



ViCA Whitepaper

Version: 2.0.0

(First Release: 2021-05-21, Last Update:02/23/2022)

# **Arbitrage Supported Ecosystem for Next-Generation Metaverse**

**Author:** DongKoo Lee

**Editor:** Ali Raza Joyia, Ahmed daffar

ViCA is a comprehensive ecosystem where arbitrage supports the development of a shared virtual reality Metaverse. ViCA is building a unique virtual world that is beyond digital assets representing land, it is a comprehensive system of 3D objects, buildings, cities, plants, personas, and way more that will be available in the form of NFTs. All these assets will be developed by ViCA team and members of the community helping shape the ultimate parallel world as desired and pace up the transition towards the Metaverse. The ecosystem will be supported with its native token called the ViCA token which is based on an unprecedented Noflation concept and the arbitrage trading model.

## Table of Contents

<b>Introduction:</b> .....	3
<b>Operation Policy:</b> .....	3
<b>ViBot- An Automated Arbitrage System:</b> .....	4
<b>ViCA Token:</b> .....	5
Ethereum’s Smart contract and ERC-20 standard: .....	5
The concept of Noflation:.....	6
Business Model behind ViCA Token: .....	7
No Offerings or Pre-sales:.....	8
<b>ViCA’s e-wallet:</b> .....	9
<b>Use Cases:</b> .....	9
Exclusive Vending Machines:.....	9
ViCA token trading: .....	9
Buy and Sell NFTs: .....	9
Metaverse Marketplace: .....	10
<b>Conclusion:</b> .....	11
Contract Address and Distribution Status.....	12
Distribution Status and Distribution Plan:.....	12
Disclaimer (Legal Notice).....	13

## **Introduction:**

The word “Metaverse” and the vision towards a shared virtual universe is gaining popularity following the announcement and claims by major tech companies. But the concept of this virtual reality environment where everyone can interact, play games or perform other activities is not new. The term Metaverse and its concept was introduced in a science fiction novel written by author Neal Stephenson in 1992 where he envisioned that lifelike avatars of individuals exist together in a completely virtual world made up of 3D infrastructure. Since then many companies especially the gaming community have been trying to give this concept a real form. Metaverse in its simplest form can be defined as the blend of different technologies including virtual reality, augmented reality, video, and the 3D avatars combining to form a virtual space, an alternative world where users can work, play games, communicate, attend meetings, and hangout on virtual trips around that shared virtual world.

ViCA sees Metaverse as an evolving concept, which means the vision of it is continuously developing and changing according to the needs. This will help shape the most diverse, adaptable, and unique virtual world, similar to our real world where there are so many differences and changes but still behaves as one world.

Although multiple tech giants are now diverting their business strategies to invest in Metaverse and allow their users to interact and share content in that virtual ecosystem. However, a majority of these companies are completely centralized following their own policies, and are aimed at revenue generation only from the users and content creators participating in it. ViCA on the other hand has introduced a completely decentralized concept based on the Ethereum blockchain allowing the massive user base of Ethereum to enjoy all benefits of their contribution and participation through the ViCA platform.

ViCA seeks to propose and prove an unprecedented business model by reinterpreting and converging numerous existing innovative business strategies and development methodologies in the blockchain ecosystem. Through this Whitepaper, ViCA proposes to its participants a new form of virtual reality Metaverse supported through a unique financial system based on arbitrage trading.

## **Operation Policy:**

ViCA is focused on building value through its utilities and applications. The platform’s operation strategy is very simple as it is a completely decentralized platform so ViCA will not make any decision or artificially influence the market. For example; manipulating the prices of its token that will serve as the platform’s currency and will also be available in the crypto exchanges for trading. ViCA foundation doesn’t operate by

diluting the market price through over-supplying the token in the market as it will leave the market to shape itself on its own. Therefore, ViCA’s operation plan upholds the following principles.

- Underlying assets used for arbitrage trading will perpetually be used for trading purposes only
- Foundation’s tokens will have their own use in the ecosystem for NFTs, Gaming, and ViCA products
- All revenue generated from the arbitrage trading system will be used for building the ecosystem

## ViBot- An Automated Arbitrage System:

One of the essential products of ViCA is its automated arbitrage trading system called the ViBot. It plays an important role in the revenue model of the ViCA platform. Unlike other platforms or DeFi protocols, ViCA does not conduct any pre-sales to generate revenue as it is a major liability on the project. ViCA relies on arbitrage trading to generate revenue which is done with the help of ViCA’s unique ViBot. Arbitrage Trading is about taking advantage of the price difference of any virtual asset on two different platforms or exchanges at any given instant of time.

The virtual assets received from the ViCA token holders in the form of USDT or other trading pairs will be used for arbitrage trading between popular exchanges in Korea i.e. Binance and the Upbit. The image below shows YouTube's real-time stream of arbitrage trading status done with the help of our unique ViBot. The data shows operation details for about one month. The initial capital resulted in the total revenue of KRW 37.97M, which is approx. 1.52% in terms of RoR. While it cannot be guaranteed that this level of RoR would always persist, it can be seen that if operated with a similar level of RoR for 46 months the principal would double.

The screenshot displays the ViBot dashboard with the following sections:

- INITIAL BALANCE (운용 자금):**

Exchange	Asset	Amount
upbit	KRW	629,671,000.00
	ETH	262.60
binance	USDT	500,397.12
	ETH	250.00
- ASSET CHANGE (자산 변동량):**

upbit	KRW	90,637,356
	ETH	0.00
binance	USDT	-47,218
	ETH	1.75
- MARKET DATA (시장 현황):**
  - \$1 = 1,142.09 KRW
  - upbit-binance ETH-ETH Premium: **0.40%**
  - Timestamp: 2021-07-30 00:44:28
- CURRENT STATUS (현재 상태):**
  - COMPLETE: 1,430건 (3,654.3928 ETH)
  - PENDING: 297건 (804.3379 ETH)
  - SLIPPAGE: 37건 (9.8562 ETH)
  - 거래 기록 체크
- ORDER HISTORY (주문 기록):**

주문 시간	거래소	마켓	거래 포지션	주문 시점 가격	거래 수량	주문 처리 상태
2021-07-23 13:11:38	UPBIT	ETH-KRW	매수	2,418,000.00	0.0532	체결 완료
2021-07-23 13:11:35	BINANCE	ETH-USDT	매도	2,062.74	0.0532	체결 완료
2021-07-23 12:57:12	UPBIT	ETH-KRW	매수	2,412,000.00	0.0097	체결 완료
2021-07-23 12:57:09	BINANCE	ETH-USDT	매도	2,059.51	0.0097	체결 완료
2021-07-23 12:56:54	BINANCE	ETH-USDT	매도	2,058.53	0.0065	체결 완료
2021-07-23 12:56:51	UPBIT	ETH-KRW	매수	2,412,000.00	0.0065	체결 완료
2021-07-23 12:35:30	BINANCE	ETH-USDT	매도	2,060.47	1.3918	체결 완료
2021-07-23 12:35:27	UPBIT	ETH-KRW	매수	2,415,000.00	1.3918	체결 완료
2021-07-23 12:35:15	BINANCE	ETH-USDT	매도	2,061.12	0.4623	체결 완료
2021-07-23 12:35:12	UPBIT	ETH-KRW	매수	2,415,000.00	0.4623	체결 완료
2021-07-23 12:15:18	UPBIT	ETH-KRW	매수	2,417,000.00	11.5751	체결 완료
2021-07-23 12:15:15	BINANCE	ETH-USDT	매도	2,063.10	11.5751	체결 완료
2021-07-23 11:44:49	BINANCE	ETH-USDT	매도	2,063.35	1.5209	체결 완료
2021-07-23 11:44:46	UPBIT	ETH-KRW	매수	2,410,000.00	1.5209	체결 완료

Part of the revenue generated from arbitrage trading will be used to create and operate ViCA's Metaverse tools and systems like gaming, NFTs, marketplace, and developer space, and the rest will be incorporated into ViCA's basic trading seed to generate compound interest. Our arbitrage trading model is only initial support to our self-sustaining ecosystem.

## ViCA Token:

ViCA token will be the native token of the platform allowing the users to easily buy and sell the digital assets that will be used in the Metaverse. Moreover, the ViCA token will also serve as a form of digital currency that will be listed on both centralized and decentralized exchanges. This native token is based on the ERC-20 standard and follows all the conditions as any other Ethereum token. ViCA token will be issued in a limited capacity based on the Noflation concept and the arbitrage trading model to allow its holders to enjoy multiple benefits associated with the token. Comprehensive detail on the concept and philosophy behind the creation of this unique ViCA token is presented below:

### Ethereum's Smart contract and ERC-20 standard:

Without a platform, circulating new currency or building infrastructure would be costly. Here, Ethereum's Smart Contract is an innovative tool that reduces the infrastructure-related requirements (Time and Cost) for issuing new currency. Ethereum suggests a method of making a unique cryptocurrency that anyone can issue using a Smart Contract. ViCA can take the strengths of Smart Contract as it runs in the form of a token powered by the Ethereum ecosystem.

ViCA token utilizes Ethereum's Turing-complete scripting language-powered Smart Contract. Smart Contract can be built on the Ethereum blockchain in the form of programmable codes. Ethereum explains that the token

```
function _transfer(address sender, address recipient, uint256 amount) internal
virtual { require(sender != address(0), "ERC20: transfer from the zero
address"); require(recipient != address(0), "ERC20: transfer to the
zero address");
    _beforeTokenTransfer(sender, recipient,
amount);uint256 senderBalance =
    _balances[sender];
    require(senderBalance >= amount, "ERC20: transfer amount exceeds balance");
    _balances[sender] = senderBalance - amount;
    _balances[recipient] += amount;
    emit Transfer(sender, recipient, amount);
}
```

system is a code-backed database where processed records are kept permanently. The codes used to transfer a token on ViCA are as follows.

These codes verify the validity of the accounts of the senders and the recipients, check the balance, and control the volume of the tokens. One only has to pay a small volume of Gas which is a transaction fee for using Ethereum blockchain when sending ViCA token to someone by running the codes. When the codes run normally, processed records are written on the blockchain, and the balance status gets updated for confirmation.

A standardized protocol named ERC-20 is used when issuing a token on the Ethereum blockchain. ERC-20 is a standard protocol supervised by EIPs (Ethereum Improvement Proposals), such standardization provides several benefits, and one of the benefits is 'Interoperability.' ERC-20 is a standard protocol, but the codes are constantly being updated. A huge number of community members discuss and improve the protocol by handling issues including but not limited to the vulnerability of the codes of tokens issued in the past, floating-point calculations, and hacking aimed at security breaches. Individual verification of the security vulnerability or safety by token issuers is highly inefficient as you can see in the case of Smart Contract where the Ethereum platform was used to build a currency system.

There are several ways to solve the inefficiency problems. However, ViCA solved the problems by choosing solutions from a company named OpenZeppelin<sup>1</sup>. OpenZeppelin built a standardized tool for developers and independently runs security audits. The codes are then offered to the developers. OpenZeppelin offers solutions that shorten the development period and reduce security audit costs. ViCA token was written<sup>2</sup> with the most recent and settled ERC-20 codes (Contract Version 4. x and Solidity Version 0.8.0) offered by OpenZeppelin at the time of token issuance (May 1st, 2021)

## **The concept of Noflation:**

In order to understand the concept behind the ViCA token, the understanding of the concept of 'Noflation' which is not taught in the existing financial system is essential. 'Noflation' is terminology not well known. The traditional financial system is run in a format in which the central bank issues currency to expand market size. The currency issued by the central bank is basically 'debt.' Valueless paper bills are issued in exchange for 'something' with value, which then serves as the 'warranty' for the currency issued. This is the fundamental attribute of the currency issued by the central banks. The total amount of currency to be supplied to the market increases due to various reasons or to tackle the budget deficit. This process of currency issuance

---

<sup>1</sup> OpenZeppelin (<https://openzeppelin.com/about/>)

<sup>2</sup> ViCA Token Contract Code (<https://etherscan.io/address/0x19d4beb2bc410b80084fcbd0ac024326f4d3a370#c>)

in the market leads to inflation causing a decrease in the value of currency or in other words reducing its purchasing power.

In short, a system with a continued occurrence of inflation is a structure in which the currency holders have to bear the loss as the value of the currency they hold gradually decreases. In consideration of this, ViCA chose to apply an innovative and unusual idea.

**“What if the currency stopped being issued and all economic activities would have to be conducted using only the currency issued until then?” No more currency issuance means no more inflation.**

If the need for currency increases while the total amount of currency distributed in the market does not change, transactions will take place with a premium, and prices of goods will become higher due to the principle of scarcity. While the market does not experience inflation, the ‘relative value’ will increase, or in other words, increase in ‘value of trust.’ A simple example: USD 1 could be exchanged with KRW 1,000, but with higher trust, the amount of KRW exchangeable with USD 1 would become KRW 800.

Now, use the same principle to convert KRW to ViCA Token. ViCA token’s issue amount is fixed at 2 billion, and the platform will not conduct ‘Sale’ or ‘Offering’ to finance current cost from future revenue so there will be no liability. The project also does not make any promise to pay ‘interest.’ 1 ViCA will remain as 1 ViCA ten years later. This completes an extremely simple model which can be summarized as:

- ViCA token is a Noflation token in which holders can expect no artificial manipulation in the price
- ViCA project doesn’t conduct any pre-sales of its native token
- It doesn’t guarantee a 1:1 exchange like stablecoins with any other digital asset. While the exchange rate is solely determined by the market value.

## Business Model behind ViCA Token:

ViCA has built a business model that resembles a mathematical model also called FSM (Finite-state Machine) or Finite Automata. It refers to a self-operating machine that completes its tasks without complex

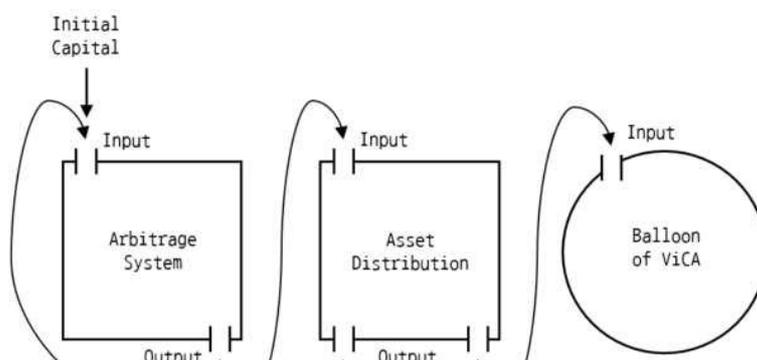


Figure 1: Balloon of ViCA, A representation of ViCA Token's ecosystem

human controls. The concept of self-operating machines or the Automata is an idea widely used in fields of hardware and software in modern times. ViCA Token's asset ecosystem logically consists of three domains. The system was designed as an independent ecosystem that grows itself with the arbitrage trading profits using the price gaps among virtual assets.

ViCA Token's business model shall take place in an ecosystem called the Balloon of ViCA. Initially invested underlying assets shall become the underlying assets of the Arbitrage System. The profits gained from arbitrage trading shall become the output value and be given at the next phase as the input value to the asset distribution system. Asset distribution shall be divided into two output values according to the ratio designated by the ViCA foundation. The first output shall be entered as the underlying asset of the arbitrage trading system and be used for the purpose of increasing the working assets. The second output shall be used as the cost for the building, developing, and running of ViCA. In other words, it shall become the resource for constantly growing the ecosystem also known as the Balloon of ViCA.

The wind was there from the beginning of time but started offering electricity to mankind since wind power generators were built. In the case of ViCA, the Arbitrage trading market in the virtual asset realm is like wind, and the arbitrage trading system is like a wind power generator. And the Balloon of ViCA functions as a limitless, infinite capital capacitor.

**ViCA pursues an extremely optimized business methodology: “Think Big, Act Small, Fail Early, and Learn Fast”**

### **No Offerings or Pre-sales:**

While anyone can issue coins and tokens, if the token is sold at a set price through sale, the marketing costs and exchange fees would become the liabilities of the project, and given the nature of Noflation tokens, more token holders will result in an exponential increase in the burden of liabilities for the project. From the Noflation point of view, ViCA sees that this is the fundamental problem for hundreds of failed virtual asset projects. Projects with sales for financing often experience price slumps due to early investors' large-scale sell to realize the profit. This is why ViCA chose not to adopt the type of business that raise fund through the sale and locks tokens.

To guarantee participant trust on price, the project will not conduct any pre-sale. Also, the project does not conduct an offering of any form. For example ICO, IEO, and STO. Proposing a solid model to token holders and permanently maintaining its circulation is ViCA's only direction. To uphold ViCA's philosophy, ViCA Foundation covered all initial costs required for the development and operation of its service. This represents ViCA's certitude based on its faith in its future and confidence in its business model. Raising funds

by exchanging actual costs with the faith for the future is a bag of sweets within reach for projects. However, the excessive attraction of investment ultimately results in a situation similar to loaning money in Noflation. This easily leads to the insolvency of exchange guarantees, and currency that lost trust soon loses its vitality. In the end, virtual assets issued using such means fall into debt.

## **ViCA's e-wallet:**

As the ViCA platform will allow its users to use its native token for plenty of applications including trading, swap, buying NFTs that can be used in the virtual shared Metaverse, and purchasing products from vending machines, the platform will also develop its own integrated digital wallet for its users and token holders. Although there are plenty of Ethereum based third-party wallets i.e. Metamask, their block confirmation time is too high which cannot be beneficial for applications like vending machines where faster processing is required. ViCA's own digital wallet will be highly secure, custodial, and Ethereum-based to assist in all types of the transaction including crypto and non-crypto payment options. This e-wallet will have a faster response time, better processing speed and the holders will not have to wait for delayed block confirmations.

## **Use Cases:**

### **Exclusive Vending Machines:**

ViCA will allow its users and token holders to enjoy the purchasing experience with exclusive ViCA vending machines physically present in different locations across the country. The first vending machine is already developed and on display allowing the users to buy any product with ViCA token or any other Ethereum-based token. However, ViCA token holders will enjoy discounts on the products and will experience better payment processing speed through ViCA's e-wallet.

### **ViCA token trading:**

ViCA token will be listed on multiple centralized as well as decentralized exchanges to be utilized as a virtual asset in the crypto ecosystem. ViCA token supply is fixed at 2 billion while 90% of the supply will be burned in the future leaving a very limited supply that will increase the benefits for token holders due to scarcity and subsequent increase in value in the market.

### **Buy and Sell NFTs:**

ViCA will launch 1 Million NFTs in the form of 3D objects, buildings, infrastructure, plants, personas, etc. solely developed by the ViCA team and the community members that can be used in the Metaverse. ViCA will launch the NFT collection on OpenSea until a separate marketplace is developed on the platform. OpenSea

will help attract and reach a bigger community and user base in a more decentralized and permission-less manner increasing the ViCA audience. Holding ViCA tokens will also provide several benefits and privileges while buying any NFT.

### **Metaverse Marketplace:**

The ViCA platform is also developing a marketplace for the next-generation virtual shared universe where the users will be able to trade between different goods and NFTs to be used in the Metaverse. ViCA token holders will have access to some exclusive rewards and discounts on the marketplace and all ViCA NFTs will also be available for trading on that marketplace.

As time goes by, ViCA holders will enjoy more applications in the virtual as well as the real world by just holding ViCA that includes but is not limited to the gaming NFTs and other collectibles.

## **Conclusion:**

ViCA's ecosystem is founded on a sustainable and semi-permanent system based on arbitrage trading to support the virtual shared Metaverse. Arbitrage trading is only the start, ViCA is about building knowledge and contributing to the development of future applications for cryptocurrency including vending machines, gaming, NFTs and other digital collectibles to be used in the Metaverse. Part of the revenue from arbitrage trading will be used as seed for compound interest, and the rest will be used to build the ecosystem. Arbitrage trading status will be live-streamed on multiple online platforms including YouTube. ViCA's native token will be used to support the business model as the virtual asset received through token holders will be used in arbitrage trading. Moreover, it will also be used in all of the platform's application as a virtual currency.

## Contract Address and Distribution Status

ViCA Token Contract Address:



<https://etherscan.io/token/0x19d4beb2bc410b80084fcbd0ac024326f4d3a370>

Token Consignee Address:



<https://etherscan.io/token/0x19d4beb2bc410b80084fcbd0ac024326f4d3a370?a=0xb64d5abb7003f7184535fa430496e803eba11a5b>

### Distribution Status and Distribution Plan:

As ViCA Token transfers are made through ERC-20 blockchain-based transactions, all information regarding transfers can be checked at any time. Access ViCA Token Contract Address at Etherscan.io to see every detail of distribution status

## Disclaimer (Legal Notice)

Please carefully read all articles of this disclaimer. If you are not confident with your actions, we recommend that you seek assistance from your legal, financial, or tax advisor at any time.

1. This Whitepaper was published as a reference to assist understanding of the ViCA Project as of the time of writing (December 26, 2021). The contents of the Whitepaper may be continuously reviewed and amended regarding the progress of the business. This Whitepaper is not a final version.
2. This Whitepaper shall not be interpreted as sales of, our proposal to sell tokens of ViCA Token (ViCA) issuers/distributors / related businesses or interested parties under any circumstances. Providing or showing this Whitepaper, or the Whitepaper itself shall not serve as the basis or dependent material for the decision to invest or enter into a contract.
3. ViCA Token (ViCA) does not constitute a security, unit of business trust, group investment plan, or fundraising, each within the meaning provided in the Singaporean Securities and Futures Act or the equivalent class under the laws of other jurisdictions. This Whitepaper is not provided as a business plan, prospectus, or investment proposal. This Whitepaper, in any jurisdiction, shall not be interpreted to constitute an investment proposal for security, a unit of business trust, group investment plan or fundraising, or a means of recruiting investors.
4. All information in this Whitepaper was not reviewed, inspected, or approved by financial regulators. We notify that such measures neither were carried out nor are to be carried out in any jurisdiction.
5. Those purchasing ViCA Token (ViCA) shall not understand, interpret, classify or treat the token as follows:
  - Currency other than virtual asset
  - Bond or stock issued by an institution
  - Rights, options, futures, or derivatives over bond or stock
  - Guarantee on investment return or loss aversion
  - Rights over differences contract or another contract for a guarantee on investment return or loss aversion purposes
  - Unit of securities such as group investment plan or business trust, or derivatives