

SmartGolf Token (SGi)

Whitepaper v4.0

Abstract

SmartGolf Token (SGi) is a groundbreaking application of blockchain technology in the sports industry, redefining golf through a tokenized, data-driven, and decentralized ecosystem. SGi stands out from typical Web3 projects by anchoring its foundation in proven innovations: over 4,000 IoT golf clubs sold globally, patented technologies recognized in the U.S. and Korea, and endorsements from PGA professionals. These achievements bridge real-world successes with Web3's potential, combining biometric motion data, AI coaching, and a robust tokenized economy to transform how golfers engage with their sport and digital assets.

Problem Statement

Golf is an elite-driven, location-locked sport with high barriers to entry. Current solutions—screen golf, driving ranges, and e-sports variations—have only marginally improved accessibility. Despite growing interest from younger generations, golf lacks a system that rewards participation, provides decentralized skill assessment, and scales into urban life.



High cost of lessons

Difficulty in improving skills without expensive professional guidance.



Barrier for beginners

Challenges in entering the sport due to lack of equipment or technical skills.



Only consuming contents

Most golfers only consume contents of golf and spend their energy and money.

Unique Strengths

SmartGolf transcends the concept phase by anchoring its ecosystem over a decade of innovation and development. With patented technologies and a record of success, including the sale of more than 4,000 units and endorsements from PGA professionals, SGi exemplifies a project backed by tangible achievements. Additionally, its partnerships with educational systems demonstrate its readiness for global expansion.

SmartGolf Platform Overview

Proven Product Advantages

1. **IoT Golf Clubs:** Equipped with 9-axis motion sensors, these clubs offer real-time, high-accuracy swing data and 3D visualization, validated by thousands of users.
2. **AI Coaching Engine:** Built on over 4,000 categorized swings, the AI delivers data-driven coaching that significantly enhances skill improvement.
3. **Robust Ecosystem:** Centered around SmartGolf Plaza, the solution brings IoT hardware, blockchain, and community participation together into an operational and successful system.



Smart golf club

A club analyze swing data with accurate algorithm.



AI Educational practice app

User-friendly, data-driven AI learning application.



Social networking features

Share feedback and progress within a web3 golf community.

Blockchain Integration

- SGI tokens, built on the ERC-20 standard, connect real-world golf activities to valuable on-chain assets.
- Unique biometric motion signatures and patented sensor data ensure high-level security and transparency.

Token Utility

- **SGi Points:** Earned through swing activity and gameplay.
- **SGi Coins:** Tradable ERC-20 tokens used for:
 - Purchasing equipment, coaching, and plaza access
 - Betting and spectating events
 - Governance and DAO voting

Token Deployment:

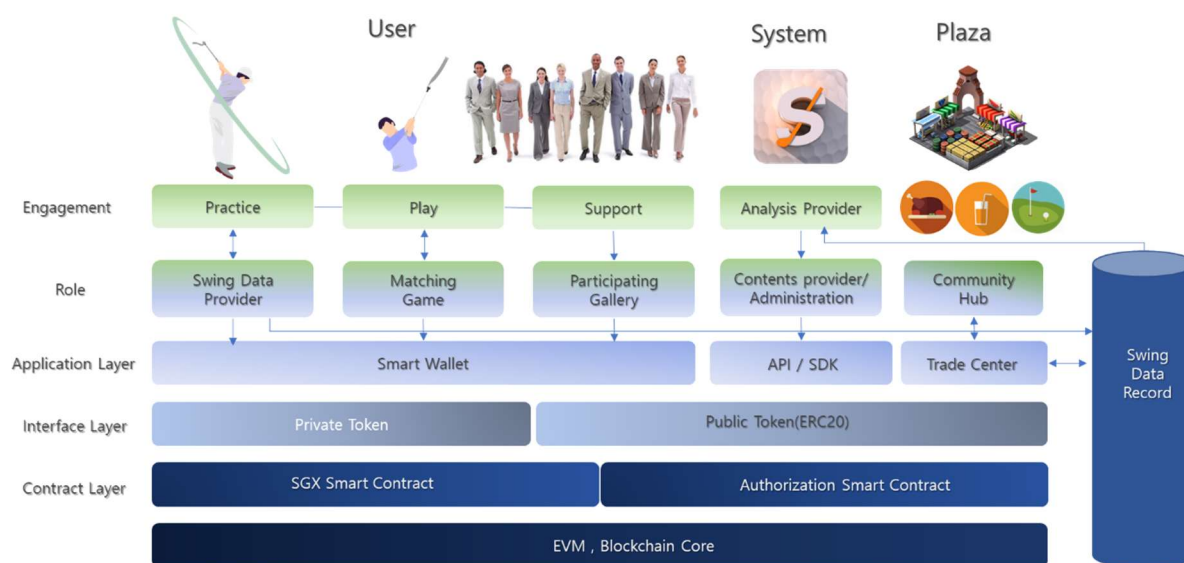
- The SGI ERC-20 token has already been deployed on the Ethereum mainnet with

a total supply of 400,000,000 tokens.

- Contract Address: 0xBe64547924b2Bf16782c903F0400308b50e3c4d4
- The token is accessible through MetaMask and integrated with the SmartGolf App. Smart contract extensions for staking, rewards, and DAO voting are planned for Q3 2025.

Smart Contracts

SmartGolf leverages blockchain to tokenize golf swings and reward performance, with a robust, modular smart contract system to ensure transparency, automation, and security.



- Swing tokens issued as NFTs
- Contracts manage data integrity, P2P swing exchanges, marketplace logic
- Smart Contract Stack

Layer	Function	Example
Swing NFT Contract	Issues NFTs per validated swing; links metadata from motion sensors	mintSwingNFT()
Reward Contract	Calculates SGI Points and converts to SGI Coins based on on-chain activity	claimRewards()
Marketplace Contract	Enables users to trade swing NFTs or book AI coaching sessions	listSwingForSale()
DAO Governance Contract	Handles proposals, voting, and treasury logic	voteOnProposal()

All contracts follow upgradeable architecture (EIP-1967 proxy pattern), with regular audits and version tracking.

On-chain KYC by Swing

Each user's swing signature is stored as a unique multi-sensor pattern (15 IMU inputs), enabling biometric-style verification.

- **Biometric Motion Signature:** Each swing generates a unique 15-sensor pattern (IMU), hashed and stored on-chain.
- **User KYC Hash Mapping:** Users' identities are mapped to swing hashes via on-chain KYC integration, ensuring privacy-compliant authentication.

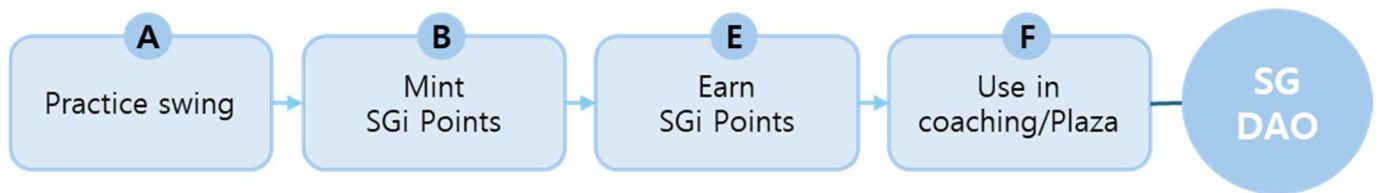
Reward Flow Model

flowchart LR

A[Practice Swing] --> B[Upload via App]

B --> C{Validated?} -->|Yes| D[Mint NFT]

D --> E[Earn SGI Points] --> F[Convert to SGI Coin] --> G[Use in Ecosystem]



Security & Standards

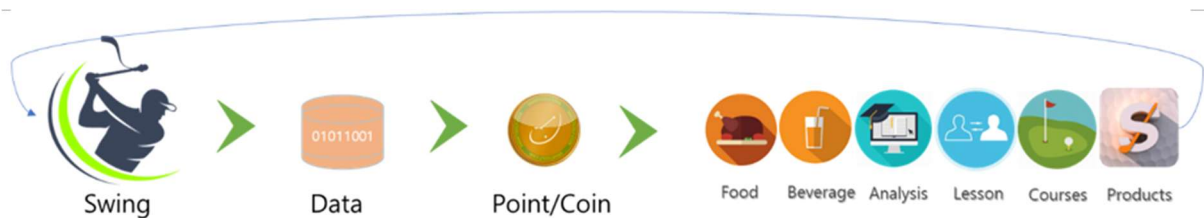
- **Audit Partners:** OpenZeppelin, CertiK (planned)
- **Gas Optimization:** Modular batch minting and reward claims
- **KYC & Privacy:** On-chain ID mapping with zk-hash (planned)

Why It Matters

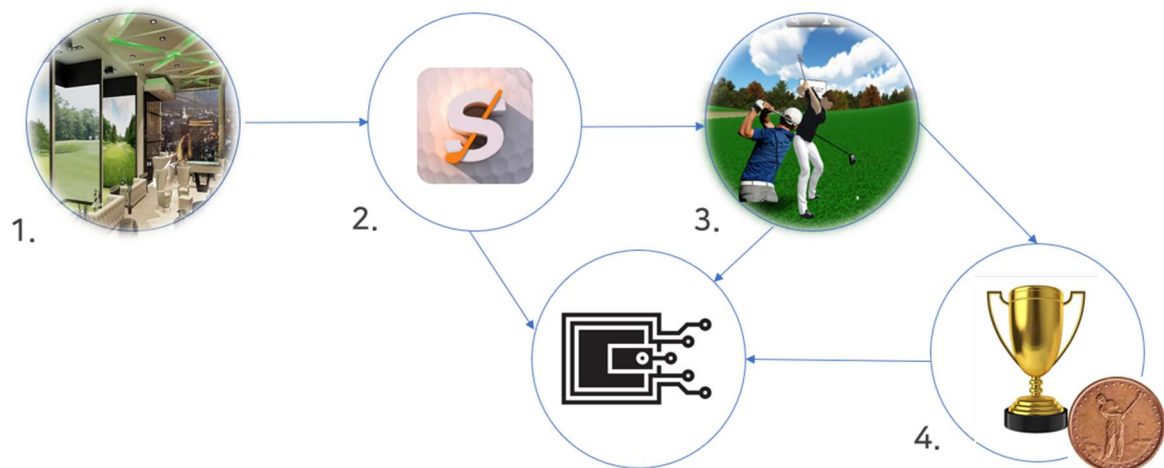
- Real-time motion data → on-chain value via NFT + ERC20
 - Fixed supply + burn model = deflationary incentive loop
 - Full transparency: DAO-voted governance + open metrics
-

Use Cases

Use Case I – Swing Tokenization Users practicing at home upload swing data, tokenize it, and share or monetize via SmartGolf DB.

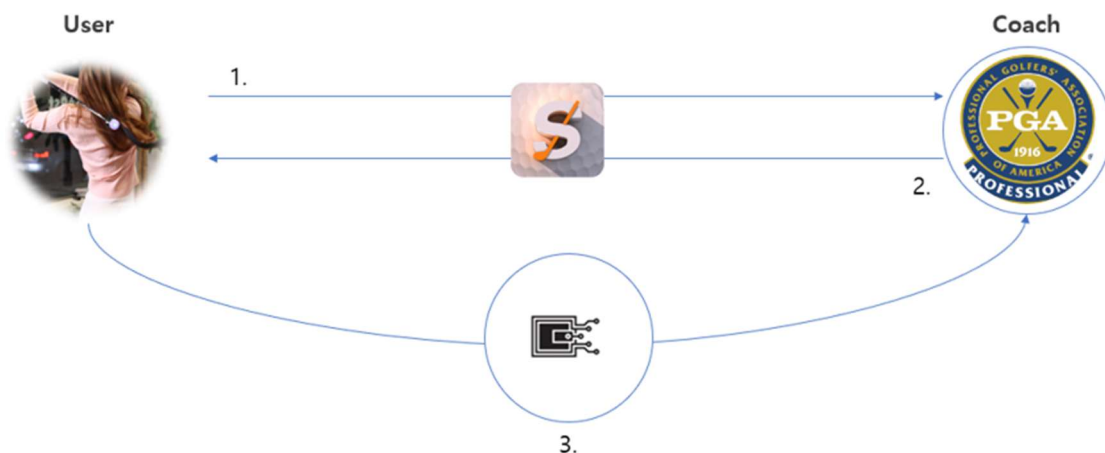


Use Case II – SmartGolf Plaza Economy Users compete or bet in SmartGolf Plaza; winnings are paid in SGI tokens and recorded on-chain.



1. SmartGolf Plaza (Could be done at home with SmartGolf app + club)
2. Player and Galley log in to the SmartGolf System.
3. Engage (rounding on course or betting as gallery) in the virtual multi-round on SG course.
4. Wins the round and received prize (tokens) as a reward.

Use Case III – Additional Coaching Users connect to certified coaches via the platform; coaching fees and swing feedback are processed through smart contracts and paid in SGI.



1. SmartGolf system – The user swings and the swing data is transferred to a matched coach.
2. The swing data will be analyzed, visualized on the SmartGolf App for a detailed review from the coach followed by specific instructions on methods to improve the user's swing.
3. The overall tuition fee is paid through a transaction via the SmartGolf digital wallet

Market Opportunity

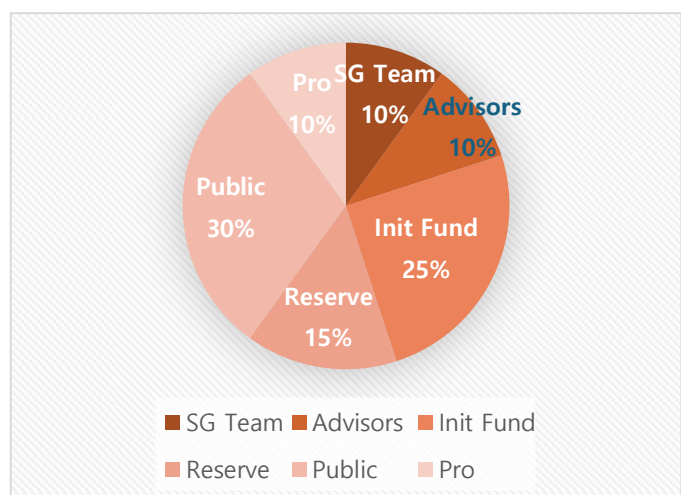
- 65M global golfers
- \$15.8B golf equipment market (US)
- 500+ simulated golf courses digitized with LiDAR
- Active partnerships with 5 Houston schools, PGA pros

Tokenomics

- Total Supply: 400,000,000 SGI
- Conversion: 1,000 SGI Points = 1 SGI | 1 SGI = 1 USDT
- Early Bird Discount: Up to 25%
- Lockup period: 6 Month

Distribution:

- 30% Public Sale
- 15% Private Investors
- 10% PGA/Associations
- 15% Business Reserve
- 10% Founders/Team
- 10% Advisors
- 10% Early Investors

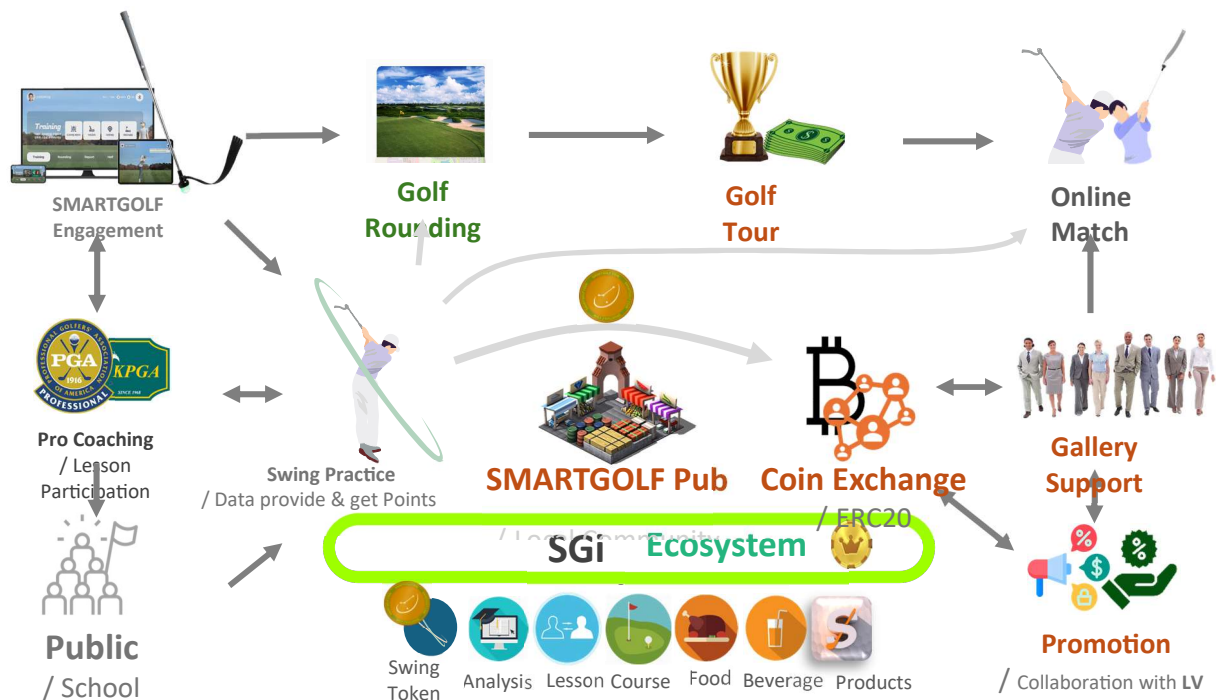


Fund Allocation:

- R&D and mass production
- Ecosystem development
- Global marketing & partnerships



Ecosystem Components



- **SmartGolf Club:** Sensor-driven IoT golf hardware
- **SmartGolf App:** Swing analysis, AI feedback, digital wallet
- **SmartGolf Plaza:** Real-world venue for token-based gaming
- **Blockchain Layer:** NFT issuance, DAO governance, token economy

Competitive Advantage

- **Patented Technology:** Protected by U.S. and Korean patents, the IoT golf club

technology is a proven game changer.

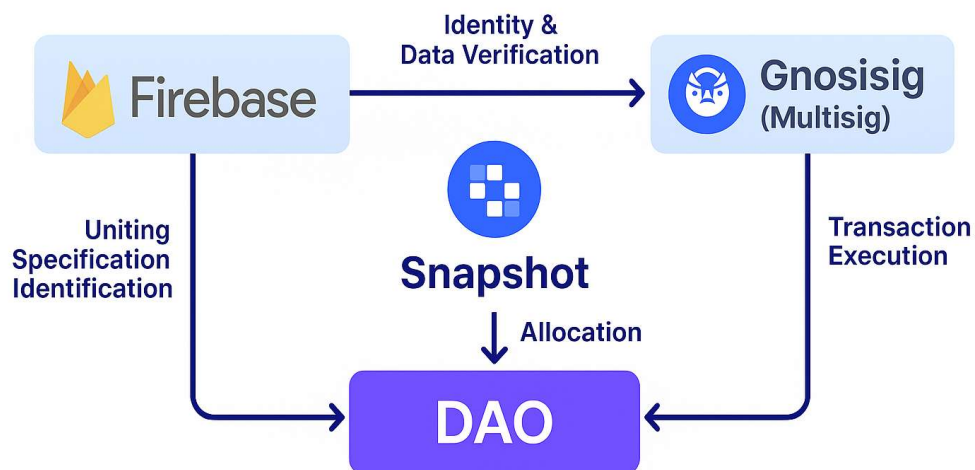
- **Commercial Success:** Over 4,000 units sold through crowdfunding campaigns, demonstrating market traction. 4K units sold via crowdfunding
- **Real-World Impact:** Strong partnerships with education systems and PGA professionals solidify SGI's relevance and scalability

Roadmap Highlights

- **2015–2023:** R&D, crowdfunding, hardware launch, PGA endorsement
- **2024:** School partnerships, major exhibitions partner (VivaTech, ExpandNorthStar)
- **2025 Q2–Q3:** Token launch, Binance Launch Pool listing, ecosystem expansion

Value Governance & DAO Structure

- SGI holders can vote on:
 - Platform upgrades
 - Tokenomics adjustments
 - Coach onboarding protocols
- Treasury managed by multi-signature DAO board with transparency reports every quarter
- Community proposals open via Snapshot-style governance portal



Risk Factors

Standard Web3 risks apply:

- Blockchain volatility
- Regulatory uncertainty
- Security vulnerabilities (wallet, smart contract exploits)

- Market adoption dependency

Conclusion

SmartGolf Token (SGi) represents a new frontier in the sports industry by combining proven, patented technologies with blockchain innovation. Unlike traditional Web3 projects, SGi leverages real-world achievements, including commercialized IoT golf clubs, endorsements from PGA professionals, and strong educational collaborations, to build a robust and scalable ecosystem. By transforming swing data into valuable, on-chain assets and providing a decentralized yet proven infrastructure, SGi is set to redefine the golf experience for players worldwide. This concept represents a significant advancement in the integration of sports, technology, and community.

<https://smartgolf.io>