WHITEPAPER

ARKER

https://arker.io

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Intro

After the success of platforms based on the blockchain[1] technology, more and more services are adding the use of this technology in order to offer the user a service with decentralization as an added value. From **Arker Labs**, we have been working for the last few months to bring the first game that rewards the user for playing with a real benefit instead of a resource whose only use is in the game itself. So, thanks to the blockchain technology, **Arker** is the first video game that rewards the user with a decentralized cryptocurrency that we called **Arker Coin**. This cryptocurrency can be used by the player within the game as a resource - to obtain new objects and / or benefits that allow them to progress faster; but can also be used outside the game to get goods or services on the internet.

The issue of the **Arker Coin** will be made as a token[2] of the Waves platform[3], one of the largest and leading networks based on blockchain; which, thanks to its complete ecosystem, will streamline the development of the project and provide a solid and secure network of nodes. As well, it will provide the project with a token that will support, immediately after its issuance, all the technologies of the platform such as the decentralized exchange market (DEX), leasing or Smart contracts.

Arker Labs initial supply of coins (ICO[4]) helps fund project completion and debugging costs (**Arker** and **Arker Coin**) as well as support the cost of marketing and launching the game at iOS, Android and Steam stores.

[1] Distributed database with a continuously growing list of records, called blocks, which are linked and secured using cryptography.

[2] Coin that uses the blockchain.

[3] Open platform designed to facilitate the use and massive adoption of the blockchain. Anyone can use Waves to create, distribute and market their own cryptographic token. The platform is totally decentralized, transparent and auditable.

[4] ICO (Initial Coin Offering) is a means of collective financing where a specific percentage of a new issued cryptocurrency is sold to investors in exchange for legal tender or other cryptones.

Arker

Project description

Arker is an online video game based on collectible items. Centered on its own universe, the player will take part in a long and ancient clash between different clans, who fight over the control of the Ohm lands. The player must take part of a clan and train their hero until they reach their maximum potential, as well as equip them with the best and most powerful items to help them take control over the lands of Ohm, where rare arks containing countless treasures have been appearing for some time now. But the most important thing for your hero is their abilities, which will allow them to fight against the players of other clans; so you must get the most powerful, interesting and rare abilities according to their class and level in each moment.

When a player begins their adventure, they will be joined by a hero of a class of his choice. This newly arrived hero in the lands of Ohm must fight against other newly arrived heroes in order to gain gold and experience. With gold you can buy new items and skills in the nearest store, but as you get stronger and level up, more new powerful heroes will come at you to dispute control over the Ohm lands.

However if you really want to reach full potential, your hero will have to make use of a rare and valuable coin they will receive each time they win a match. In exchange for this currency, a few select itinerant traders will offer you rare items and skills that will help you on your way to victory. But you never know what you're going to receive from these strange merchants.

The clan that has won more battles every week will be in control of the lands of Ohm, which will allow all the heroes of that clan to get the arks that appear as long as they maintain control of the area.

Your hero may join a powerful clan or gather other heroes to form a new one.

Items and abilities

An **item** is an equipable object that can give your hero an extra amount of life or energy during battle. The items can be equipped as helmet, armor, weapon or boots, and can be exclusive for a single class or a minimum level. In addition, the item equipped as a weapon will give an active ability that may be used by the hero once per combat.

An **ability** is an attack that your hero can perform during a battle. Each skill has a cost of wisdom, so the player can give his hero as many abilities as the amount of wisdom he dispose (eight being the minimum). Once in a battle, four of the skills previously given to the hero will be randomly selected.

Game mechanics

Preparation

To bring the hero to battle, the player must prepare them by equipping their character with a helmet, armor, weapon, boots and 8 abilities, which, as a whole, cannot exceed a cost of 50 wisdom.

Matchmaking

The matchmaking system will choose the most suitable player among the available ones so that the difference between levels of both heroes is the minimum possible. To do this, the system will initially search for a rival with a maximum difference of up to three levels. If not possible, the search range will be extended to a difference of six levels. If a rival is not yet achieved, the hero will fight against a balanced bot for his opponent.

Turns

Once in combat, the system will randomly select four of their eight equipped abilities for each hero. It will also be randomly selected which player starts first.

The hero chosen to attack first will have 30 seconds to choose one of their four abilities, as well as an amount of energy to use along with that ability. Once selected, the other player will be notified of which ability the opponent will use, but not what amount of energy is to be used. Thus, the player must think what ability and amount of energy to use to overcome his opponent's attack, again with a 30 seconds limit to choose. Once both have chosen, the hero who has used a more powerful ability, taking into account the energy used together will do the damage to the other hero.

The next turn, the other player will start the round. In this way, the battle will end when a hero has exhausted all his life or both players have used their four abilities.

End of the game and rewards

At the end of the game both players will get rewarded with experience and gold. The winning player will receive, in addition to greater experience and gold, a variable amount of Arker Coins.

The gold will allow the player to purchase of items and specific skills in the store. With Arker Coins, the player can purchase arks that will contain six items. Four of these will be normal, the fifth will have a 50% chance of being normal, 40% of being rare and 10% of being extraordinary, and the sixth will have a 70% chance of being rare and 30% of being extraordinary.

The price of the arks will be regulated on a daily basis, based on the average value of the Arker Coin in the decentralized exchange market of the Waves platform (DEX), in order to avoid a sudden change in the value of the arks in relation to the fiat coins that could cause a cost increase of the ark.

Gamification beyond the game

One of the main attractions of the game is the possibility of the player to be rewarded with a cryptocurrency that has a value beyond the game, so you can get an additional benefit from them.

The use of the Waves platform gives the player the possibility of going to their exchange market (DEX) to change their token for fiat money. The player can already exchange from the first day Arker Coins with other cryptocurrencies or fiat[5] currency in the same decentralized exchange of Waves.

Token flow inside the project

Given the nature of the game, the project has a wallet of Arker Coins. This wallet will be used to award players who win each battle by sending a variable amount to their private wallet.

When the player has collected enough Arker Coins, they can redeem them for a ark containing different items and abilities (see End of the game and rewards). When the purchase is made, the payment for this reward will be transferred back to the private wallet of the project. This generates a constant flow of Arker Coins between wallets.

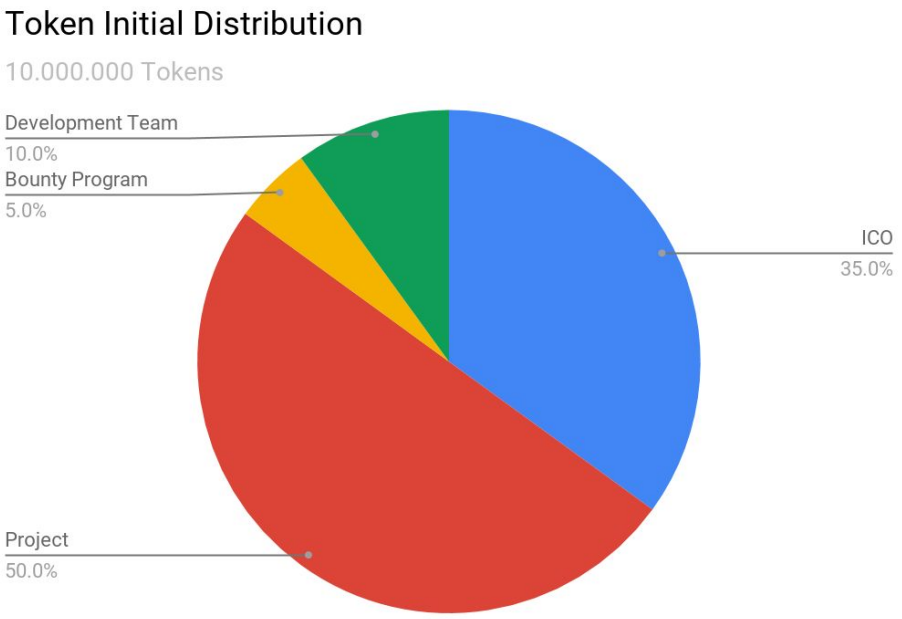
Arker Coin

Initial issue and distribution

The initial and single issue of **Arker Coin** will be TEN MILLION (10,000,000) token to be initially distributed as follows:

Name	`Arker Coin (ARKER)`
Identifier	`E8gDQh5aDz6VQMwmFhUrpMERorwje6AqNe4FcjGSCNo6`
Total supply	`10,000,000 not re-issuable`[6]
Operation of the project	`5,000,000 (50%)`
ICO	`3,500,000 (35%)`
Dev team	`1,000,000 (10%)`
Bounties	`500,000 (5%)`

[5] Fiat money is a currency without intrinsic value established as money by government regulation or law, like Dollars or Euros.
[6] Total supply can't be modified to add more coins



Percentage of the Project

The operation of the project requires a constant flow of currency between the game and the player. 50% of the total emission will be dedicated for this purpose; so, when a player is to receive their reward for winning a game or achieving milestone, this amount will go out from the game's wallet to the player's wallet. Likewise, when a player makes a purchase at the game store using their coins, the purchase amount will be sent from the player's wallet to the game wallet.

The amount that the player will receive as a reward will be variable based on three key points: the remaining amount in the wallet, the number of active players and the value of this in the market. The purpose is that the reward is always fair and equitable throughout the life of the game, so that each player always needs about 100 games to win around $ 1.

Since the reward could be worth less than the unit of the coin, the name it will receive in the game will be Arker Coin Fragment. 1 fragment of Arker Coin is equivalent to 0.00000001 Arker Coin.

Initial coin offering (ICO)

In order to raise the necessary funds to carry out the project successfully, the initial coin offering will be open for 50 days[7], when anyone anyone interested in the project can participate by donating Bitcoins, Ethers and Waves. As a reward, you will be awarded with a fair share of Arker Coins for your faith in the project.

[7] The maximum amount to be collected through the Initial Currency Offer (ICO) will be 1 million euros. In the case of reaching this amount, the offer will be closed even if the term of 50 days has not been reached.

Funds guarantee

The security and transparency is one of the pillars of the project, for that we wanted to have one of the most pioneer companies in cryptocurrency payments: Chip-Chap[8]; we reach an agreement to be in charge in the recollection of the ICO funds.
In addition, the custody of the credit/debit card funds will be through Soldier Lawyer[9], an outsider entity to the project who will act like escrow, ensuring the total transparency and the proper use of the funds[10].

Bonus program

Once the initial coin offering has been initiated, during an initial period all the contributions made will be subsidized as follows:

- If the contribution is made in the first two days: 15% bonus on the contribution.
- If the contribution is made between the third and the seventh day: 12% bonus on the contribution.
- If the contribution is made during the second week: 10% bonus on the contribution.

In this way, for example, a person contributes 1 BTC on the fifth day of the initial money offer, once it is completed, the reward will be based on a contribution of 1.12 BTC.

[8] https://www.chip-chap.com/
[9] https://soldier.lawyer/
[10] Contract of sale (spanish): https://drive.google.com/open?id=1slRu1UZoxLmbcuYHqGPaWukMDcbEO2vH

Waves Platform

Waves is a decentralized financial exchange platform written in Scala under its own blockchain based on a proof of stake, unlike other block chains like Bitcoin or Ethereum that base their network on the proof of work. Among all its functionalities, the following were the ones that led us to choose this technology to implement our rewards system:

1. The creation of custom application tokens (CATs) in the network itself quickly and easily.
2. Its own decentralized exchange market (DEX) where all the custom tokens that are created on the network are available from the moment of their creation.
3. The speed of block-processing, because thanks to a new version of the blockchain called NG (Next Generation) it can process 100 transactions per second. Other blockchains such as Ethereum can only process 20 transactions per second.

As part of our commitment to the WAVES platform project, we have created a node whose purpose is to help distribute and decentralize the network. Given its LPOS (Leased Proof of Stake) nature, any wallet with more than 10,000 WAVES can be a complete node and process network transactions. But since it is not easy to get this amount, the network provides a 'leasing' system that allows loaning from one wallet to another an amount of WAVES without losing control over them. In this way, the WAVES never leave the user's wallet but lend them and remain blocked until they decide to cancel the loan and "recover" the control to devote them to another purpose. When the sum of the WAVES that the wallet owns, along with those received by this loan, reach the necessary 10,000 WAVES it begins to process transactions and generate blocks.

In addition, having our own node in the Waves network will allow us to accept any token as a fee for processing a transaction (even one issued by us). Since the nature of the game will cause us to emit a lot of transactions, commission costs could skyrocket; however, having our own node will solve this problem. In this way, the costs per transaction can be very reduced compared to other networks like Bitcoin that only accepts the own currency or Ethereum that only accepts "gas".

Arker Team

Team

To successfully accomplish the Arker project we have created the following team:

Juanjo Chust ***Founder / CEO***
After almost 5 years directing a small development team in a company specialized in online payment methods, he decided to specialize in blockchain technology.
https://github.com/Nytyr

Aaron Martínez ***Operations***
After almost 5 years directing a development team in a company specialized in online payment methods, he has specialized in blockchain technology.
https://github.com/zodier

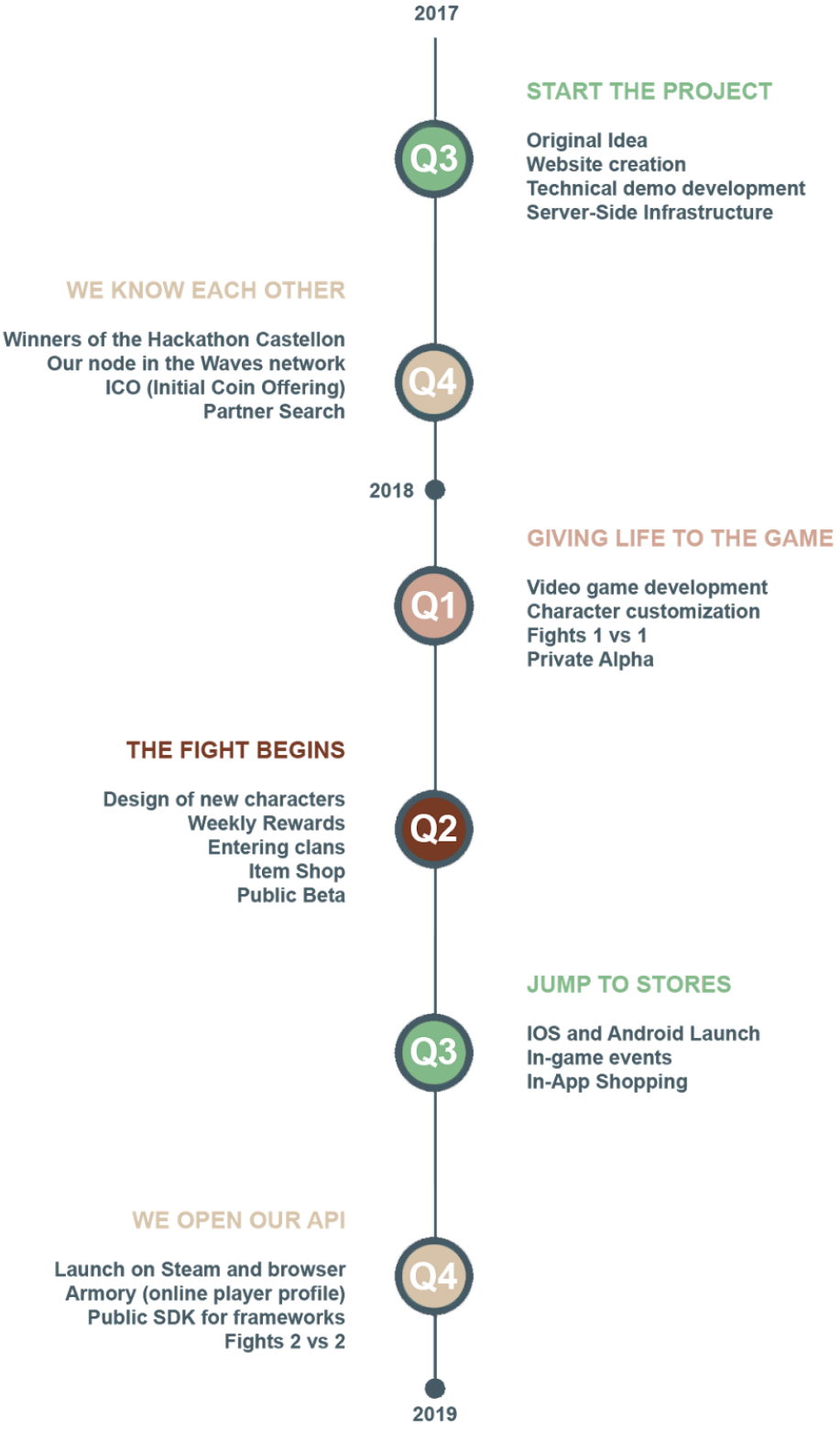
Nelson Marco ***Social / Systems***
He has been managing servers that accomplished the strictest security standards such as PCI-DSS[11] and always had passion for online marketing (SEO, Social Networks ...).
https://github.com/nelson208

Jose Ignacio Rubio ***Technologies***
With more than 5 years of experience, he is currently in the R&D sector using the most advanced technologies in the world of software.
https://github.com/jsrubio

Carlos Santamaria ***Design / Creativity***
Copywriter and expert in gamification and advergaming, he has worked for companies such as Pixar and collaborated on various projects in the field of design, mobile applications, video games and e-commerce.

[11] (PCI DSS) is an information security standard for organizations that handle branded credit cards from the major card schemes.

Roadmap


2017
START THE PROJECT
Q3
Original Idea
Website creation
Technical demo development
Server-Side Infrastructure
WE KNOW EACH OTHER
Winners of the Hackathon Castellon
Our node in the Waves network
ICO (Initial Coin Offering)
Partner Search
Q4
2018
GIVING LIFE TO THE GAME
Q1
Video game development
Character customization
Fights 1 vs 1
Private Alpha
THE FIGHT BEGINS
Design of new characters
Weekly Rewards
Entering clans
Item Shop
Public Beta
Q2
JUMP TO STORES
Q3
IOS and Android Launch
In-game events
In-App Shopping
WE OPEN OUR API
Launch on Steam and browser
Armory (online player profile)
Public SDK for frameworks
Fights 2 vs 2
Q4
2019

Terms and conditions

General

This document is for informational purposes only and is not an offer or sale of shares of Arker Labs or any other associated company. The possession of the Arker Coin tokens (ARKER) does not confer to the holder any ownership rights over Arker Labs or any other right. Feedback from the community will be taken into account; however, the possession of Arker Coin does not entitle you to participate in decision making or in any commercial development direction related to Arker Labs. Because the tokens and network are based on the Waves Platform protocol, any protocol failure in Waves Platform can have a significant adverse effect on the network or Arker Coin. In addition, advances in cryptography or technological advances, as well as the development of quantum computing, can risk the tokens and the Web. You are responsible for implementing reasonable measures to ensure the security of your wallet or other storage mechanism that you use to receive and store the tokens you receive, including private keys or other credentials required to access such funds. If your private keys or other access credentials are lost, you may lose access to your tokens. We are not responsible for such losses.

Arker Labs has consulted and been advised by lawyers about the legal framework regarding the operations of Arker Labs and its ICO in different jurisdictions.

Risks

Arker Coin do not in any way represent a formal or legally binding investment. Due to unforeseen circumstances, the goals described in this document are subject to change. While it is our intention to achieve all the goals described in this document, all individuals and parties that acquire Arker Coin do so at their own risk.

Blockchain technology has been monitored and scrutinized by different regulatory agencies around the world. The WAVES network, as well as Arker Coin, could be affected by one or more regulatory actions by governments, including restrictions on the use or possession of digital tokens such as Arker Coin, which could prevent or limit the utility or purchase of this token in the future.

ICO funds are not insured. In case of loss or value loss, there is no public or private insurer that offers recourse to the buyer.

Limitation of liability

TO THE EXTENT PERMITED BY THE APPLICABLE LAW: IN NEITHER CASE ARKER LABS WILL BE RESPONSIBLE FOR INCIDENTAL, CONSEQUENTIAL, DIRECTLY OR INDIRECTLY DAMAGES (INCLUDING, BUT NOT LIMITED TO, THE LOST OF REVENUES, LOST OF BENEFITS OR PROFITS) THAT COME UP OR RELATIONED WITH THE SELL, USE OF TOKENS OR RELATIONED WITH THIS TERMS, REGARDLESS BY THE FORM OF ACTION.

In addition you release Arker Labs any such responsability, claims and/or damages (currents or indirect) of any type or nature, known or unknown, that come up or are relationed with disputes between users, as well as acts or omissions by third parties.

Reviews

This terms constitute an agreement between the user and us with regard to the exchange of the Arker Coin token. May be necessary update this terms and conditions to enforce with the applicables laws or regulations or fix errors. All changes shall include in the present document and always be enforceable and application with the most recent date (all documents will be marked with “Revision X.Y (Date)” in the footer of each page).