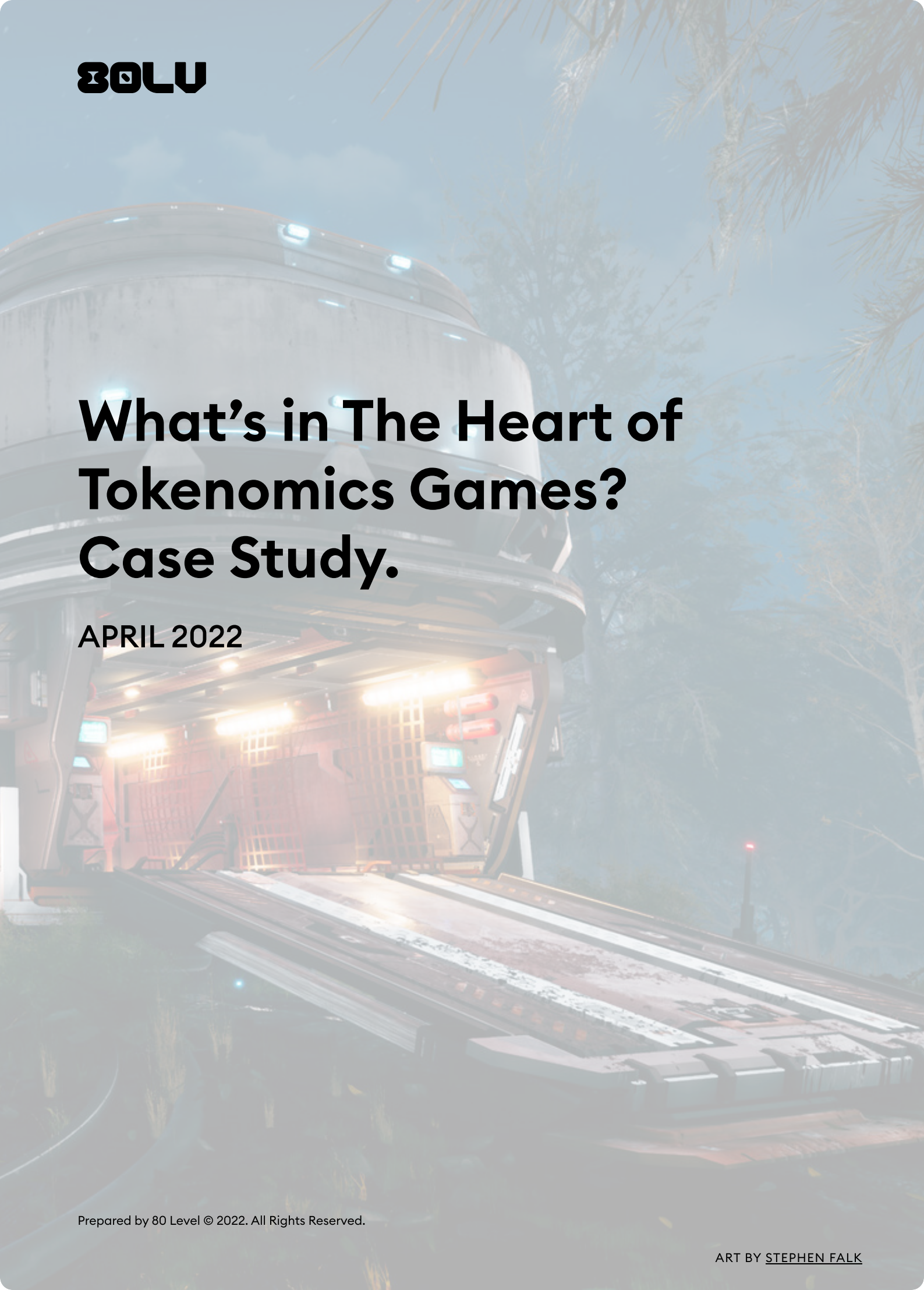

What's in The Heart of Tokenomics Games? Case Study.

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ART BY STEPHEN FALK

Changing Trends in The Video Game Industry

Recently, 80 Level's research team did a survey on the state of the game industry with over 800 respondents, including game artists, developers, managers, marketers, and designers from all over the world. One of the questions was related to the newest gaming trends. Its goal was to find out what industry specialists think about NFTs. It turned out that lots of respondents have a controversial attitude towards non-fungible tokens and consider this trend questionable.

Some respondents commented that they don't trust NFTs. Others stated that they see the potential in the technology behind NFTs, considering the trend to be a money-earning opportunity and a new driver of content customization. Still, others expressed the opinion that NFTs will eventually evolve into a new genre of games.

This case study is aimed to provide more insight into tokenomics in the game industry from NFT experts' POV. Tokenomics game developers share what prompted them to adopt NFTs and why they see great potential in it. The report will focus on the inner workings of tokenomics development, different approaches to its implementation, and the concept of utility tokens.

- **Fungibility** – the ability of a good or asset to be readily interchanged for another of the same kind. Physical money and cryptocurrencies are "fungible," meaning they can be traded or exchanged for one another. They're also equal in value; just like how one dollar is always worth another dollar, one Bitcoin is always equal to another Bitcoin.
- **NFT (non-fungible token)** – a digital asset that represents real-world objects like art, music, in-game items, and videos.
- **Tokenomics** – this word, coined from a combination of "token" and "economics", is an informal term that explains the structure and cycle of how a token is acquired and used for trade.

Case Study: The Essence of Tokenomics Games from Developers' Perspectives

In order to shed some light on the tokenomics game development, 80 Level's research team has interviewed 5 industry experts and asked them to share their visions, experiences, and goals.

Whom did we interview?

Aaishwarya Jain
Product Manager
POWDER

Ada Jonušė
Founder & CEO
LYMPO

Lewis Grafton
COO
SOLCHICKS

Mathieu Nouzareth
CEO for the U.S.
SANDBOX

Jure Grahek
Head of Strategic Initiatives
ZEBEDEE

Table of contents

Tokens as Utility Tools

Tokenomics game developers don’t see tokens as a financial investment tool, but as a utility. They believe in the future of NFTs, as it should expand the player's ability to enjoy the game as well as transfer some game elements to real life.

Players may **feel more connected to the game if they actually own in-game assets,** which is the benefit of NFTs compared to traditional in-game purchases. Token game developers see **NFTs as players’ propert**y that can be withdrawn from the game and sold on marketplaces. In theory, the presence of a token in the game increases retention.

From a legal point of view, tokens can be taxed as cryptocurrency. Interviewees believe that **tokenomics should expand the player's ability to enjoy the game** as well as transfer some game elements to real life, creating augmented reality (AR). They **don’t see the token as a financial investment tool, but as a utility.**

One of the goals of token game development is to **create a circular Web3 economy**, where creators create and sell NFTs while players buy, rent, and use the assets made by the creators. Blockchain-based tokenomics are inflexible, as developers don’t have full control over the management of tokenomics. It is very important to balance the supply and demand of tokens in order to build a fair and transparent economy. As planned by the developers, the **blockchain in games should expand the field for players to enjoy the game, not become a risky and speculative financial instrument.**

Aaishwarya Jain
Powder
Product Manager
RECORDING LINK

The token is treated as any other crypto asset that you own, so if you own a bitcoin, you would pay the same kind of taxes on it as you would for an in-game token. You wouldn’t just own the asset inside of the game — you would own it as an individual even outside of the game.

As tokens are considered utility items in a game economy, it really depends on the business model of the game. If I own an NFT that is just a profile picture that I use inside of the game, then it's just an NFT — not a utility item. But if, let's say, I have a sword that lets me unlock a lot of different benefits, these benefits can be inside of the game. Utilities can also give access to a certain event outside of the game; for example, a Snoop Dogg concert or something like that. The utility is not about the token, but about the benefits associated with it.

People feel a bit more secure owning the assets in real life rather than just owning it inside of the game. Users have a sense of security in their heads because, once you own an NFT, you own it forever. It's not going to be destroyed even if the game stops working.

Ada Jonušė
Lympo
Founder & CEO
RECORDING LINK

Play-to-earn currencies are utility tokens (at least Lympo's are). Utility tokens are any tokens that a user can get some kind of a service for. So, when users buy play-to-earn tokens in Lympo's NFT ecosystem, they know exactly what kind of product or service they will get for it.

As an example, Lympo is going to release a new game later this year. In order to play this game, users will have to pay a small entry fee in tokens. In return, they can also earn tokens based on their in-game performance. So, there's a dynamic utilization of tokens in the game.

Another way to utilize tokens in games is to use them for buying assets, skins, etc., to enhance players' experiences. In non-blockchain games, these in-app purchases are just digital representations of something (for example, a digital representation of a sword) that can only be used in that particular game. Players use it, but they don't own it. In blockchain games, these assets are NFTs, which you can transfer out of the game, sell on a special market, or maybe even utilize in some other app. The important thing is that gamers actually own it. In Lympo, users have to also utilize their tokens to get NFTs.

In terms of in-game currency, the question is, who's actually rewarded for creating the value of the game? There's no possibility to verify whether the value of 1 million gold coins is equal to the price that the game company sets. You cannot know the real value of the currency that you've bought; you just trust the company. They get all the profit from the currency sale.

With blockchains, everything is verifiable. For example, you know for sure that there are exactly 1 million gold coins, and you also know that, as the user base grows, the value of the coin will grow, too. This is the finance element in blockchain games. In traditional games, you can only utilize currency within that game, while in a blockchain game, you can go to an exchange market and sell it — so you actually become the owner of the currency. The company takes a fee for the transactions, but the majority of value stays in the hands of the users. It's the new business model.

It's important to balance token supply and demand. Tokenomics has a feature that a lot of tokens can be paid out and sold by users. If that were to be the only thing that players would do with them, it would be very unhealthy for the token. So, developers have to understand supply and demand dynamics and control the release.

Lewis Grafton
SolChicks
COO
RECORDING LINK

Game tokens are utility tokens; you can think of it like a part of a game's economy. For example, in SolChicks, you can receive the tokens through actions within the game. There's no complete analogy, though, unfortunately.

Tokens are extensions of previous types of game currencies, but they have always been discouraged or disallowed by game companies.

Tokens give players the opportunity to earn money within the game's economy. Basically, all the money goes to the developers; blockchain games allow a circular economy where you can earn, pay, and buy things.

Mathieu Nouzareth
Sandbox
CEO for the US
RECORDING LINK

Sandbox believes that the center of tokenomics should be a utility approach. Tokens are like a commodity in a way because they're not meant to be used for speculation or investments in the long term. SAND tokens are meant to be used in the game to buy stuff — to create stuff. Sandbox wants to create a circular economy where creators, on the one hand, create things and sell it, and have players on the other hand who buys, rent stuff made by creators.

The main goal for Sandbox as a company is to make sure that players have fun. They're constantly trying to improve the game and come up with new tools for creators to provide amazing experiences for players who, in turn, will enjoy and buy them. Balancing supply and demand is crucial in order for tokens to be a real utility.

The main difference between tokens and in-game currency is that tokenomics is the underlying tool. The platform is for creators to come up with what they want for players to buy and sell. In the case of in-game currency, developers fully decide the price and quantity of the items, their consumability, etc. In the case of tokens, it is fully up to content creators. It looks like more of a marketplace.

“Token First” vs “Game First” Approaches

There are different opinions about “token first” vs “game first” approaches. From the tech angle, **it is easier to integrate tokenomics into a gameplay-ready game**. However, building a blockchain economic model and creating tokens before developing gameplay allows developers to **create a community around the NFTs, as well as do pre-sale activities to raise funds long before releasing the game**. On the other hand, a “token first” game may be of **poor quality due to a lack of focus on gameplay development.** It’s important to focus on the audience’s needs. Do you want them to just earn by investing in tokens or be truly immersed in the gameplay as well?

The longest and **most complicated part of tokenomics is to develop a concept**. The technical part is easy to build since smart contracts can be done with existing templates. Since this is a field for experimentation, tokenomics launches take anywhere from four weeks to several months, and it can take years to test its viability.

Aaishwarya Jain
Powder
Product Manager
RECORDING LINK

Token first vs game first is more like a “chicken and the egg” problem because the long-term goals with the game and business model are what really define the approach you want to take. If you want to make it a hybrid game, so it can be free to play and/or pay to mint, keep in mind that this kind of a game has also started coming up a lot. If it's a token economy from the very beginning then the token has to come first. If you are building a token inside of the game you are developing an entire economy around, you have to create the valuation, supply the demand, and a lot of different things that go into it — so you need to think about it from the very beginning of the game’s development.

Also, Web3 essentially means that users are governing the ecosystem and developers don’t have a lot of say on that. What is created in the beginning stays forever. anything that goes onto the blockchain can’t be destroyed.

Building tokenomics is not rocket science because everyone is learning in a space where there are no rights or wrongs. There are cases where the launch of a token takes anywhere from three weeks to four months. A lot of times, what people do is they drop NFTs as a first launch, and then they keep defining tokenomics towards a later stage.

Ada Jonušė
Lympo
Founder & CEO
RECORDING LINK

Some companies release NFTs first — then the game, and then the token. Others work vice versa; they have a functioning game first, then they implement NFTs and tokens. Lympo took the approach where they've released NFTs and tokens first, and now they're working to release a range of games based on it (from simple mobile games to AAA).

Every company that makes products on the blockchain knows that community building is the most important thing. So, it's often easier to launch the game when you've already built a community around tokens and NFTs.

Lympo isn't a game development company. They went to game developers and partnered with them, but their long term goal is to create an ecosystem as well as incentive models. That way, any independent game developer can come and build a game on Lympo tokens, accessing an already established community. Lympo wants to become a more decentralized platform, in the hands of developers and community members.

Programming the smart contract for tokenomics is easy. A lot of smart contracts are just being copied, as everything is open source nowadays. So, you just have to audit it and make sure there are no mistakes. After that, you're able to release the token itself.

The complicated part is to think through the tokenomics concept, release all the products around it, and grow the user base. It might take around 2 years to find out whether your tokenomics work or not, as it has to be tested by the players first.

The main challenge is the uncertainty about the future of the game. The early stages of the launch are well-understood, but it's hard to tell what your audience is going to look like in the long term. Are they mainly going to be crypto users who want to earn tokens, or gamers who just want to play and don't care about the blockchain that much?

Up until now, most blockchain games have been super simple and targeted at crypto users. The gameplay hasn't really been interesting, either — it was just a way to earn tokens.
Currently, the market is expanding, and developers want to create high-quality captivating games — games that are for gamers. So, the big challenge now is to define who your audience is.

Mathieu Nouzareth
Sandbox
CEO for the US
RECORDING LINK

In terms of the chronological order of development, Sandbox's token came first, but in terms of importance, the game comes first. It's possible for companies to have initial success and build the token early, then promise to give users a good game for it later, but for Sandbox, it's crucial to build the best game and best experience possible. Only as a consequence will tokens be used and give value to the players. Sandbox is focused on the long-term, and the only way to do it is to provide users great experiences and monetization. They want to empower creators. The token comes after that. Sandbox only charges a 5% commission — 95% goes back to the community.

Jure Grahek
ZEBEDEE
Head of Strategic Initiatives
RECORDING LINK

Lots of gamers are quite averse to play-to-earn gaming, because many play-to-earn games are bad games. Developers put the economics first and lose the gameplay element.

Economics first can be a great approach for the game developer, because if they have a token or an NFT and do a pre-sale, they can use that to fund their game and possibly even make a profit before launching anything.

But if the developer is more focused on making a successful token then maybe they're not very focused on making a good game. Creating a really good game is very hard, which is what makes gaming such a competitive industry. It's much easier to integrate crypto into a game that's already good than build a good game around crypto.

Lewis Grafton
SolChicks
COO
RECORDING LINK

An open game economy is a living system, so it's important to closely monitor and model out many different scenarios and be dynamic in the approach to setting key variables such as the pricing of items and actions within the game and the frequency at which they can be done. To do this well, one must have the mindset of a data scientist or economist and think of the governance of the game economy as being similar to that of a central bank.

Looking Under the Hood

In terms of blockchain networks and payment protocols for games, developers want **extremely fast transaction processes with low transaction costs.** These factors are crucial for gamers. The most popular protocols for blockchain gaming are **Solana** (standalone protocol) and **Polygon** (L2 protocol on Ethereum). Another advantage of these protocols is reduced energy use, which makes them better for the environment.

Aaishwarya Jain
Powder
Product Manager
RECORDING LINK

There are two styles of blockchains: one is proof of work, and the other one is proof of stake. Proof of work is the old mainstream blockchain like Bitcoin, where people are mining tokens. The process of mining is something that a lot of people do. Proof of stake is the process of minting where a random person is selected from the stakers to actually mint the coin. Because it is a random selection, people don't waste their energy. Solana happens to be one of the best in this space, mainly because minting is cheaper. Furthermore, Solana is much faster than other alternatives like Polkadot. Polygon is also growing, but not as fast as Solana.

Polygon has an advantage in the sense that it is compatible with Ethereum. It's a level two protocol on the Ethereum blockchain. So, it's easier for Ethereum projects to shift to Polygon, whereas Solana is a standalone protocol.

Ada Jonušė
Lympo
Founder & CEO
RECORDING LINK

They started to run Lympo at Ethereum, but they learned really fast that it didn't make sense for users to mint NFTs, especially for low value assets, due to the high transaction costs. For example, take a simple NFT that costs $5 and the user wants to utilize it in games in the future. However, to mint the token, the user has to pay $50, so it doesn't make any sense. Lots of blockchain gaming apps face a similar problem.

Last autumn, Lympo migrated to Polygon. It also works on Ethereum, but it's the application on top of it with a separated protocol that makes the transactions cheaper and faster.

Speed is key. Games don't typically use the Ethereum protocol , as the transactions take too much time (only a few minutes — but it still isn't good enough for games). The most popular protocols are Polygon, Bitcoin, and BNB Chain. There's a whole range of super scalable, fast, and cheap transaction options.

Lewis Grafton
SolChicks
COO
RECORDING LINK

Solana is very fast and cheap to transact on, with the transaction fee being very low. They use it in the game context where one can have more interactions with the blockchain from within the game); other chains are less frequent.

Lewis thinks that, for Bitcoin, there's processing inefficiency; the transaction fees are like a proxy for that. How much work or effort is required to keep the system going? Solana is very efficient and not wasted. Bitcoin is almost designed to be intentionally wasteful because the way that it's built requires the proof of effort and work to actually function. Solana is optimized to be fast and cheap.

Mathieu Nouzareth
Sandbox
CEO for the US
RECORDING LINK

Sandbox is currently using Ethereum (L1 blockchain), but they're moving to Polygon soon. Polygon is much faster. The settlement layer is still on Ethereum, so you still benefit from the amazing security and decentralization of the system, but building on top of that makes it faster — and way cheaper. The transaction fees are really small, which is extremely important for games in order for the token to be a utility.

Polygon is better for the environment as well; it uses significantly less energy than Ethereum.

Matheiu thinks that the transaction speed of crypto payments is slow and expensive — especially Ethereum — but it is a temporary problem. L2 crypto solutions are coming to the market soon and will upgrade the speed of transactions. Also, there is an opportunity for new options and services based on Solana or Avalanche. Each developer will choose which one is best for their use case.

Tokens Within Gameplay

Token-based game mechanics depend on the game strategy, and there are different approaches on the market. Players can **use tokens to make in-game purchases** (for example, to buy weapons, skins, etc). But unlike non-blockchain games, **users actually own the assets they buy** and don't just have its digital representation. They can use it, sell it on the market, or even transfer it to other apps in some cases. **Tokens can also be utilized to unlock levels or enter the game** in a favorable position. For example, users can contribute tokens to the prize pool to participate in the game and get a chance to win a share of it, depending on their performance.

Aaishwarya Jain
Powder
Product Manager
RECORDING LINK

The transaction process is very dependent on the game strategy. Aish doesn't think it's very different from how developers make games today. For example, after gamers reach a certain level to be able to buy something, the developer gives the choice for the user to either buy accessories for their skin, or something different. The user does the transaction when they buy the skin with that certain amount of money. It's exactly like existing games, but instead of virtual coins, it's more of a transaction or minting of an NFT.

Ada Jonušė
Lympo
Founder & CEO
RECORDING LINK

Lympo is going to release a new game later this year. In order to play this game, users will have to pay a small entry fee in tokens. In return, they can also earn tokens based on their gaming performance. So, there's a dynamic utilization of tokens in the game.

Another way to utilize tokens in games is to use them for buying assets, skins, etc., to enhance players' experiences. In non-blockchain games, these in-app purchases are just digital representations of something (for example, a digital representation of a sword) that can only be used in that particular game. Players use it, but they don't own it. In blockchain games, these assets are NFTs, which you can transfer out of the game, sell on a special market, or maybe even utilize in some other app. So, gamers actually own it. In Lympo, users have to also utilize their tokens to get NFTs.

The major principle that is being utilized in token games right now is that users pay for tokens, then they pay with tokens for participation in the game. The tokens that are paid for playing are then put into a prize pool (sometimes extra coins can be added), and after that, these tokens are distributed back to the users, according to how well they play.

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