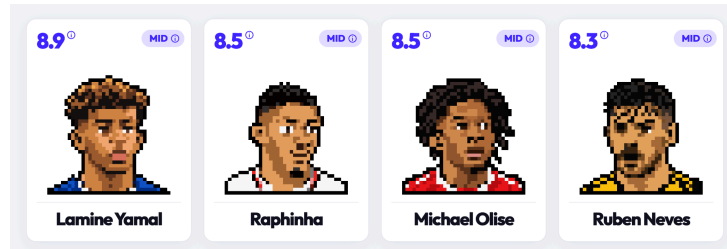


Ball Paper

This paper introduces the PIX11 game, combining Fantasy Football with Decentralized Finance mechanics.



Collect football players related to real-world stars. Mint or trade them as NFTs. Earn with increasing performance of your player based on game rankings. Create teams to boost earnings.

Phase 1. Mint

The game starts with the minting phase. Users can spend Native Currency (*in short, NC*) to unlock a random player.

Players list

Initially, the starting 11 and the bench of top leagues teams are added to the to-be-minted list. One copy of each player. Thus, the initial list would contain 1029 players. Once these are sold out, the secondary leagues and their players are added. If we cross 3000 mark in the amount of NFTs minted, the duplicates of existing players may be introduced.

Minting price

The initial minting price is 111 NC. However, each next mint costs 0.1% more. Thus, minting the 100th NFT would be priced at 122 NC, the 1000th NFT – 301 NC. This essentially benefits early adopters by design.

Batch mintings

Users are able to mint up to 11 NFTs with one transaction, however it doesn't have additional bonuses.

Being minted, NFTs are immediately available for transfer and secondary market, but for them to be used in the game the next phase has to be launched.

Phase 2. Teams

Minted NFTs can be used to form teams or added to the game as free agents.

Free agents

This free action sends NFT to a smart contract which will generate yield for the owner once Phase 3 starts.

Teams

There are two types of teams available: 11 players (football/soccer) and 5 players (futsal team). They can be purchased with NC. To fill the team you need to own players of all needed positions.

For 11-team: 1 GK, 3 DEF, 4 MID, 3 ATT.

For 5-team: 1 GK, 1 DEF, 2 MID, 1 ATT.

Team multiplier

11-team gives 22% multiplier to yield of all players staked to it, if fully filled. 5-team and gives 11% multiplier to yield of all players staked to it, if fully filled.

A user can have as many teams and free agents as they want. Teams can be reformed whenever the user wants, but are not transferable. Once teams are formed, the owner can await phase 3 to start earning from them.

Phase 3. Yield

From minting NFTs in Phase 1 the NC treasury is formed. NC treasury does generate yield from staking. We call it Total Yield.

Yield Period

Every week marks the new yield period. Total Yield is being distributed to players proportionally to their Multiplied Player's Score (MPS).

Player's Score

To calculate Player's Score in the given Yield Period the list of their games is taken. Then, the *Rating* of each is squared and multiplied by *Played'*. For example, if player had two games last week and got rating 9.0 for playing 90 minutes in the first and 8.0 for playing 70 minutes in the second – his Player's Score would be $9.0^{**2} * 90/90 + 8.0^{**2} * 70/90 = 130$.

Multiplied Player's Score

If NFT is being staked as a Free Agent, its Multiplied Player's Score is equal to Player's Score. However, if it's staked as part of the team, there is a multiplier. 11-team gives 22% multiplier, 5-team gives 11% multiplier. So, in our example, if the player is a part of filled 11-team, his Multiplied Player's Score is $130 * 122\% = 158$.

Yield Distribution

MPS of all staked NFTs are summed up (Total MPS), and each of them gets a share of Total Yield equal to $\text{MPS} / \text{Total MPS}$. If Total MPS for the given Yield Period was 10000, our example NFT would be receiving $158 / 10000 = 1.58\%$ of Total Yield.

With this, users are getting yield from players according to their in-life performance — multiplied by their own skill to form teams. Most importantly, the yield of a player can vary from week to week, and it may come that the player one got for cheap started performing better and is generating more yield — this creates an ultimate way to invest in football stars and their future.

After Phase 3 starts, the game is fully functional: mint, trade, form teams, earn.

Phase 4. Burn

To exit the game, the user is able to either sell his player NFTs on the secondary market, or — after Phase 4 launch, — to burn them in exchange for part of the NC in treasury.

Clean Burn Value

To calculate the value of the NFT, the Player's Score for the last 11 yield periods is taken and divided by Total Player's Score, then multiplied by Treasury Value.

Burn Value

From the Clean value, there is a penalty to be taken — from 10% to 50% depending on the total burn amount in the previous period. So, in a period of bank run, the penalty would max out. Burn Value would be equal to Clean Burn Value minus Penalty.

Immediate Cash-Out

This mechanic creates a scenario in which a lucky user could mint a star player for a regular price and burn it immediately for a higher value.

Player re-adding

Burned NFT is removed forever, however the related player can be added back to the list of players available to mint in the next batch.

Summary

PIX11 game design, introduced in this Ball Paper, suggests a combination for collectible and game mechanics connected to real-life events. The gamified RWA!

Note, that the exact implementation details may vary and would be announced separately.