

# GameX Option – A Decentralized Game Asset Trading and Options Platform

**Team Members:** Shiqi Wu, Yirui Yao, Jiawei Wang,  
Haoyang Fan, Boping Song

Date: April 29, 2025

## Agenda:

- Business Problem
- Market Opportunity
- Product Idea
- Smart Contracts
- Execution and Future Plans

# Business Problem

## ■ ■ ■

### Problem Statement

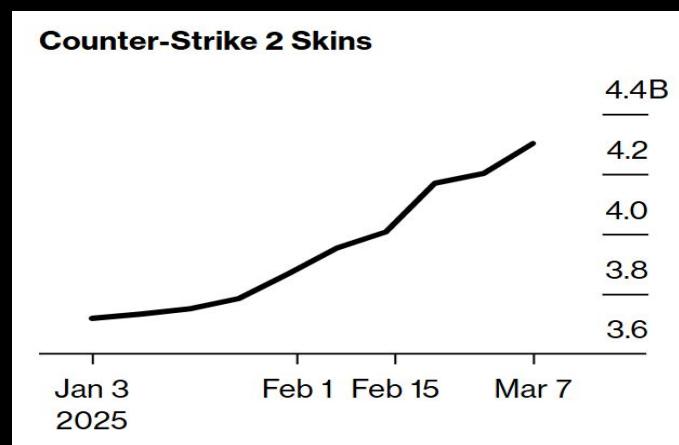
The global online gaming industry has seen exponential growth in in-game asset trading, with virtual items such as weapons, skins, and equipment gaining real monetary value, as evidenced by the Counter-Strike 2 market value for such goods passing \$4.3 billion for the first time, according to Pricempire.com [1]. However, the current ecosystem of game asset trading is:

- **Largely centralized**, with limited transparency in pricing and transaction rules;
- **Prone to fraud, hacks, and money laundering**, especially through black market channels and unregulated platforms;
- **Financially inflexible** – Players who believe in the future value of an asset must commit full capital to purchase and hold it;
- **Fragmented game ecosystems**, make it hard for developers to manage across games.

### Who is affected?

- Retail players (especially younger gamers with limited capital)
- Game item investors or speculators
- Game developers with multiple titles and imbalanced asset ecosystems

D'Anastasio, C. (2025, March 7). Market for "Counter-Strike 2" Digital Items Hit New High. MSN.  
<https://www.msn.com/en-us/money/markets/market-for-counter-strike-2-digital-items-hits-new-high/ar-AA1AtI0a>



# Opportunity

## Why is this a critical issue?

- Fraud and a lack of transparency discourage legitimate trading. In 2023, Roblox alone faced \$110 million in chargebacks, and ***about 10% of digital game purchases were suspected to be fraudulent [2]***.
- High entry costs limit participation. In Counter-Strike: Global Offensive (CS: GO), the StatTrak Factory New AK-47 Blue Gem with the 661 pattern, a skin for a gun, sold for ***\$1 million [1]***.
- Game publishers such as NetEase are facing difficulties managing inactive economies in lesser-played games.
- No current platforms offer financial flexibility or dynamic ecosystem balancing tools.

## Market Opportunity

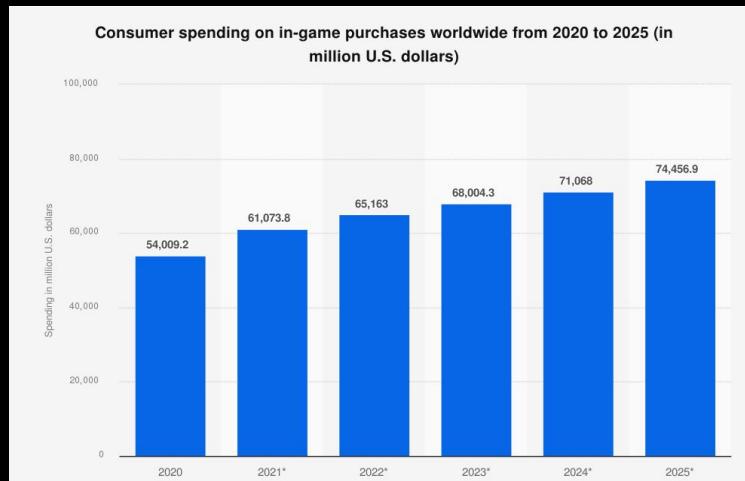
- The global Blockchain Gaming Market size is projected to exceed ***\$74 billion by 2027 [4]***
- Over ***2.6 billion gamers worldwide [5]***, with growing interest in trading and owning digital items
- Potential in combining DeFi principles with virtual asset marketplaces

[2]<https://insideainews.com/2024/12/20/defeating-fraudsters-at-the-finish-line-the-power-of-ai-in-gaming-transactions/>

[3]<https://www.statista.com/statistics/558952/in-game-consumer-spending-worldwide/>

[4]<https://www.marketsandmarkets.com/Market-Reports/blockchain-gaming-market-167926225.html>

[5]<https://www.statista.com/forecasts/748044/number-video-gamers-world>



# Market Analysis

## Skin Market:

- High-value skins trending upward (Blue Gem, Dragon Lore, Butterfly Knife)
- Popular Centralized P2P Trading Platforms (Buff, Skinport, CSMoney)

## Player Base:

- 1.8M+ active players worldwide [6]
- Still among the most-played games on Steam



[6]<https://steamdb.info/app/730/charts/#6>

# Product Idea and Minimal Viable Product (MVP)

GameX Option is a decentralized trading platform for in-game virtual assets. It enables users to:

- Trade both full NFTs (Non-fungible tokens) and fractionalized game assets;
- Create and trade call and put options on those assets;
- Redeem fractional assets into full ownership;
- Seamlessly integrate on-chain asset ownership into gameplay.

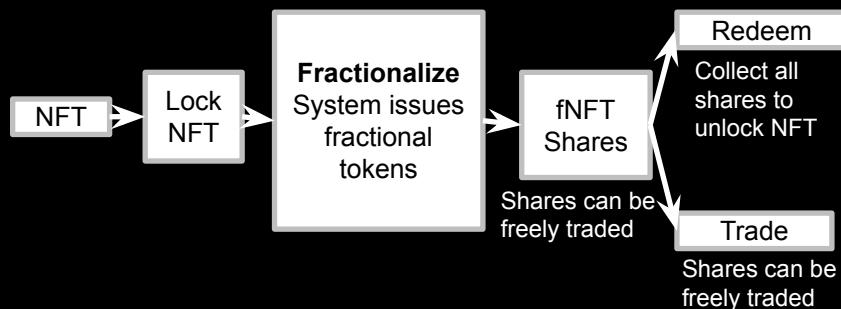
By combining NFT minting, asset fractionalization, and programmable financial tools, GameX Option creates a more flexible, inclusive, and transparent environment for digital asset speculation and ownership.

## Fractionalization Module Purpose

Allow high-value assets to be divided into fNFTs (fractional NFTs) for collective ownership

Standard: ERC-20 to represent fNFTs (e.g., SWORD001-FRAC)

- Players or developers lock an NFT into a smart contract
- System issues a fixed number of ERC-20 tokens (e.g., 1000 shares)
- These tokens are freely tradable, and may be used as option underlyings

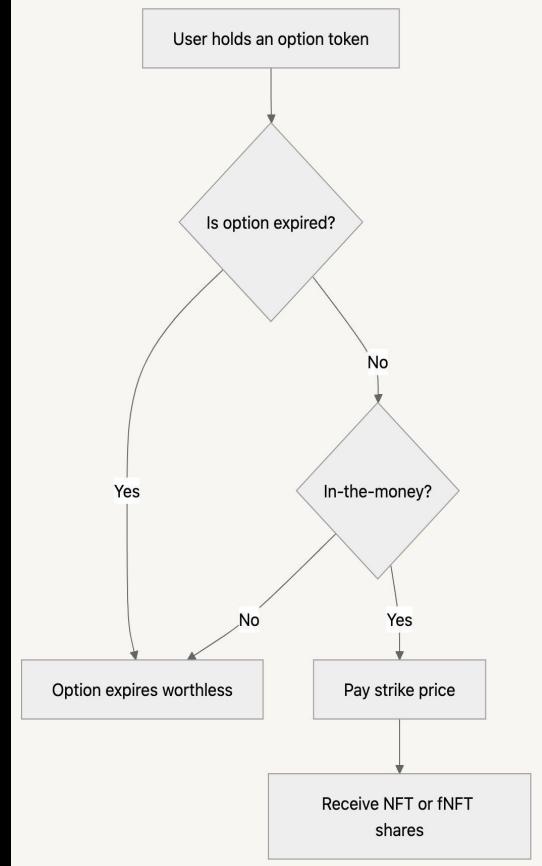


# Product Idea and MVP

## Option Module Purpose

Support call and put options on both NFTs and fNFTs  
Core: Options smart contract governs strike price,  
premium, expiration

Field	Description
underlyingAsset	NFT tokenId or fNFT token address
optionType	Call or Put
strikePrice	Strike price in Ether (ETH)
premium	Premium paid to acquire the option
expiry	Option expiration date
isFractional	Boolean flag indicating fNFT vs full NFT



# Product Idea and MVP



## Redemption Module Purpose

Enable users to convert full fNFT ownership back to original NFT

- Contract includes redeem() function
- User submits 100% of fNFTs
- Contract validates ownership
- Burns fNFTs and transfers full NFT to wallet
- Game logic can instantly reflect redeemed assets as usable

## Marketplace Module Purpose

A user interface (UI) for users to browse and transact assets  
Supported Features:

- Spot trading for NFTs and fNFTs
- Option purchase and sale (on both asset types)
- Secondary market trading of options (as ERC-1155 tokens)
- Display of option metadata:
  - Underlying asset
  - Strike / Premium / Expiry
  - Status (Active, Exercised, Expired)



User : 1234x1234...AbCD

search

My Game Asset &amp; Usage Rights



AWP | Dragon Lore

**Start Using**

✓ Usable Today: Yes ⏳ Time Remaining: 60 minutes

Token ID: #123456

My Ownership: 300 / 1000

**BUY FNFT** **Option Market (Call Only)**

User: 0x1234...AbCD

**Available Options**

- Price: 0.02 ETH
- Expires in: 5 days
- Strike Price: 0.40 ETH

**Buy Option****My Options**

- 1 Call Option
- Expires in: 2 days
- Strike Price: 0.30 ETH

**Exercise****Transfer**

Call Option grants the buyer the right to purchase the asset at the strike price before the expiry date.

**Click for more**

# Product Idea and MVP - comparison

## Existing Alternatives: What's missing?

Most current platforms—such as OpenSea or Steam Marketplace—have these limitations:

Problem	Existing Platforms (e.g., OpenSea, Steam)
Ownership flexibility	Only full ownership; no fractionalization
Speculation tools	No options, futures, or hedging mechanisms
Capital efficiency	Buying assets requires full price upfront
Risk management	No way to hedge asset value fluctuations
Cross-game pricing logic	Each asset lives in its own siloed game
In-game sync	Very limited or none; mostly cosmetic ownership

## How GameX Option is different:

Feature	GameX Option's Innovation
Fractional Ownership	Split NFTs into tradable ERC-20 fNFTs, increasing accessibility and liquidity
Options Contracts	Enables players to buy call/put options on assets, reducing capital needs and allowing speculation
Capital efficiency	Users can gain exposure with small premiums instead of full purchases
Risk management	Put options offer downside protection for volatile in-game assets
Cross-game pricing model	Asset values can reflect trading activity across multiple games based on AMM
In-game Integration	Option ownership, fNFT status, and full NFT redemption are reflected in the game interface

# Product Idea and MVP - comparison

## How it addresses the identified problem:

The core problem is that current in-game asset trading is limited, risky, and inaccessible to most players.

## GameX Option solves this by:

- Allowing players to participate with lower financial barriers via options;
- Providing tools to hedge or speculate, just like in real financial markets;
- Creating a transparent, decentralized, smart contract-based system that increases trust and auditability;
- Supporting partial ownership, so even casual players can benefit from asset value trends.

Aspect	OpenSea	Ledger Group Project
Type of Assets	Mainly digital collectibles and NFTs (art, profile pics, music, etc.)	In-game virtual assets (e.g., skins)
Target Users	NFT collectors, artists, investors	Gamers, in-game asset speculators
Financial Tools	Limited to basic buy/sell or auctions	Introduces options contracts, allowing low-cost speculation on asset values
Pricing Mechanism	Independent, user-driven pricing	Apply AMM to build Cross-game asset pricing model based on transaction volume and user activity across games
Ecosystem Integration	Largely separate from actual games	Designed to be integrated directly into gaming ecosystems, solving real game economy issues
Scalability	Focused on the NFT art/collectible market	Potential to reshape the entire gaming industry's asset trading logic, including underperforming games

# Product Idea and MVP - why blockchain



## **1. Transparent & Verifiable Ownership**

- Blockchain allows players to provably own and transfer in-game assets without relying on a central authority.
- Every asset and its history (minting, transfer, option creation, exercise) is **public and immutable**.

## **2. Programmable Financial Logic via Smart Contracts**

- Option contracts (calls & puts), fractionalization, and redemption are all **automated and trustless**, thanks to smart contracts.
- No need to trust a centralized game server to honor asset rights or option execution.

## **3. Capital Efficiency Through Token Standards**

- ERC-20 and ERC-1155 standards enable:
  - Fractional ownership of valuable NFTs
  - Composability with other DeFi protocols or wallets
  - Easier integration into trading interfaces and games

## **4. Interoperability Across Games and Platforms**

- Blockchain-based assets can be read and used by any compatible game or app.
- This allows the potential for cross-game trading, pricing, and composability, which centralized platforms cannot support.

## **5. Security and Fraud Resistance**

- Blockchain eliminates asset duplication, unauthorized modification, or manipulation.
- Ensures ownership can't be faked and trades can't be reversed.

# Smart Contract and Technical Overview

## 1. Game Asset Contract:

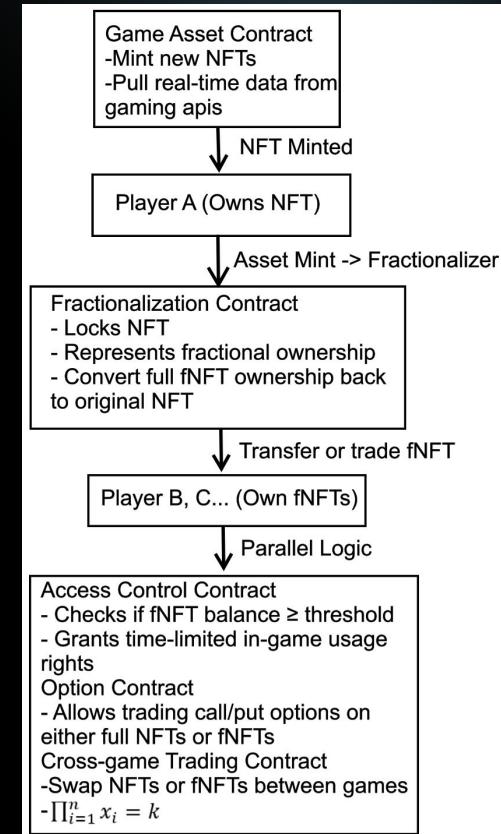
- Role: Mints and manages in-game items as NFTs
- Key functionalities:
  - Mints new game assets (e.g., sword, armor), with customizable asset properties, (e.g. rarity, role, power).
  - Each asset has a unique tokenId and uri (metadata).
  - Uses mint() to assign items to players (owners).
  - Accepts external metadata updates from real gaming platforms.

## 2. Fractionalization Contract:

- Role: Converts a full NFT into fractional shares
- Key functionalities:
  - Locks the NFT inside the contract.
  - Deploys a new ERC-20 token contract (fNFT) and mints fractional shares.
  - Allows full redemption if the user collects 100% of the shares again.

## 3. Access Control Contract:

- Role: Checks whether a user holds a minimum required amount of fNFTs and, if so, grants them temporary usage rights to the underlying game item
- Key functionalities:
  - Verify fNFT balance against usage threshold.
  - Grant or deny usage rights based on ownership and cooldowns.



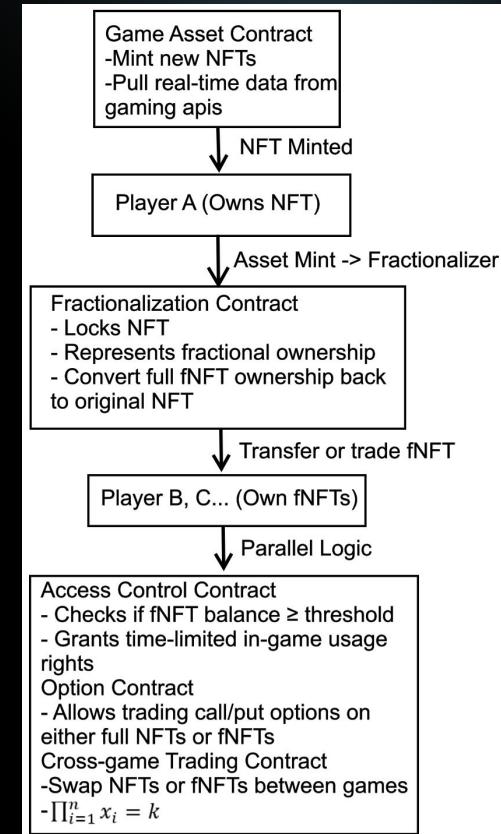
# Smart Contract and Technical Overview

## 1. Option Contract:

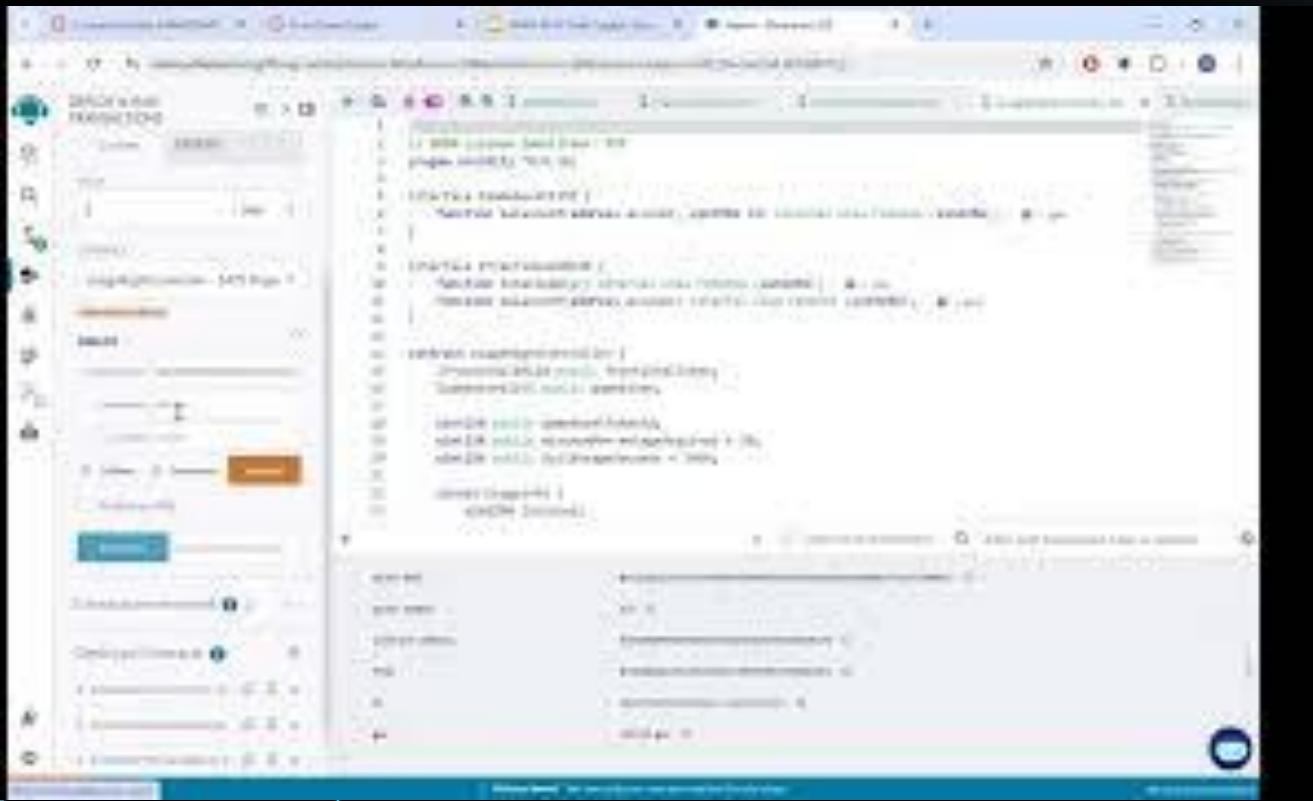
- Role: Financial tools for trading rights on NFTs and fNFTs
- Key functionalities:
  - Sellers can create call options with a strike price and expiry.
  - Buyers can purchase these options.
  - If conditions are met, buyers can exercise() the option to claim the underlying fNFT

## 2. Cross-game Trading Contract (AMM for assets in multiple games):

- Role: enables seamless, decentralized asset swaps between NFTs or fNFTs from different games.
- Key functionalities:
  - Users can exchange NFTs or fNFTs from different games using the AMM logic.
  - Supports both ERC-1155 and ERC-20 standards for full and fractional assets.



# Demo



# Project Milestones (Following a 3-week design and planning phase)

## Growth & User Milestones

- Week 4: Launch internal MVP with 5–10 test wallets interacting with NFT and option modules
- Week 5: Reach 50 demo users simulating option trades, call/put execution, and fNFT redemptions
- Week 6: Invite 100+ testers via gaming and blockchain communities (e.g., Discord, Reddit)

## Revenue Simulation Milestones

- Week 4: Introduce simulated trading fees (e.g., 1%) and option premiums (e.g., 0.01 ETH)
- Week 5: Simulate 50 call/put transactions → Projected platform revenue: 0.5 ETH
- Week 6: Add leasing module mock-up to explore weekly rental income (e.g., 0.05 ETH/week per asset)

## Partnership Exploration Milestones

- Week 3–5: Reach out to 1–2 open blockchain game projects (e.g., Loot, Big Time) for pilot testing
- Week 6: Explore mock API for syncing on-chain assets to in-game displays (e.g., backpack mapping)
- Final Week: Propose an open SDK for integrating GameX Option asset logic into third-party games

# Team Roles & Collaboration



**Shiqi Wu:** Smart Contract Architecture, Execution Logic, and Future Planning

**Yirui Yao:** Smart Contract Deployment, Testing, and Remix Environment Setup

**Jiawei Wang:** Smart Contract Deployment, Testing, and Remix Environment Setup

**Haoyang Fan:** Initial Drafting of Business Plan, Option Design, Product Idea and MVP, Project Milestones

**Boping Song:** Market Research, NFT Design, Smart Contract Review, Interface Implementation

## **Collaboration Tools & Schedule**

### *Communication Tools:*

We primarily use WeChat for daily coordination, progress updates, and informal discussions

### *Weekly Meetings:*

Formal team meetings are held 1–2 times per week via Zoom.

# Execution and Future Plans

## **Execution Strategy:**

- MVP Launch on testnet with core features: NFT minting, fractionalization, and options.
- Initial Game Integration with a partner offering gaming data.
- Community Growth via early access drops, game events, and cross-promos.

**After we complete our core features, data integration and incentives, our next steps are:**

- Public launch & testnet deployment: deploy to Goerli/Sepolia testnet and open beta for community testers.
- Ecosystem & marketplace expansion:
  - Utility staking rewards for long-term fNFT holders.
  - Explore cross-game fNFT interoperability.

## **Future Enhancements:**

- Multi-platform NFT bridging and game item standardization.
- AI-based asset valuation system.
- Achievements, leaderboard integration, and seasonal game mechanics.

# Execution and Future Plans

## **Risk & Mitigation:**

- **Economic Exploits or Incentive Misuse:**
  - **Challenge:** fNFT holders may attempt to game the system by repeatedly using a weapon's utility (e.g., multiple users rapidly mint and use).
  - **Mitigation:** Enforce cooldowns or per-user usage limits on fNFT utility.
- **Platform Dependency:**
  - **Challenge:** Heavy reliance on a single gaming partner or platform might limit expansion.
  - **Mitigation:** Partner with multiple games to diversify integration. Use a modular architecture where each game is an optional "plugin".
- **Scalability & Cost:**
  - **Challenge:** On-chain logic (minting, fractionalizing, logging) can become expensive as user base grows.
  - **Mitigation:** Optimize gas usage in smart contracts. Consider batching transactions where possible.

++++

# Thank You!

Q & A?

: :