

COSMOS ARCADE

may random numbers be with you

What is Cosmos Arcade?

Cosmos Arcade is a decentralised place where you can have fun, and if you are lucky, win money.

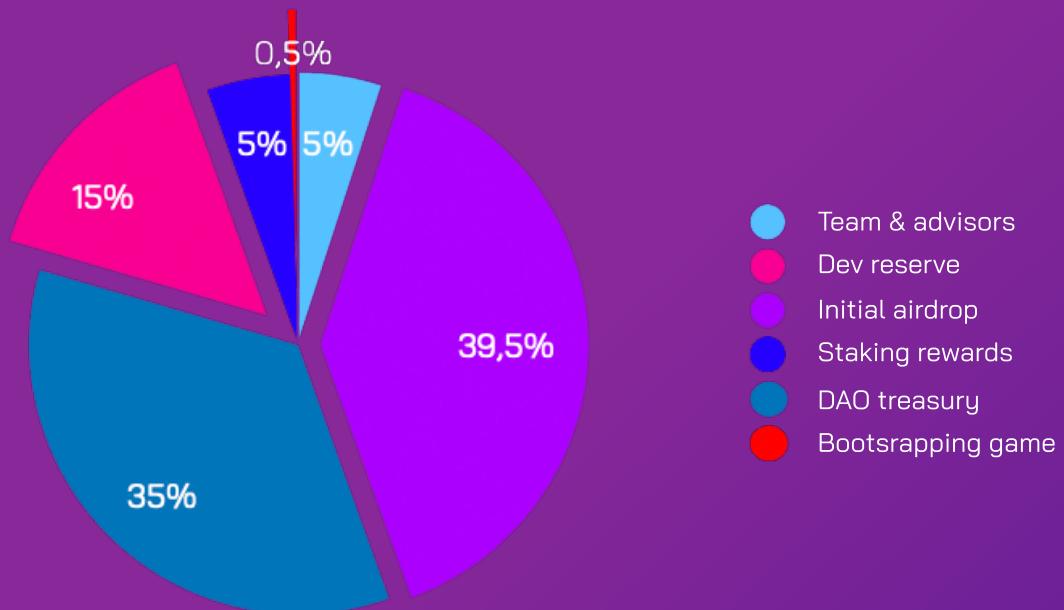
The idea behind this project came from the minds of a group of developers, a group of friends, already engaged in the Cosmos ecosystem since many years. There were 3 main objectives to achieve in the development of our idea:

- Create a platform where people can play simple games, since there isn't one on the Cosmos ecosystem.
- Create a platform that reinvests earnings to help and support the community.
- Create a platform where every participant can collaborate and decide how to redirect part of the protocol income, with a DAO.

Cosmos Arcade checks every point. We wanna help people, we wanna help the evolution of the Cosmos ecosystem, we are a DAO.

Tokenomics

\$LUCK is the token that will fuel the fun in Cosmos Arcade. Its total supply is 7.021.003.008 and from the fancy cake below you can see how it will be divided.



- **Team & advisors:** this is the one of the smallest of the cake slices and will be given to the core team that developed the smart contracts and to other advisors who helped during the project evolution.
- **Initial airdrop:** this allocation is for you :)
- **DAO treasury:** as said before, Cosmos Arcade will be a DAO. This bootstrapping liquidity will be managed by the community through votes on proposals.

Some examples of applications can be supporting groups that fight against gambling addiction, supporting academy for onboarding new devs on Cosmos and stuffs like these.

- **Dev reserve:** used to support other teams who would like to contribute to this project building other games.

If you have a nice idea drop us a line so we can help you bringing your idea to life.

- **Staking reward:** these tokens will be used as incentive for people who will stake their tokens.

- **Bootstrapping game:** used as starting prize for the first game. This amount is used to engage people and start great.

Random generation

Probably, the most cryptonic of you, are wondering how we are planning to generate random numbers on the blockchain, right?

For people who don't know it, it's not easy to produce random numbers on the blockchain since every node would compute a different number, generating confusion on the single state of the protocol. In order to bypass this problem, we decided to generate the random allocations totally offline. Don't worry, even if the computation will be offline, and so in a "centralised way", the numbers generation will be absolutely fair and we tell you why.

We decided to fix a particular event in the future. We will publish an hash of the event before the game start to guarantee that we didn't cheat. The event picked will be totally unpredictable so don't be scared about manipulation or bad actors. For example, the event could be the number of cosmic rays impacting a particular geographic area on a specific date and time.

This event will be used as a seed for the random allocation function. Given a seed everything becomes deterministic but it will still keep a random aspect. A seed? Yes, a random number generator on a computer is not really random, it needs an input value to generate the output (random) value.

The random number generation will be performed in a **ceremony**, during which the event hash will be decoded and the seed of the random number generation will be fixed. With the random and unpredictable seed, Cosmos Arcade will be ready to generate **unpredictable token distributions** and let you play our first game.

Airdrop

If you are engaged in the interchain for long enough, you probably already know the communitarian philosophy of the emerging projects. To promote decentralization and community participation, the initial token distribution usually passes through an airdrop, not through a venture capital (VC) private sale. We are not different, we plan to distribute the majority of the supply of **\$LUCK** tokens to people that actively contribute to the evolution of the ecosystem.

It's **how** we will do it that stands out!

We decided to organize the craziest and funniest airdrop ever made in the galaxy! Bear with us and read about our idea.

To start with the best mind, the airdrop distribution of **\$LUCK** tokens will be completely random. Yes, you got it right, we decided not to give more to those who already have more.

At the genesis of Cosmos Arcade, to every eligible wallet will be assigned a random number. This random number will represents the address allocation of the **\$LUCK** airdrop supply. Just to make things clear, let's make an example:

- Alice draw a random number 0,35.
- Bob draw a random number 0,7.
- Linda draw a random number 0,55.

The sum of these random numbers is $0,35 + 0,7 + 0,55 = 1,6$. Consequently, the three users would get, in terms of percentage of the total initial airdrop supply:

- Alice: $0,35 / 1,6 \times 100 = 21,875\%$
- Bob: 43,75%
- Linda: 34,375%

The unclaimed tokens will be directly sent to the DAO address after the claiming end time.

Besides the plain airdrop, we decided to dedicate another part of the token supply as an incentivized airdrop to the first game winner. More on this later on..

Project launch

The launch of this project will be composed of **three stages**, the same stages that you can find in our opensource smart contract:

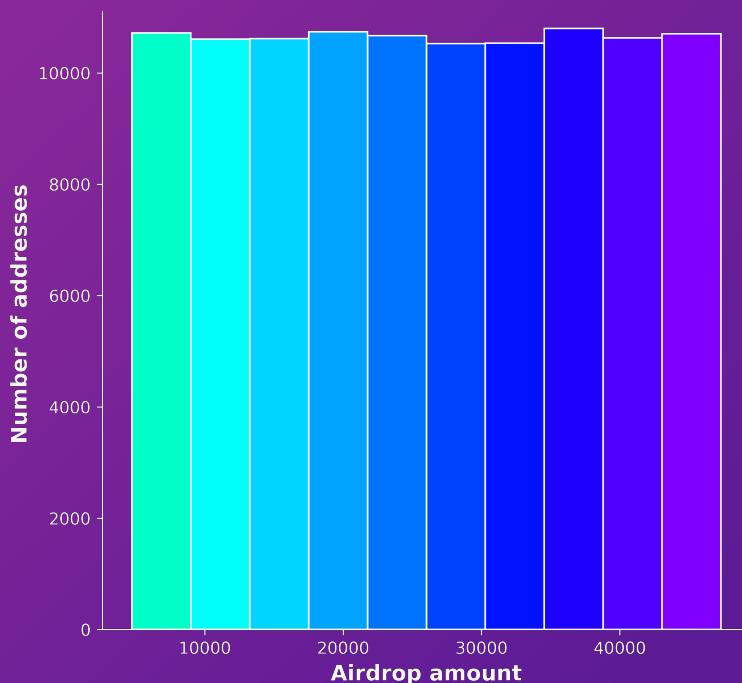
- **Entry game:** throughout this stage, people can start playing the first game trying to guess their own airdrop allocation. People not eligible for the airdrop cannot participate in the first game since they don't have an amount to try to guess.
- **Airdrop distribution:** eligible addresses can claim their tokens and, consequently, know if they won or not the first game.
- **First game prize claiming:** during this stage, winning addresses, will be eligible to claim their slice of the total prize. The prize claiming will be dependent on the airdrop claiming.

Entry Game

The first game of Cosmos Arcade will be totally related to the airdrop. We can say that the protocol will adopt a sort of gamified airdrop strategy. It will take place during the first stage of the project launch, during which people can bet on their airdrop allocation.

Since the airdrop distribution is uniform, and we know in advance the number of eligible addresses, we can smoothly compute the minimum and maximum amount of tokens an address could receive. Nobody will receive 0 tokens because of the uniform distribution, ranging from 0.1 to 1.

By dividing the range given by the minimum and maximum allocations in X bins, we obtain X groups of people depending on how much they are lucky. We defined a lucky person, one that will receive an high amount of **\$LUCK** tokens. The number of groups dictates the winning probabilities. As example, you can look at the simulation below, because we divided all the addresses into 10 groups, every address has a 10% probability of winning.



The entry game will be simple: after paying a small ticket, you just have to guess which group you will find yourself in! [How lucky do you think you are?](#) Every address that will guess its bin right, will be considered a winner.

DISCLAIMER: only the addresses that claimed their airdrop will be eligible to be winners too. If you guess your bin right but you don't claim your [\\$LUCK](#) airdrop, you won't be considered in the winning addresses.

Winners [will equally split](#) the total prize which is composed of:

- The total amount accrued with entry game tickets.
- The bootstrapping game liquidity (0,5% of [\\$LUCK](#) supply).

The unclaimed prizes will be redirected to the DAO as for the initial airdrop, after the expiration of the claim prize period.

What's next

The aim of this paper is to introduce you this best in class game platform and our vision. Hope you appreciated our work.

We don't want to reveal all our ideas right away, but we want to get them out in due time. Just to intrigue you a little, we have in mind to:

- Create a **DAO** with the goal of managing the protocol funds in the best way.
- Introduce a **gamified way of staking tokens**. Obviously, we are here to have fun together, and we will let the standard boring stuff to other projects :)
- Release an **NFT collection** linked to a memorable game. The objective of this collection will not be raising money, all the funds will be redistributed to the protocol, but we thought a funny game and NFTs are perfectly fitted into it.

These are just a couple of the milestones we would like to bring to life.

Are you ready for the best airdrop of the history?

“May random numbers be with you.”



FAQ

1. Which will be the price of the token \$LUCK?

The initial price of the token will be defined by the first pool in an automated market maker (AMM). The price will depend on many factor but, in few words, it will be given by the money inserted in the pool by the team.

2. What the token \$LUCK symbol does represent?

You don't get it? it is a quatrefoil!

3. Which will be the price of the ticket of the first game?

This is not fixed in stone but we are planning to set the ticket price to 5 \$JUNO. We don't want to create an elitarian game platform, so, if \$JUNO will pump to the moon, we will decrease the ticket price.

4. Why the Cosmos ecosystem?

We think that one of the best characteristics of the blockchain technology is the inclusion. With inclusion, the annoying and old boundaries related to geography or culture can be destroyed. Many projects born on different blockchains included in their roadmap a cross-chain implementation. Instead of deploying on a single isolated chain we decided to empower directly the Cosmos ecosystem and its multi-chain connection by design.

5. Why the blockchain Juno?

There are many factors that droves our decision to deploy Cosmos Arcade onto the Juno network. First of all we think that this is one of the best example of decentralised network all around the internet. Second, CosmWasm, it is the best framework to develop secure and efficient smart contract. Third, DAO.DAO.

6. May random numbers be with you....?

Yes, we use this sentence as a tribute to Star Wars :)