the ad budget for the best audience.

The system automatically creates or cancels ads based on each ad's effectiveness. Ads are automatically evaluated against the advertiser's KPIs. This helps advertising agencies spend less time monitoring ads.

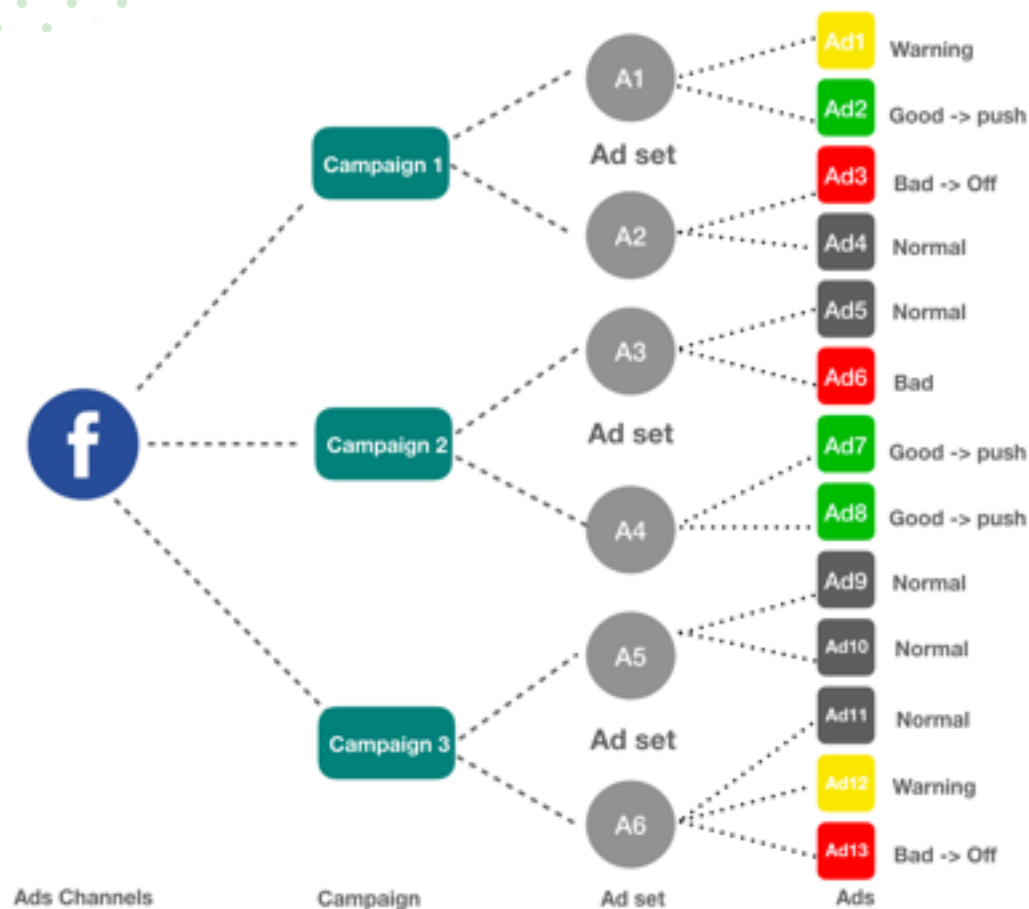


Figure 7: Ads optimization via Bigbom iAds

## 7.COMPETITIVE ANALYSIS

In the past years, the cryptocurrency industry has seen multiple projects utilizing blockchain technology in an attempt to solve the issues the traditional advertising industry faces. However, previous projects such as Adex, Indahash and Adhive are structurally different from Bigbom Eco. Bigbom Eco has been purposely made as a decentralized ecosystem with variety of solutions offered including Smart Contracts, Marketplace and Bigbom iAds. Other platforms are essentially advertising platforms

This means, that technically these platforms could become a target audience for Bigbom Eco in the future.

## 8. TEAM

### CEO & Co-Founder : Vung Nguyen

Vung Nguyen is the Founder & CEO of Bigbom. He has 11 years of technology start-up experience and 8 years of experience in digital advertising. He is also the founder of Adtop, an online advertising company established in 2011. Adtop has steadily increased in revenue and currently generates millions of dollars of revenue per year. Starting in 2013, Mr. Vung and his partners developed an advertising solution that has displayed over 3 billion impressions per month. In 2015, Mr. Vung Nguyen graduated from the Silicon Valley Founder Institute, a start-up training program involving people from over 50 countries.

**Linkedin:** <https://www.linkedin.com/in/vungnguyen>

**Twitter:** <https://twitter.com/vungak>

### CTO & Co-Founder : Tuan Co (Alex)

Tuan is an experienced engineer with over 10 years experience in high-tech business. He has worked for large enterprises such as VNG and Lazada. In addition, Tuan Co has designed and developed many scalable and high-performance systems which serve millions of users. He is also a blockchain enthusiast and active investor.

**Linkedin:** <https://www.linkedin.com/in/co-le-quoc-tuan-95b09634/>

**Twitter:** <https://twitter.com/CoLeQuocTuan>

### CMO & CoFounder : Anh Huynh (Annie)

Anh graduated from the RMIT University faculty of Marketing. She has worked in companies such as Nguyen Kim, Vietnamworks and Adtop. She is currently in charge of all Bigbom's marketing plans, including building and expanding Bigbom's community of potential stakeholders around the world.

**Linkedin:** <https://www.linkedin.com/in/annie-huynh-5b10829a/>



### **Community Management, Team Leader: Marco Calicchiati**

Marco is responsible for community management of Bigbom. He is also founder of Mazee, former Community Manager of Lockchain.co and SiteGround company.

**Linkedin:** <https://www.linkedin.com/in/marcocalicchi/>

### **Lead Engineer & CoFounder: Hung Quoc (Kenny)**

With 7 years of experience in the field of technology and systems development, Mr. Hung has successfully built advertising systems that serve up to a billion impressions per month.

**Linkedin:** <https://www.linkedin.com/in/quochungnguyen/>

### **Lead UI/UX Engineer: Cau Trang**

Cau is a suprising discovery of Bigbom Team. All his designs bring a completely new breath for the project. With the experience of implementing many projects for clients around the world, he easily grasps the latest design trends for website and mobile platforms.

**Linkedin:** <https://www.linkedin.com/in/cau-trang-866a36146/>

### **Backend Developer: Khanh Nguyen (Brian)**

Khanh is one of the first members of Bigbom's Engineering team. Together with Bigbom's Lead Engineer, Khanh is responsible for developing the backend for Bigbom's products, especially Bigbom iAds.

**Linkedin:** <https://www.linkedin.com/in/khanh-nguyen-236b18135/>

### **Front-End Developer : Thinh Au (Shen)**

Thinh is a talented Front-End engineer, he specializes on building applications with ReactJS. Thinh brings creativity, sophistication to Bigbom's interface. Together with UI / UX design, they become an extremely collaborative team in both work and life.

**Linkedin:** <https://www.linkedin.com/in/thinh-au-tuan-3a1ba5122/>

### **QC Engineer: Thanh Nguyen (Windy)**

Thanh ensures that Bigbom's products are delivered to customers with the best experience. Graduating from one of the most reputable universities in Vietnam, Thanh has some good qualities of a QC engineer including hard work, responsibility, creativity and eager to learn.

**LinkedIn:** <https://www.linkedin.com/in/thanhnguyen0110/>

### **Marketing Executive : An Nguyen (Ann)**

An is a Marketing Executive of Bigbom. She is responsible for all activities related to Bigbom's marketing campaign including PR, Event and Community. Graduated from RMIT University, she is one of the most dynamic and active members of marketing team.

**LinkedIn:** <https://www.linkedin.com/in/an-thien-6b0b17a8/>

## **9. ADVISORS**


### **Financial Advisor : Mr. David Carnell**

Mr. David Carnell currently is Managing Partner at Clean Energy Capital Pty Ltd, - Advisor ICO & Funds Management at Blockchain Intelligence Group LLC Singapore - Industry experts offering all services required to launch a successful ICO including marketing, legal, technical and financial support. He was also CEO of International Fluid, Acqua International and SAFER Energy Groups. Former Director of Finance in BWN Industries

**LinkedIn:** <https://www.linkedin.com/in/david-carnell-7a20ba14/>

### **Strategic Advisor: Dr. David Nguyen Vu**

Founder of Blockchain Intelligence Group, Co-author with Mr. Loi Luu - Kyber Network the book "Blockchain and basic ICOs Investment - Pathway to Financial Freedom". Dr. David is the President of the Vietnam Chamber of Commerce in Singapore (VietCham Singapore), Chairman of Regulus Investment and Capital Holdings, a Singaporean private equity firm manag-



ing \$50 million in funds, he has helped over 120 Vietnamese SMEs and startups expand into the global market through the Singapore gateway.

Dr. David holds a PhD from the Université du Maine – France, and a double MBA in Marketing and Strategy from Nanyang Business School – Nanyang Technological University, Singapore.

**LinkedIn:** <https://www.linkedin.com/in/quangvunguyen/>

### **Marketing Advisor: Mr. Niels Jense de Ruiter**

Niels is a Marketing Advisor and Investor. Advises and assists several ICOs with marketing. Graduated with an MSc in Strategic Management from Erasmus University, Rotterdam, with an extracurricular MBA semester at Keio University, Tokyo. He worked in digital production & marketing, with clients such as General Electric, Adidas, She Il and Heineken. Previously held several positions ranging from founder of a web shop to online marketer.

**LinkedIn:** <https://www.linkedin.com/in/njderuiter/>

### **Co-Founder of Kyber Network : Mr. Victor Tran**

Victor Tran is a senior backend engineer and Linux system administrator. He has experience in developing large-scale infrastructures for multiple social marketing platforms and advertising networks. He is interested in building high performance multi-platform applications. Victor has been involved in blockchain and cryptocurrency development since early 2016 and is a lead engineer at the SmartPool project and Co-founder/Lead engineer at KyberNetwork.

**LinkedIn:** <https://www.linkedin.com/in/vutranhuy/>

**Twitter:** <https://twitter.com/vutran54>

### **Co-Founder of Tomochain : Mr. Minh Chu**

Director of Blockchain Research at Tomochain, Chief Cloud Architect of VCCloud - one of the biggest “AWS like” local cloud service in South East Asia. Minh has a deep technology

research expertise and is a security expert.

**Linkedin:** <https://www.linkedin.com/in/chu-duc-minh-1773a229/>

## 10.PARTNERS



Figure 8: List of current Bigbom's Partnership

## 11.ROADMAP

Our primary focus is Bigbom iAds and Bigcom Eco development. We will open our Beta version of Bigbom iAds as MVP before ICO date.

Below is our roadmap, including our key milestones for technical and business development.-  
Dates and activities may be subject to change.

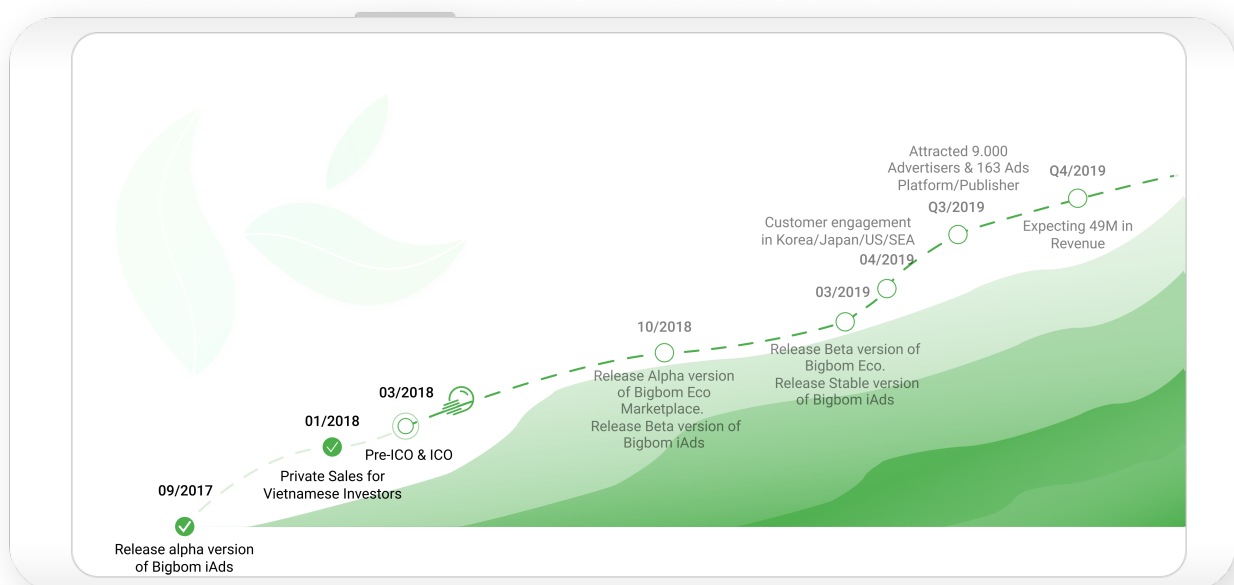


Figure 9: Bigbom's roadmap

## 12. MARKET EXPANSION

Our development strategy is different depending on each stage of the project. In the first phase, we focus on expanding markets in Asia (excluding China) and the United States. Then, we will expand to other markets in Europe, India and China. In order to accelerate the market expansion, we will promote the cooperation of Bigbom with professional and popular advertising partners in the targeted markets. To be clear, we use the "Network Growth" Fund to maximize our partners' participation in the Bigbom Eco ecosystem, and will provide a free fixed amount of time to attract more advertisers using BigBom iAds.

In general, we will expand in different markets depending on the capital we gain during the ICO period.

\$(M)	Singapore	Vietnam	Indonesia	USA	Japan	Korea	India	EU	China
2	✓	✓	✓						
5	✓	✓	✓	✓					
7,5	✓	✓	✓	✓	✓				
10	✓	✓	✓	✓	✓	✓			
12,5	✓	✓	✓	✓	✓	✓	✓		
15	✓	✓	✓	✓	✓	✓	✓	✓	
17,5	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 10: Market expansion based on raised funds

## 13. TOKEN

### 13.1.Token Sale

BBO will be issued as ERC-20 compatible token. Only 15% token is available for public sale.

The reason we have chosen for a hard cap of only 12,000 ETH, with a relatively lower amount of tokens allocated for the token sale, is because we are able to set out and accomplish our first goals with only 12,000 ETH in funds. This approach is more similar to a Seed Funding approach, which is more appropriate given the nature of the businesses in this stage. We could have opted to increase our hard cap and allocate a larger amount of tokens for the

token sale, though we do not want to raise more capital than needed at this stage. This approach further internally incentivizes a long-term approach for Bigbom.

At a later stage, once the product is more developed, we may raise more capital in order to fulfill our further goals for the project. Token freezes are incorporated into our smart contracts to ensure that this will only be possible at a later stage. Details about these freeze times can be found further in this document.

Our Pre-ICO will happen from 28 March 2018 10:00:00 GMT to 31 March 2018 10:00:00 GMT.

Our ICO will happen on April 2018.

The rest of the details can be found in the table below:

<b>Hardcap</b>		<b>12.000 ETH</b>
<b>Softcap</b>		<b>Reached during Private Sales</b>
<b>Total Supply</b>		<b>2.000.000.000 BBO</b>
<b>Token Sale Price</b>		<b>1 ETH = 20.000 BBO</b>
<b>Total Token for Sale</b>		<b>300.000.000 BBO</b>
<b>Require KYC</b>		<b>Yes</b>
<b>ERC20 Token</b>		<b>Yes</b>
<b>Timeline</b>	<b>Pre-ICO</b>	<b>28 March 2018 - 31 March 2018</b>
	<b>ICO</b>	<b>April 2018</b>

Figure 11: Token sale details

#### Note:

We do not guarantee that all investors will be able to purchase BBO tokens during the ICO period. To ensure legality, investors need to provide personal information (KYC) to be included in the whitelist. We reserve the right to refuse investment from citizens from certain countries that have laws prohibiting ICOs or have other relevant regulations. By carefully following legal processes, we will make it easier for BBO tokens to be listed on major international exchanges.

## 13.2.Token Allocation

**Founders & Core Staff (13%):** These tokens are allocated to founders & core staff, who have been involved in this project for a long time before this ICO. These tokens will be frozen for a duration of at least 24 months (2 years).

**Advisors (7%):** Bigbom has appointed several experienced advisors, who will assist with the project not only during the ICO, but also afterwards. These tokens will be frozen for a duration of at least 12 months (1 year).

**Bounty Program (2%):** In advance of the ICO, we are organizing a Bounty Program, aimed at those individuals who assist in bringing Bigbom to a wider audience. There are several ways for individuals to earn bounties, including writing articles, joining the Telegram channel and making a video about Bigbom.

**Network Growth (30%):** Primarily for attracting new advertisers, ads platforms/publishers into the ecosystem. We will not release all the tokens at once, instead we will develop a plan to release the token, depends on ecosystem's development. These tokens will be frozen for a duration of at least 12 months (1 year).

**Reserve (31,75%):** In order to decrease the barrier of entry to our customers, customer are able pay for their services on our ecosystem by traditional payment method, such as credit card. In practice, these customers will essentially buy BBO tokens from the BBO Reserve at a rate 5% above market price, therefore minimizing impact on the overall value of the BBO-token. In addition, these BBO tokens will be directly used within the system, thereby further decreasing supply of the BBO token on the market. This system will go into place after 12 months (1 year). Implementation of traditional payment methods may occur before that period. In this case users buy directly from the market through the Bancor Protocol. In addition, the reserve may be used to raise more capital at a later stage.

Token Sale (16.25%): 16.25% of the tokens are allocated for the token sale, for a total hard cap of 12,000 ETH. The token sale consists of Private Sale (1.25%), Pre-Ico (1.25%) and Public Sale (14%). Unsold tokens will be burnt.

After contract is deployed, all Tokens that do not belong to Token Sale phase will be sent to multiple Ethereum Multisig Wallets. Each wallet represents a different category. The funds in these wallets will be frozen according to the structure laid out in Figure 12.

After the frozen duration, BBO can be withdrawn from these Wallets, but we will apply a maximum withdrawal limit for each Wallets. We also apply another 24hrs lockout if the maximum withdrawal is reached. Table below is describing about the token withdrawal policy.

	Frozen Duration	Maximum Withdrawal	Delay between maximum withdrawal	Burning Policy
Founder + Core Staff	T+24months	10,000,000.00	24hrs	No
Advisor	T+12months	10,000,000.00	24hrs	No
Airdrop & Bounty	T+2months	40,000,000.00	24hrs	No
Network Growth	T+12months	20,000,000.00	24hrs	No
Reserve	T+12months	6,350,000.00	24hrs	No
Public Sale	0	275,000,000.00		Unsold Token will be burnt
Private Sale 1	0	25,000,000.00		Unsold Token will be burnt
Pre-ICO	0	25,000,000.00		Unsold Token will be burnt

Figure 12: Token withdrawal policy



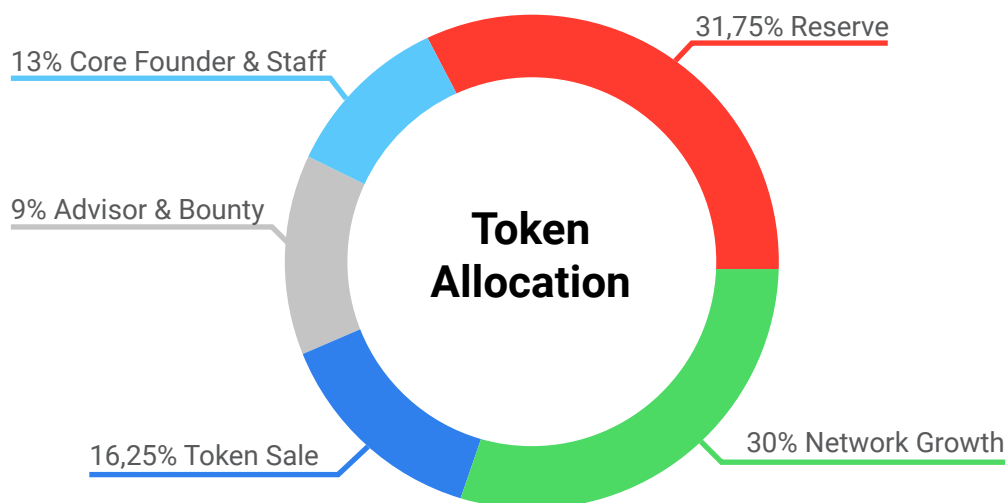


Figure 13: Token allocation structure

## 14. BUSINESS MODEL AND EXECUTION PLAN

We have developed several scenarios for our execution plan, depending on the amount of ETH raised, and the ETH/USD conversation rate. The table below is for a raise of 15m USD. Further in the document, there is specification for lower amounts.

Area	%	Spending in USD	2017	2018	2019
Product Research & Development	40%	\$6,000,000	\$180,000	\$3,300,000	\$2,520,000
Marketing	33%	\$4,950,000	\$74,250	\$2,227,500	\$2,648,250
Business Development	13%	\$1,950,000	\$39,000	\$877,500	\$1,033,500
Administration & Operation	9%	\$1,350,000	\$33,750	\$607,500	\$708,750
Legal	5%	\$750,000	\$22,500	\$337,500	\$390,000

Figure 14: Money spending in 3 years term

Infrastructure and salary. A fair amount of these funds will be used for attracting more data scientists, whom will develop AI algorithm for adjusting ads price on Bigbom iAds and User matching on Bigbom Eco.

## Marketing

Attracting advertisers and agencies into the Bigbom Marketplace.

## Business Development

Expanding into potential markets such as SEA/US/Korea/Japan.

## Administration & Operation

This budget is allocated to cover the expenses of the back-office, as well as the salaries of all the employees, excluding the development center.

## Legal

This budget is allocated to cover the legal expenses for the platform development and its roll out in others region.

**However**, in case we do not reach hardcap, we will continue to implement the project followed the business objectives. Because of that, we will have a slight change in how we allocate funds to suit the actual situation.

Funds	>2M	>5M	>10M	>15M
Product Research & Development	45%	43%	41%	40%
Marketing	26%	28%	30%	33%
Business Development	16%	15%	15%	13%
Administration & Operation	10%	10%	10%	9%
Legal	3%	4%	4%	5%

Figure 15: Use of funds in multiple scenarios

## 15. MARKETING CAMPAIGN AND PR

It is certain that the most effective marketing is word of mouth. In order to do this, Bigbom's main focus will be on developing the best product possible, and bringing the most benefit to the users. As a result, Bigbom anticipates they will be happy to introduce Bigbom Eco to others. In addition, by enhancing promotion, advertising, or being as sponsorship of relevant events in targeted markets will also extremely assist in boosting the Bigbom Eco brand.

Bigbom aims to build a library with the goal of providing advertisers with the best possible experience in products / services in the ecosystem. In addition, customers and VIP partners can be supported directly by Bigbom team.

More important, Bigbom will cooperate globally with influencers in the field of online advertising and pre-coding, to deliver our message to potential clients and partners.

## 16. REVENUE FORECASTS

Before focusing on revenue, our strategy at the first stage will focus on maximizing the number of advertisers and partners participating in Bigbom Eco and Bigbom iAds to expand market share.

There are two main sources of revenue:

### **Revenue comes from Bigbom Eco Marketplace:**

Bigbom helps ad platforms/publishers gain more new and potential customers. At the same time, they will share with us 3-5% of their revenue.

**Note:** For ad platform / publisher only use smart contract, but do not join the marketplace of Bigbom Eco will not require to pay any fee for us.

### Bigbom iAds Revenue:

Our solution purposely helps advertisers save maximum human resources while increasing efficiency and reducing costs. The fee for using BigBom iAds will be between 3-5% based on total spending. As the total cost advertisers can save up to 20-25% or even larger, this is a perfectly fitting fee.

Global advertisers on the Facebook platform and Google, etc. are also potential customers of Bigbom iAds.

Budget allocation	2018	2019	2020
Total of Ad platform/ Marketing Technology *	6.500	8.125	9.750
Total of partners	33 (0.5%)	163 (2%)	780 (8%)
Revenue counted in each partner	\$0	\$5.000	\$40.000
Revenue from Bigbom Eco	\$0	\$812.500	\$31.200.000
Assumed revenue from Facebook and Google **	\$144.900.000.000	\$162.590.000.000	\$182.625.000.000
Advertiser quantity on Facebook and Google ***	16.200.000	18.000.000	20.000.000
Average value of each advertisement	\$8.944	\$9.033	\$9.131
Quantity of advertisers	324 (0.002%)	9.000 (0.05%)	100.000 (0.5%)
Spending budget of advertisers through Bigbom iAds	\$2.898.000	\$81.295.000	\$913.125.000
Revenue of Bigbom iAds	\$28.980	\$812.950	\$27.393.750
Gross Profit	\$28.980	\$1.625.450	\$58.593.750
Cost	\$3.920.000	\$4.477.640	\$8.955.280
EBITDA	-\$3.891.020	-\$2.852.190	\$49.638.470
<b>Note:</b>			
(*) based on report 2011-2017 of Chiefmartec.com			
(**) based on report 2013-2017 of Statista.com			
(***) based on report of Businessinsider.com			

Figure 16: Revenue forecasting in 3 years

### **Note:**

According to Statista.com and Businessinsider.com, from 2013 to 2017, Google's revenue growth and the number of advertisers, Facebook are forecasted to be downward. Besides, data on Global Ad Platforms and Marketing Technologies has a gradual decline (Chiefmartech.com, 2013-2017).

## 17. RISK ANALYSIS

We perform risk analysis based on 3 major area: Technology, Market and Legislation. The analysis relies on our more than 10 years in this industry, and our experience on blockchain technology since 2016

**Technology:** What is your risks in terms of technology?

Stability of decentralized network, especially Ethereum:

We had anticipated that the decentralized network itself is still in early-stage, it could be changed, transformed, or completely disappears without notice. Even we're developing our solution on Ethereum platform, the largest smart contract platform in current time being, there's no guarantee that Ethereum will head to its current plan. A decentralized network is running by community, and very fragile in terms of regulation, so we cannot expecting consistency at this moment.

**Risk Rating:** AVERAGE

Despite this situation, Bigbom believes that smart contract platform has huge potential in the future. Smart contract development still has a lot of space for improvement, innovation. In any circumstances, our solution only can become better, with the evolution of the smart contract technology.

**Impact:** LOW

**Marketplace:** advertisers and partners are not willing to use the Bigbom Marketplace and Bigbom iAds.

Bigbom iAds is convinced to be able to attract advertisers to their platforms, because of several reasons:

The Bigbom Marketplace solves the trust issues which are currently occurring in traditional systems. Bigbom Marketplace is safe and secure, and severely reduces the risk of fraudulent transactions. In addition, it reduces the risk of deferred payment from advertisers.

The Bigbom iAds saves up to 80% in terms of effort and 20% in terms of efficiency, will be a significant attractor.

Finally, Bigbom will create a user-friendly experience which will be easy to use.

**Risk Rating:** LOW

**Impact:** None

**Legislation:** If countries prohibit the use of tokens as intermediary payment assets.

This is a common problem for multiple companies involved in Cryptocurrency. Bigbom Pte Ltd, a Singapore-based company, a country with an advanced and transparent legal system, and has been supportive of cryptocurrencies. In case the growth of Bigbom Eco is hampered by legal issues, Bigbom may consider to move operations to other countries.

**Risk Rating:** LOW

**Impact:** LOW

**Business:** Market expanding difficulties

Each market has different size, culture, legislation and geographic. Expanding into a new market requires a lot of research, networking, presence establishment. Only by challenging

these problems seriously, a company is able to successfully expand their business into other markets.

**Risk Rating:** AVERAGE

We will use raised funds for investment into market research, legal assistance, and opening our representative in upcoming markets. With our current experience in advertising industry, and support from our high-profile advisors, we don't see any big obstacles regarding this problem.

**Impact:** LOW

## 18.FAQS

### **How can advertisers and investors purchase BBO tokens?**

BBO tokens can be purchased during the Private Sale, Pre-ICO, and ICO. BBO tokens may also be purchased on an exchange after the ICO closes.

### **How will Bigbom increase the value of BBO tokens over time?**

The value of BBO will be decided by market, the higher the demand, the higher the value of BBO will be reflected. Our primary target is attracting thousands of advertisers and ads platform/publisher into our ecosystem, generating high volume of transaction. As a result, there will be a high demand for BBO token in the market. Our product development is progressing well, and we are able to release our products in 6 months after ICO ended.

In addition, the total supply of BBO is fixed and unchanged over time.

### **What is the fee per transaction when using smart contract?**

The fee will be determined by the Ethereum Network. We're working on a scheme for letting anyone able to execute our contracts, giving them right to choose the gas price that suit them.

### **The value of BBO can change during a contract's duration. How will Bigbom reduce risk for the ads platform/publisher?**

This is a common problem for the whole cryptocurrency market. When a person accepts payment through Bitcoin or Ethereum, they accept that the value of these coins may change over time. Bigbom is committed to develop a strong Bigbom Eco following in the long-term. If successful, demand for the BBO tokens will increase, which has a positive long-term effect on the tokens. Though, for those cases where users may appreciate more stability, Bigbom Eco will be linked with cryptocurrency converters so that investors and partners can quickly convert BBO tokens to USD or other at currencies.

### **How are the Campaign Reports generated, and how accurate are they?**

With institutions capable of delivering reports through the API, Bigbom Eco will integrate with their APIs to collect information about the advertising campaign and provide advertisers.

For organizations that do not have the ability to provide reports through the API, the advertiser will negotiate with the provider on the authenticity of the campaign results. Examples of such method are Google Analytics and Appsflyer.

### **Do all countries share the same problems between advertiser and ads platform/publisher in the online advertising industry? Which benefits does the ads platform/publisher receive by participating in Bigbom Eco?**

Depending on the country, the proportion of unpaid customer accounts is around 4 to 8%. This is a huge loss of revenue compared to the 0.1% charge of Bigbom Eco (2.5 to 5% compared to total loss). Therefore, ads platform/publisher are expected to have a significant revenue gain by using Bigbom Eco. In addition, as the community of BBO advertisers grows, ads platform/publisher will have more opportunities to acquire new customers through the Bigbom Marketplace.



## **Why should advertiser choose ads platform/publisher on the Bigbom Eco Ecosystem? What are the benefits?**

First, Bigbom Eco will use a smart contract to guarantee maximum benefits for the Buyer. The ecosystem's marketplace allows advertisers to easily search for and select service providers. Advertisers can make informed decisions by reviewing the service providers' ratings. The ratings are provided by the Bigbom system and other advertisers, and are transparent, objective and accurate.

Second, once Bigbom Eco is fully developed and used widely, it will become a common platform for all parties in the online advertising industry. Being a part of this ecosystem will be an advantage for all advertisers, and platforms who seek new customers, partners and service providers.

## **Where is Bigbom based?**

Bigbom Limited is a British Virgin Island based company (BVI Company No 1971098). BigBom Limited is the parent company of Bigbom Pte Ltd, a Singapore-based company (UEN No 201801349C). Both companies are headquartered at 160 Robinson Road, SBF Center, # 26-10, Singapore 068914.

BigBom Limited is the issuer of BBO token whereby BigBom Pte Ltd will be in charge of business development including building the network of Advertising Agencies that will join the BigBom Ecosystem.

## **If Facebook or Google temporarily suspend all ad APIs and change the distribution algorithm then why?**

It is unlikely for Facebook and Google to suspend all their API, as there are hundreds of major advertising companies in the world that are connected to their APIs. And as discussed above,

they have a policy of developing the Agency network. Bigbom iAds does not interfere with the delivery of ads on Facebook, Google and other platforms.

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