DEMOCRATIZING

NFT CARD GAME

White Paper

Business Plan

June 2021

Executive Summary

Quick Description

Duelist King (DK) is a democratized card game whereby all decisions made on the card issuance, distribution and proceeds allocation are governed by decentralized mechanics on blockchain for proven fairness, transparency and best interests for the community.

DK was powered by the DKDAO platform, a meta-ecosystem for game distribution and digital assets issuance. Thanks to the distinct permissionless, verifiable and community-driven power of blockchain democratization and decentralization, DK aims to transform the way people buy, collect, play, trade and earn in card games.

Vision & Mission

Vision: DK aims to champion tokenization and democratization of card games

Mission: We combine the power of DAO and tokenization to provide a transparent, community-owned and permissionless card game, whereby all stakeholders ranging from players, collectors, creators and investors are incentivized to participate in, grow and reap the respective benefits from the DK game.

Company Synopsis

Background

Card games, still present huge untapped growth potentials. The distributor tends to show little move to:

- Cap the numbers of issued cards which leads to massive manipulation of card price
- Guarantee the uniqueness and authenticity of the cards especially the legendary decks
- Empower the community to capture feedbacks and initiatives from the fans and contribute creative assets to the gaming ecosystem.

Business Plan

- Endorse the latest technology in upgrading their own game
- Abandon their monopoly over volume distribution and exercise transparency in distributing loot boxes, where the odds of winning a loot box remains a chronic mystery
- Initiate joint incentives or initiatives with other card games due to the siloed nature of card game community

In order to resolve all of those chronic challenges to physical card games, DK employs blockchain technology, more specifically Non-Fungible Tokens (NFTs) and decentralized mechanics to revolutionize card games like never before. We plan to build on Cardano blockchain to leverage its unparalleled sustainability, efficiency and security and support all EVM - compatible chains.

- Non-Fungible Token is an emerging approach to represent and verify the ownership of a unique asset, for example a collectible, an artwork, a card or a memorabilia, powered by programmable and deterministic smart contracts on blockchain. The NFT market has tripled in 2021 to 250 million USD led by the 69.3 million USD worth auction of Beeple's NFT at Christie.

- Decentralized mechanics include Decentralized Autonomous Organization (DAO) and decentralized Random Number Generator (dRNG). The two latter tools are built-in input processors that power the distribution of cards in a fair and transparent way. Unlike traditional distribution scheme of card games in lootboxes where the distributor has offered anything but transparency and fair supervision of distribution, DK uses a oracle to process external inputs to a decentralized RNG in a manipulation-proof and 100% random process, allowing fair distribution of card; whilst DAO as an open source, transparent and community-powered entity will govern the whole ecosystem in a permissionless, incorruptible and community-driven approach.
- Ethereum Virtual Machine (EVM) is a Turing complete machine. Its processing is deterministic and auditable plus its state will be stored on blockchain to make sure the result of Duelist King's Card Distribution remains immune to manipulation and verifiable. As Duelist King owner, we will provide a tool for everyone to verify their transactions and the distribution result.

Industry Overview

Industry Analysis

According to Statista, the revenue in the Card Games segment hovers around 5.6 billion USD in 2021 with a CAGR of 5.18% between the period of 2021-2025, in which China accounts for 23% of global revenue. Also Print Ninja stated that 43% of players were willing to spend from 600$ on new board game and card games (2017) and word-of-mouth is the best marketing tool as voted by 71% of the respondents.

The NFT market itself has tripled to 250 million in 2020, representing huge untapped potentials given that only a handful of projects in basketball collectibles, artworks, card games and music have been circulated. The online card game is getting more popular while there has been little move from other projects in the market to develop a full-fledged and blockchain-agnostic online NFT card game platform.

Competitive Landscape

The NFT card game ecosystem has expanded significantly thanks to the popularity of a handful of games such as Gods Unchained, Illuvium, AnrKey. Built as the first showcase on DKDAO, Duelist King will be designed as a decentralized card game where both upstream and downstream solutions such as tokenization, distribution algorithms and governance are conducted through decentralized tools such as dRNG, decentralized oracle and DAO, while keeping the experiences for card games intact.

Target Users

DK targets gamers, creators and investors interested in card games from all around the world. You can choose to participate in Duelist King either as a non-investor i.e. gamer, creator, collector or as an investor of Duelist King Token (DKT).

Story Narrative

----“A malediction so powerful and horrible that never been bestowed before”----
Battles among human races have dragged the universe down a spiral of outrage and vengeance, all striving for the holy royal throne. The Duelist King had to convene the last resort - putting all races on earth under a formidable malediction and sealing their power in the Holy Chest to save the earth.
Little John - an ordinary mortal pirate - was totally ignorant of such world-tumbling history and accidentally discovered the Duelist King map that leads to the Holy Chest. Treasures and fortunes abound on his journey and so do incantation and menace. We invite all daring adventure seekers to join John on his epic conquest NOW!

Differentiators

Key Features

Gamer, creator, collector and investor alike can participate in Duelist King and enjoy the features as follows:

- **Incentivization**
  - The creator automatically receives a card genesis version exclusively issued to him.
  - Members including creators, players or collectors can partake in the ecosystem as a token holder similarly to a stakeholder by buying and holding the DKT token. They will receive dividends allocated from the accrued profit pool of the project.
  - Following the Play to Earn model, Duelist King will reward or ‘drop’ a card to the winner of a game after each game. The winner has a chance to win a card of any grade of rareness.
- **Distribution** (please refer to the Appendix for more details)
  - Each card is issued as a Non-Fungible Token (NFT), allowing **transferable and auditable ownership** for the user
  - **Scarcity** is guaranteed as each card is unique and timestamped once issued. No other replica or extra edition of the issued cards will be produced or circulated.
  - **Card distribution** is guaranteed to be fair, transparent and traceable via blockchain and smart contracts.
- **Kiss goodbye to monopoly!** The community will be empowered to have voting rights with the specs, volume and type of news cards to be issued. In the future, the community members can also propose initiatives and get funding from the community fund to amend rules, host tournaments or enforce improvement proposals.

Benefits

GAMER

- Aesthetic card design
- Participation in global Duelist King game
- Dividends allocated to token owners
- Play to Earn

COLLECTOR

- Guaranteed card uniqueness
- Verifiable and transferable ownership on blockchain
- Transparent and verifiable distribution

CREATOR*

- IP infringement-proof and self-executing agreement with Duelist King
- Verifiable ownership

*later development

INVESTOR

- Governance voting
- Special loot box discount up to 25%
- Staking to mint rare cards

Token Utilities

10,000,000 DKT (Duelist King Token) will be issued and token holders will have the following rights:

Governance Voting

- Token holders of DKT are able to participate in DAO Governance by locking their token to gain voting power
- Duelist King DAO voting mechanism is based on weighted voting that will be performed through the following steps:
  - **Locking token:** Your voting power is proportional to your locked amount of tokens, from now we call people with positive voting power an elector.
  - **Unlocking token:** The locked token won't be transferable, if you want to make your token transferable again you might need to unlock your token. It takes 15 days at the minimum to unlock your token.
  - **Creating a proposal:** An elector can create a new proposal. Each proposal will expire 7 days after initiation regardless of the number of votes.
  - **Voting a proposal:** An elector can vote in favour or against any proposal at his/her own discretion.
  - **Calculating result:** The sum of either FOR or AGAINST vote must be over 50% to activate proposal execution.
  - **Executing the proposal:** A proposal contain two parts and the part in text and data will be executed following on-chain governance.

Token Utilities

Tiered Loot Box Discounts

The card discount will be calculated based on locking amount and locking period following this formula:

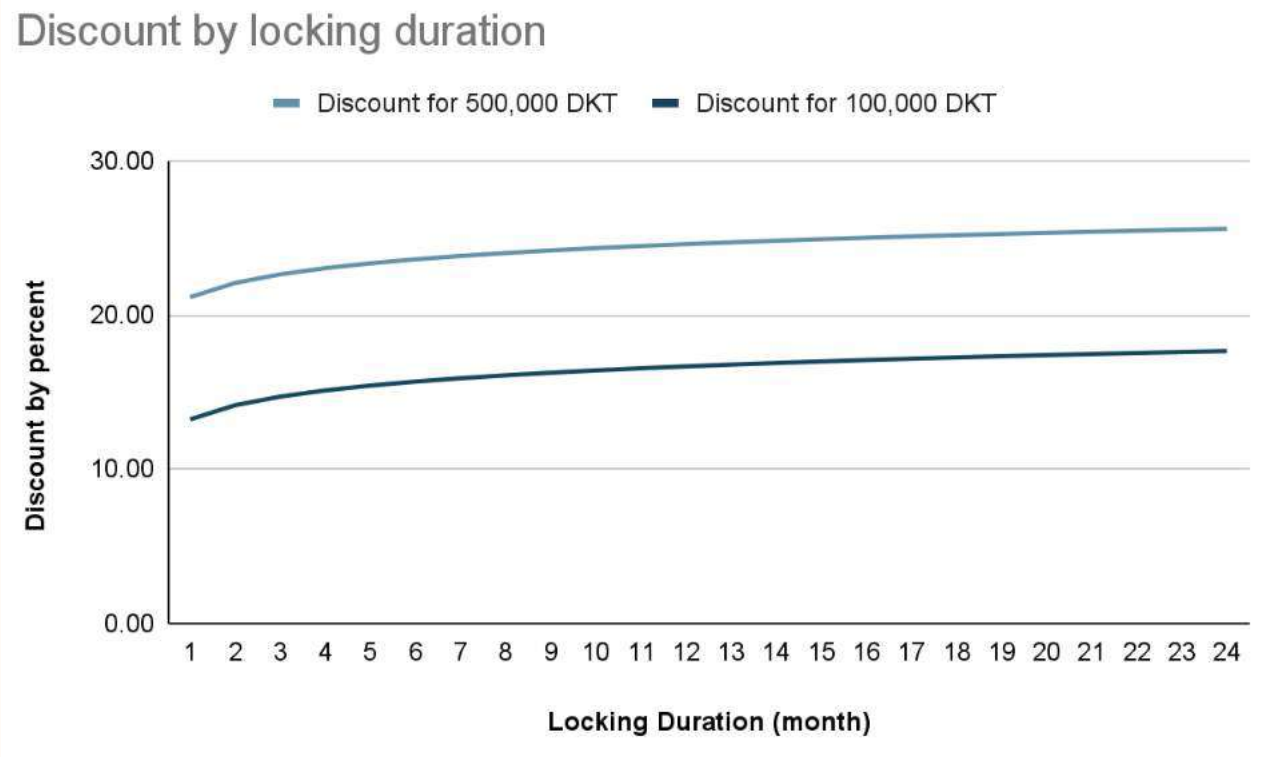
$$D = 5\% + log_2(1 + \frac{\Delta t}{31536000} \times 100) + 5\% \times log_2(1 + \frac{\alpha}{A} \times 100)$$

- D : Discount in percentage
- Δt : Locking duration in seconds
- α : Locked amount
- A : Total supply

All DKT token holders will have a base discount of 5% plus adaptive discount subject to locked amount and locking duration.

E.g: If I had 500,000 DKT which have been locked for 2 year (63072000 secs) the discount is:

$$D = 5\% + log_2(1 + \frac{63072000}{31536000} \times 100) + 5\% \times log_2(1 + \frac{500000}{10000000} \times 100)$$



Token Utilities

Staking To Mint Rare NFTs

- Duelist King will hold a lottery for token holders, the lucky winner will be able to win a unique NFT which doesn't come with any replica
- The probability of winning a lottery positively correlates to the locking amount and locking period of DKT.

Revealing And Unlocking The Sealed Card

- Players will receive or get 'dropped' a card by winning a duel, the dropped cards will be covered and sealed.
- Players need to pay DKT to uncover the card and pay a higher amount of DKT to unseal the card.

Key Milestones

Q1, 2021 — Technical And Marketing Research

- Light paper publication
- DK-DAO based smart contract for NFT distribution
- Oracle for fair distribution
- DKT token and vesting mechanic for smart contracts

Q2, 2021 — Communication & Design

- Landing page & card distribution
- Game story and first 20 card designs
- Other materials for launch

Q3, 2021 — Card Sales & Seed Round

- White paper publication
- Seed round investment
- Car sales powered by in-house fair distribution
- Game development kickstart

Token Utilities

Key Milestones

Q4, 2021 Game Development And Back To Back Card Sales

- Back to back card sales
- Listing of Duelist King cards on NFT exchange(s)

Q1, 2022 Game Play Development And PvE Launch

Q2, 2022 Launch PvP And Multi-Play Feature

Q3, 2022 Community Empowerment

- DAO launch
- AirDrop to contributors
- Community engagement

Tokenomics

Stage	Token %	DKT tokens	Note
Seed Round	7.75%	775,000	10% TGE, 05 month cliff, linear vesting over 1 year
Strategic Round	4.75%	475,000	12.5% TGE, 04 month cliff, linear vesting over 1 year
Private Sales	5.20%	520,000	15% TGE, 03 month cliff, linear vesting over 8 months
Public sales	4.80%	480,000	100% TGE
Advisors	3%	300,000	10% TGE, 06 month cliff, quarterly vesting over 1 year
Team	20%	2,000,000	12 month cliff, monthly release over 2 years
Foundation	10%	1,000,000	12 month cliff, monthly release over 2 years
Airdrop	0.5%	50,000	100% TGE
Marketing/ Marcom	15%	1,500,000	5% TGE, monthly release over 1.5 years
Community Funds/ Development	19%	1,900,000	5% TGE, monthly release over 1.5 years
DKDAO	10%	1,000,000	12 month cliff, monthly release over 2 years
Total	**100%**	**10,000,000**	

**10% of the token pool will be transferred to DKDAO (the master DAO of the gaming ecosystem including Duelist King) and locked up as dividends for holders of DKT token.

Team Overview

The masterminds of DK are seasoned blockchain advocates and warriors who are passionate about blockchain and its ultimate goal in breaking silos and boundaries through community empowerment.

Dzung Tran

CEO & Founder

Dzung (Chiro Hiro) was the R&D Engineer of Cardano Labo Vietnam/Infinity Blockchain Labs, one of the first and leading blockchain startups in Vietnam. He is also the former Solution Architecture at HexTrust, a custodian firm based in Hong Kong with 6 years of experience in security, blockchain technology. Dzung has been involved with a variety of world-class research projects on tokenization, Random Number Generator. He has a strong passion for cryptography, decentralization and permissionless applications.

Hiep Duong

COO, Co-founder

Hiep is the Founder of ABhorizon, with more than 18 years of experience in Information Technology. As a visionary and forward thinking leader, he has showcased exceptional skills in forming and building cohesive, high-performing teams that deliver consistent and distinguished value to clients.

Prior to finding ABhorizon, Hiep had a proven track record of scaling infrastructure, teams, and processes to both support and drive growth. He held key roles in a number of Fortune 100 company's major and most sophisticated projects in HRIS implementation for their Vietnam entry operation as well as a software solution for government projects. Hiep is a well-seasoned entrepreneur and builder in various industries ranging from talent management, ICT, finance to e-commerce.

Team Overview

Nicole Nguyen

CMO, Co-founder

In her previous role as Head of Asia-Pacific for Asia Blockchain Review and Infinity Blockchain Ventures, Nicole was entrusted to leverage her industry insights and extensive network to develop the blockchain and emerging tech startup ecosystem in Vietnam and help transform the country into the leading blockchain hub in the region.

Nicole has been the key organizer behind a series of community outreach initiatives in Vietnam including the first Vietnam Blockchain Hackathon, the first mass scale conference Vietnam Blockchain Week for 2,500 audience and ENIGMA - a blockchain business contest. She is also a co-author of the first Vietnam Blockchain Landscape Report and other landscape reports for Indonesia, Thailand, Malaysia and the Philippines. She was interviewed by Forbes, the Business Times Singapore and South China Morning Post as a blockchain thought leader.

Nicole was the spokesperson for the company at over 50 local and international conferences including - World Bank/IFC event themed Blockchain transforms Global Supply Chain and Trade Finances, Blockshow Asia 2018 and a TEDx blockchain speaker. She has over 10 years of experience in managing operations and projects in MNCs, international donors, NGOs and startups.

Nam Nguyen

Product Designer, Co-founder

Nam has 7 years of experiences in design, UX/UI and product development through his tenure at numerous multinational companies and industry powerhousers such as NEC Corporation, Infinity Blockchain Labs, VinID and Binance - the largest crypto exchange in the world. He has been engaged with various roles in the blockchain space for the last 4 years.

Appendix

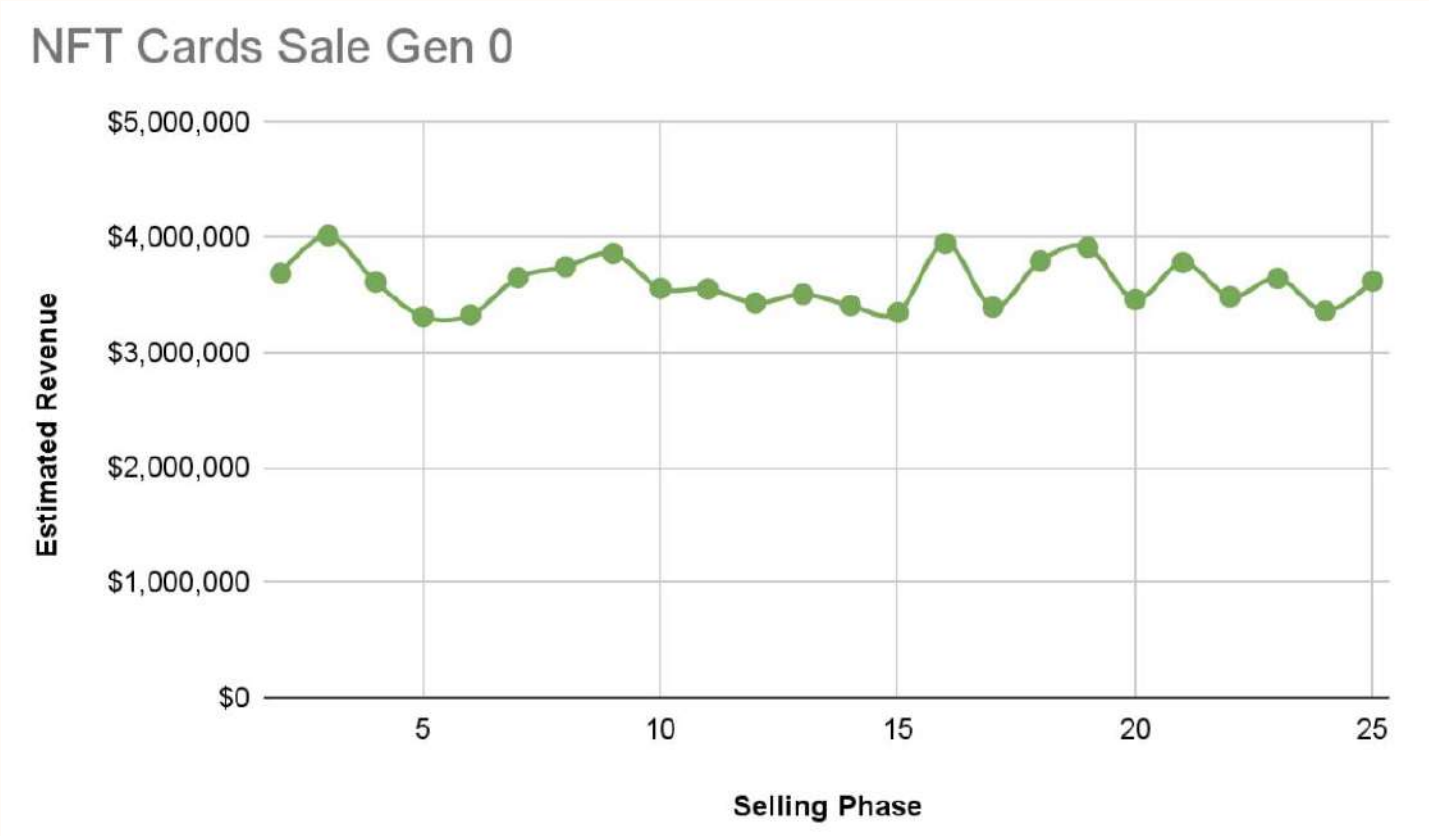
DISTRIBUTION OF CARDS AND LOOT BOXES

Scarce And Transparent Distribution

- There are 20 generations x 25 phases/generation
- Each phase contains 20 unique designs which will be issued in around 5,000,000 copies
- The copies of the unique design will be distributed in 1,000,000 loot boxes
- Each loot box contains 5 copies of 20 unique designs randomly distributed based on its rareness (Legendary, Special Super Rare, Super Rare, Rare, Uncommon, Common)

Loot box unit price can be referred from the table below. Our estimation is that 80% to 90% of 1,000,000 loot boxes are sold out for the first 25 phases (Gen 0) and total revenue projection is **$37,283,742.**

Single Box	Batch Of 5 Loot Boxes	Batch Of 10 Loot Boxes
$5	$22	$40



Appendix

DISTRIBUTION OF CARDS AND LOOT BOXES

All Duelist King Loot Boxes Distribution Is Performed On Blockchain!

The commit scheme is initiated by Duelist King Oracle (DKO) that facilitates high throughput, allowing multiple participants to get involved in the card distribution to guarantee fairness and transparency. Each card is a Non-Fungible Token and unique.

- **A. Draw random value**

  Random value will be generated from the system's Cryptographic Random Number Generator (CRNG) by using OpenSSL. This value will be combined with a time stamp to make sure that the value is unique and remains unchanged afterwards.

- **B. Secure Contract Execution**

  At the beginning of any phase of distribution, the Duelist King Oracle will commit all hashes of random values to a smart contract and these values are immutable and auditable with a cryptographic proof.
  Even though Duelist King runs the Oracle, we are unable to manipulate or alter the results or intervene in the process. Our role is purely to make sure that the Oracle runs as per its design.

- **C. Card distribution**

  At each phase of distribution we will issue 20 unique designs. There are 5,000,000 cards copies in circulation based on its rareness:

Unique Designs	Rareness	Symbol	Chance	Estimate Price
01	**Legendary**	**L**	1/2000	$10,000
02	**Special Super Rare**	**SSR**	1/200	$1,000
03	**Super Rare**	**SR**	1/20	$100
04	**Rare**	**R**	1/10	$50
05	**Uncommon**	**U**	1/4	$2
06	**Common**	**C**	1/2	$1

Appendix

DISTRIBUTION OF CARDS AND LOOT BOXES

Subject to the total number of cards that will be distributed based on its rareness, we will be able to calculate the probability of acquiring new cards.

Each loot box contains 5 cards that are available for purchase yet the rareness of the cards are randomly assigned. In theory you can get 5 legendary cards in the most ideal scenario since our algorithm won't leave out any possibility. The probability of acquiring a new card will be adjusted by the algorithm that keeps the fairness in check.

Also the probability will be updated and shared real-time to the community to ensure fair and well-informed distribution among the community. Unsold cards will be transferred to a prize pool as rewards to winners at Duelist King tournaments.

- **D. Verifiability**

  Ethereum Virtual Machine (EVM) is a Turing complete machine. Its processing is deterministic and audit-able plus its state will be stored on blockchain to make sure the result of Duelist King's Card Distribution remains immune to manipulation and verifiable.
  As Duelist King owner, we will provide a tool for everyone to verify their transactions and the distribution result. As with physical card issuance, each card will contain a cryptographic proof that prevents other parties from producing a replica. The only way to transfer the card ownership is via a blockchain transaction. All smart contracts will be open source and available soon on Github.

Transparent And Democratic Governance

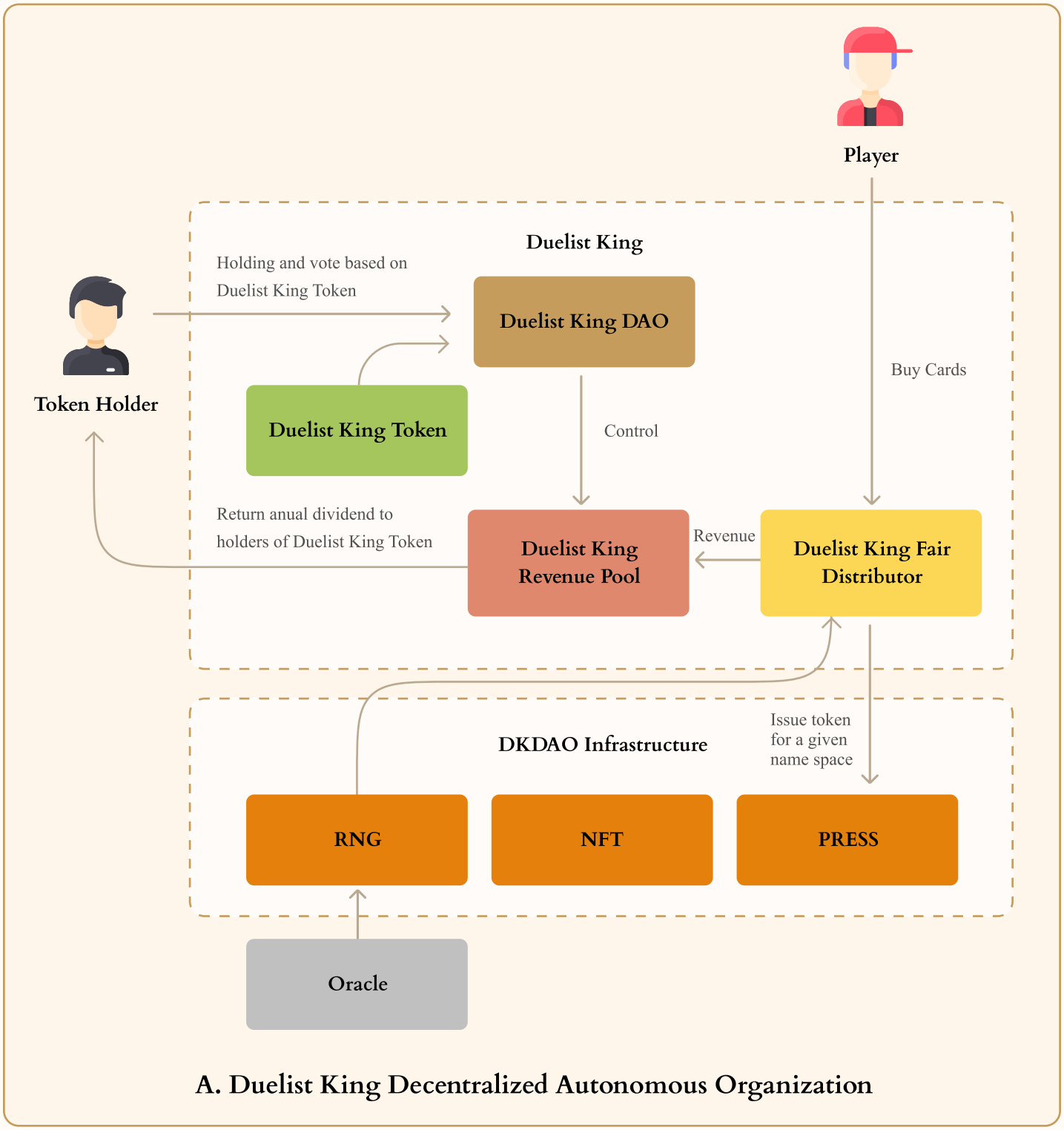
Duelist King ecosystem is managed by a Decentralized Autonomous Organization (DAO) namely the Duelist King DAO through DKT token.

Appendix

DISTRIBUTION OF CARDS AND LOOT BOXES

The DAO is governed based on 4 principles:

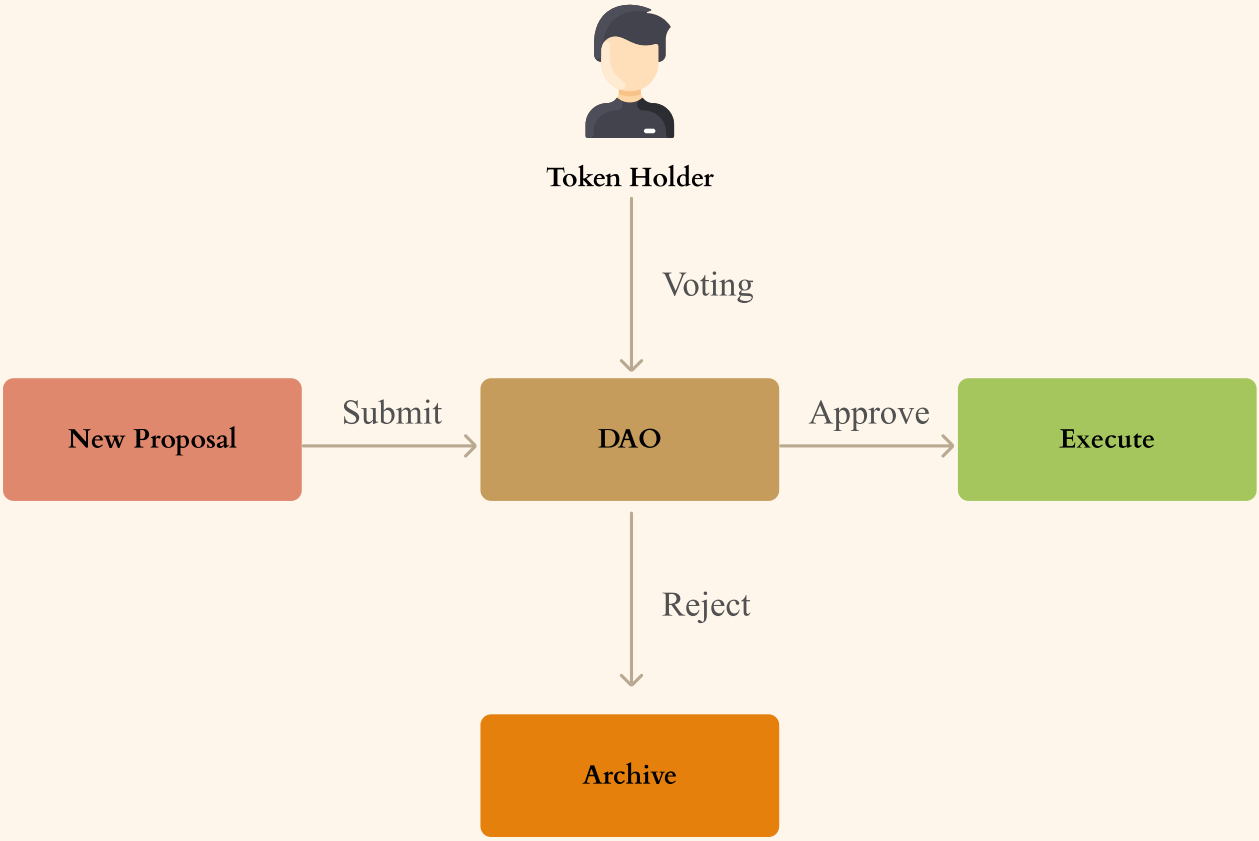
- Weighted voting
- Proposal-based decision making
- Community-based approach to ensure transparency and democracy
- All revenues and profits will be channeled to a Duelist King Pool where the fund will be managed via Duelist King DAO



A. Duelist King Decentralized Autonomous Organization

Appendix

DISTRIBUTION OF CARDS AND LOOT BOXES



B. Duelist King Fund Management

Website & social media handles

www.duelistking.com

www.reddit.com/r/DuelistKing/

t.me/DuelistKingNFT

www.twitter.com/DuelistKingNFT

www.discord.gg/UmUuFCgu64

www.www.facebook.com/DuelistKingNFT

www.github.com/Duelist-King

Contact

contact@duelistking.com