



## SmartGolf Token (SGi)

Whitepaper v1.0

### Abstract

SmartGolf Token (SGi) bridges real-world golf training and tokenized digital rewards. With 4,000+ devices sold and PGA endorsement, SGi is a proven use case of AI and blockchain in sports. 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.

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### 1. Problem Statement

#### Current Issues:

- Golf is perceived as an elite sport with limited accessibility, lacking systems that incentivize participation.
- Existing platforms like screen golf or driving ranges are restricted to certain users, without mechanisms to reward engagement.



#### 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.

#### Proposed Solution:

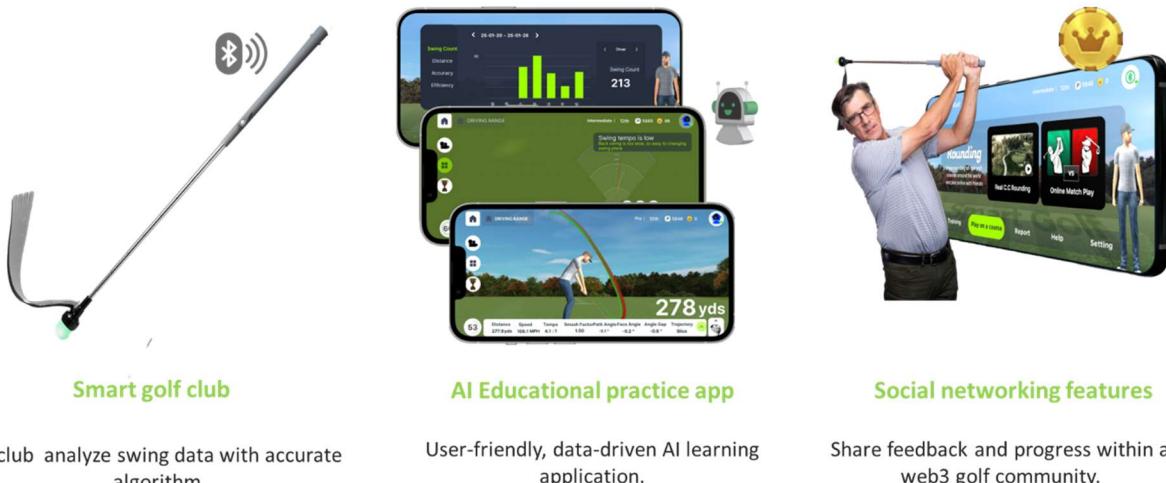
- SmartGolf integrates IoT-based golf clubs and AI coaching systems to analyze swing data in real-time, recording it on the blockchain to reward participation.
- SmartGolf Plaza extends the Web3 experience offline, enhancing user engagement through physical locations.



## 2. Technical Overview

### Core Technologies:

- **IoT Golf Clubs:** Equipped with 9-axis motion sensors to collect real-time swing data, visualized in 3D.
- **AI Coaching Engine:** Provides personalized coaching based on over 4,000 categorized swing data points.
- **Blockchain Integration:** Utilizes ERC-20 SGi tokens to link offline activities to digital assets.



### Security and Standards:

- **Swing NFTs:** Each swing is issued as a unique NFT, ensuring data integrity.
- **Smart Contracts:** Implemented for reward systems, DAO governance, and exchange integrations.
- **KYC & Privacy Protection:** Employs zk-hash-based on-chain KYC to safeguard user information.

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()



Layer	Function	Example
<b>DAO Governance Contract</b>	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.

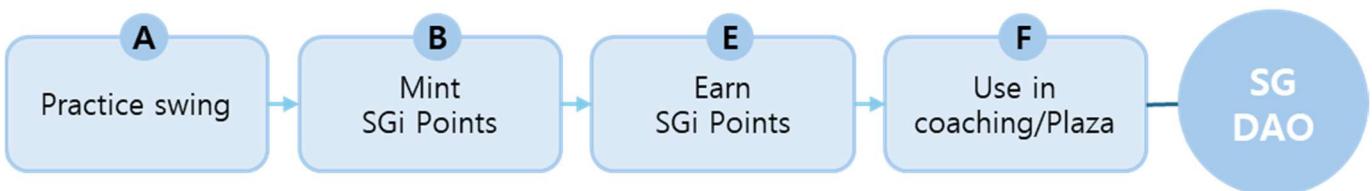
### Reward Flow Model

flowchart LR

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A[Practice Swing] --> B[Upload via App]
B --> C{Validated?}
    C -- Yes --> D[Mint NFT]
    C -- No --> E[Earn SGI Points]
D --> E
E --> F[Convert to SGI Coin]
F --> G[Use in Ecosystem]

```



### 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



## 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

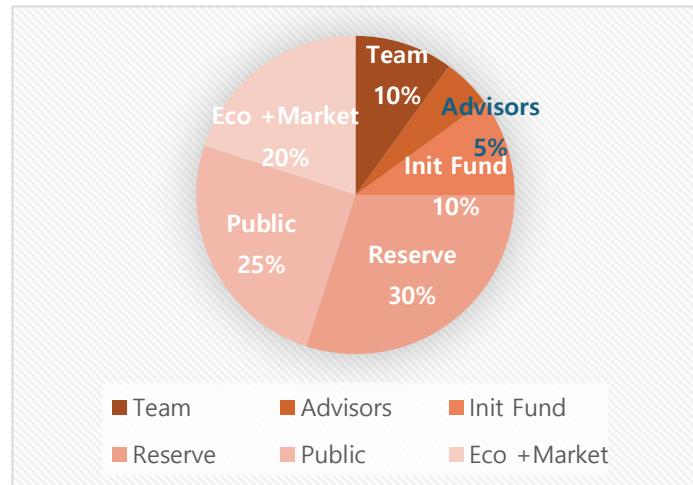
## 3. Tokenomics

### Token Structure:

- **Total Supply:** initially 1,000 million SGi tokens. (Originally 400M; expanded to 1B under DAO governance)
- **Swing Generation:** 1 swing converts 1~3 SmartGolf points
- **Conversion:** 1,000 SmartGolf Points = 1 SGi Token
- **Utility:** Used for equipment purchases, coaching sessions, event participation, and DAO governance.

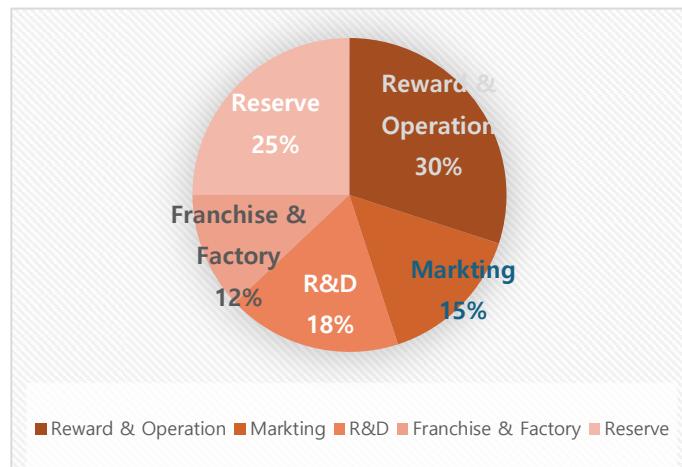
### Distribution Plan:

- **Public Sale:** 25%
- **Private Round:** 10%
- **PGA/Ambassadors:** 2.5%
- **Advisors:** 2.5%
- **Team:** 10%
- **Liquidity:** 5%
- **Community(marketing):** 5%
- **Ecosystem/Rewards:** 10%
- **Reserve:** 30%



### Fund Allocation:

- **Rewards & Operations:** 30%
- **Marketing & Community:** 15%
- **R&D:** 18%
- **Manufacturing:** 2%
- **Franchise Launch:** 10%
- **Reserve:** 25%





## Private Sale Terms & Vesting

Early contributors benefit from tiered SGi token pricing and structured vesting schedules to promote long-term alignment. The public sale price is set at \$1.00 per SGi token, in alignment with its internal utility valuation.

### Private Sale Opportunity:

Round	Price per SGi (USD)	Discount vs \$1.00 peg	Vesting Schedule
Seed	\$0.50	50% off	3-month cliff, 12-month linear vesting
Strategic	\$0.65	35% off	1-month cliff, 9-month linear vesting
Private	\$0.75	25% off	1-month cliff, 6-month linear vesting
Public Sale	\$0.85	15% off	Fully unlocked

This structure ensures price fairness while rewarding early believers. Vesting is enforced via smart contracts.

**Dual Valuation Context:** SGi's public sale price is set at \$1.00, reflecting its internal utility value when applied toward real-world products such as the AIX Club. For example:

- 500 SGi + 1 AIX Club = \$500 → SGi = \$1.00
- 1,000 SGi + 1 AIX Club = \$1,000 → SGi = \$1.00

The public sale price of SGi is set at **\$0.85 per token**, offering a 15% entry incentive compared to the internal utility value of \$1.00.

This ensures ecosystem consistency while rewarding new community members with early access benefits.

### Utility Components:

- Access to AI swing coaching modules
- Gallery-based cheering participation in tournaments (token-supported prediction)
- Access to franchise-based SmartGolf Plaza locations and branded F&B rewards
- Minting and trading swing-based NFTs
- Entry into SmartGolf Plaza events and competitions



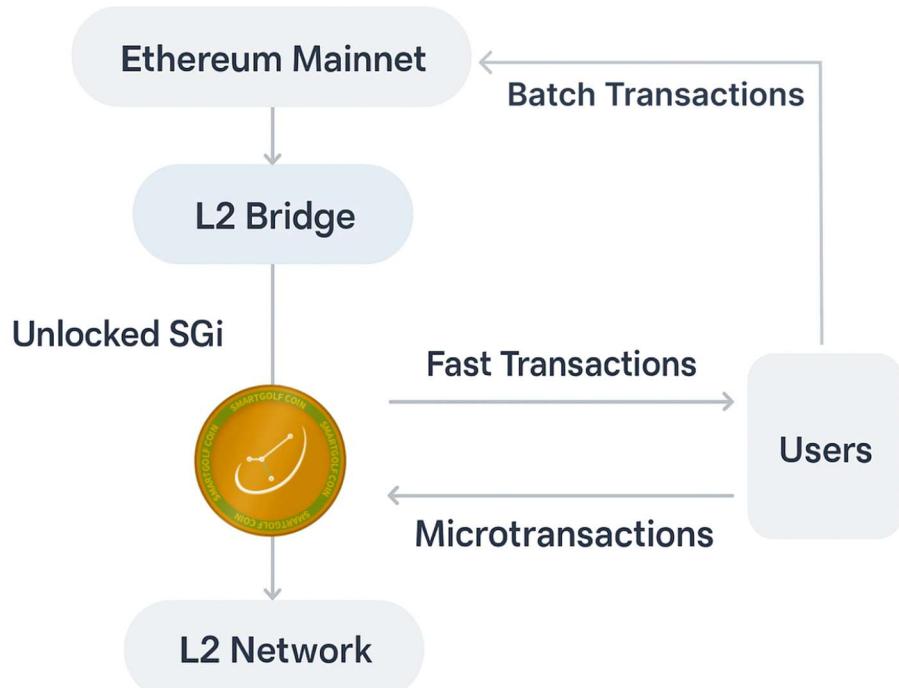
- Participation in DAO governance and platform voting
- Physical rewards (e.g., AIX Club) via token holding tiers

## Scalable Architecture: L2 Integration Strategy

SGi will selectively bridge unlocked tokens to Layer-2 networks like Arbitrum and Optimism, enabling ultra-low-cost interactions for game mechanics, NFT use cases, and PvP microtransactions.

Only a controlled portion of unlocked SGi will be bridged to L2, ensuring supply discipline and ecosystem health.

This dual-layer design ensures that core governance and long-term vesting remain secure on Ethereum MainNet, while L2 handles fast, user-level operations.



## Reward Integration Model:

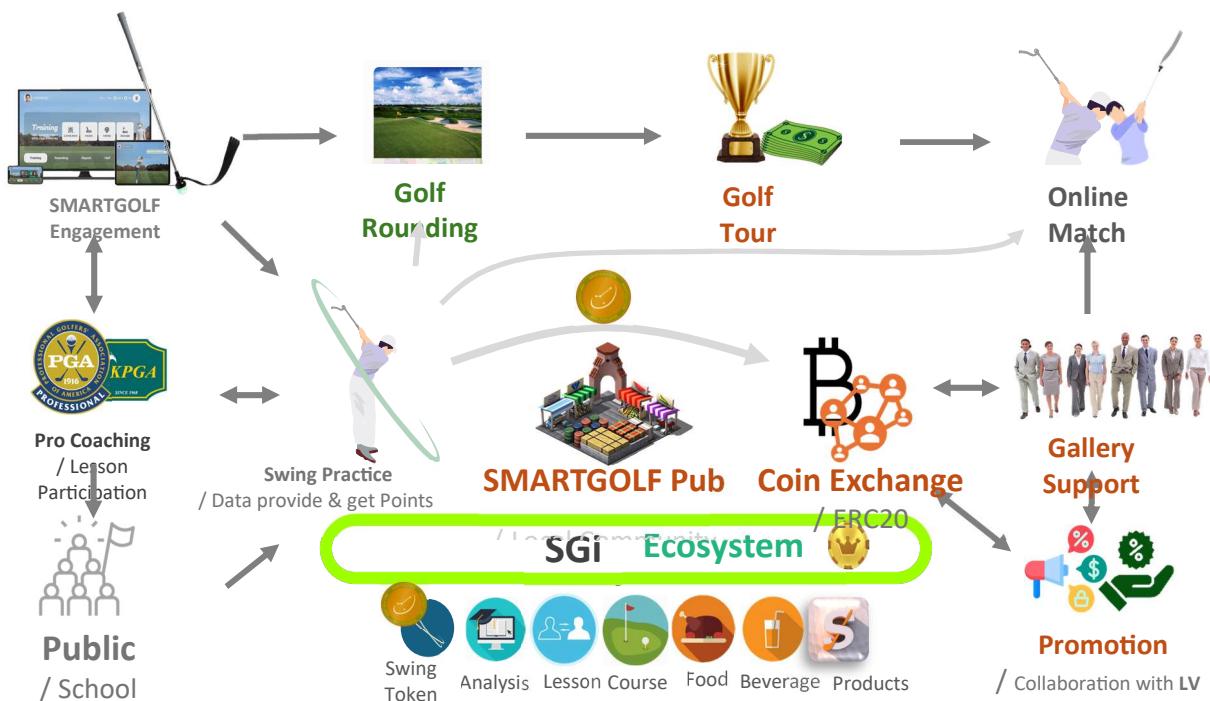
Round	SGi Holding Threshold	Reward	Description
Bronze	500 SGi	1 AIX Club	Entry-level real swing experience with token utility
Silver	1,000 SGi	1 AIX Club + Swing NFT rights	Active user tier with digital asset engagement



<b>Gold</b>	3,000 SGI	All above + DAO voting priority + Plaza event pass	Ecosystem contributor + governance enabler
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SGi holders can unlock a combination of physical rewards, digital features, and community governance rights. This tiered model supports both mass adoption and incentivized participation, while reinforcing SGi's identity as a non-securitized, real-world utility token.

## Ecosystem Components



- **SmartGolf Club:** Sensor-driven IoT golf hardware
- **SmartGolf App:** Swing analysis, AI feedback, digital wallet, and downloadable course access
- **SmartGolf Plaza:** Real-world venue for token-based gaming
- **SmartGolf Tournament:** Entry fees into events and competition
- **Blockchain Layer:** NFT issuance, DAO governance, token economy

## 4. Use Cases

### Use Case I – Swing Tokenization

- **Players** swing with a SmartGolf club at home, and the motion is recorded and

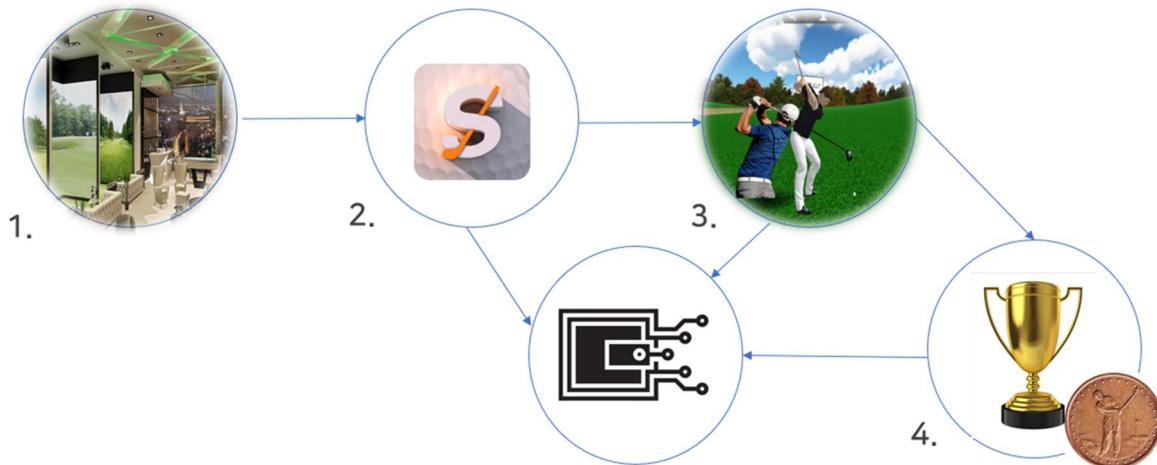


tokenized on-chain. These Swing NFTs can be used for rewards, coaching, or trading.



### Use Case II – SmartGolf Plaza Economy

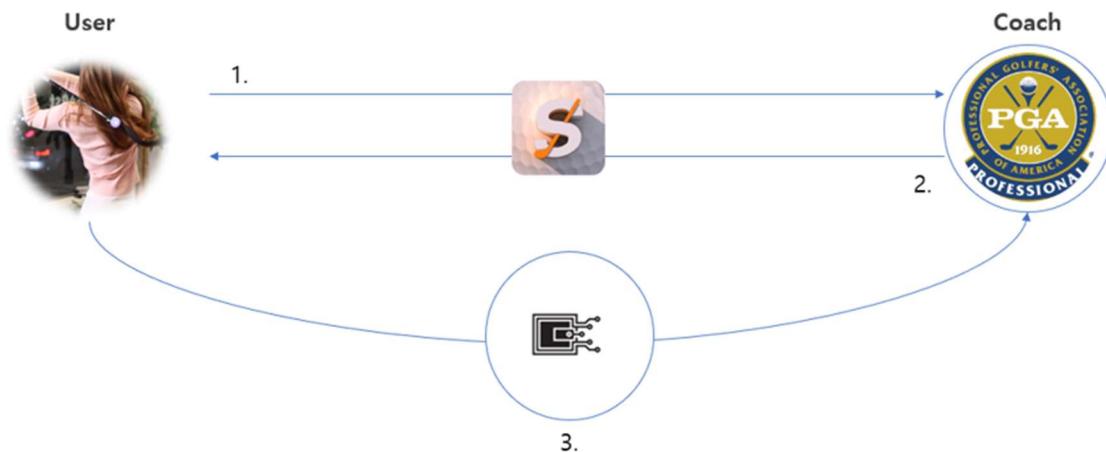
- **Users** engage in competitions or prediction support at SmartGolf Plaza, receiving SGi tokens as rewards, with all activities recorded on the blockchain.



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 token-backed cheering by 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 with certified coaches through the platform for coaching sessions, with fees and feedback processed via smart contracts in SGi tokens. Tuition fee is paid via SmartGolf digital wallet.



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

## 5. Market Opportunity

- **Global Golf Population:** 65 million.
- **U.S. Golf Equipment Market Size:** \$15.8 billion.
- **Digitized Golf Courses:** Over 500.
- **Active Partnerships:** 5 schools in Houston, collaborations with PGA professionals.

## 6. Team

### Core Team:

- **Jongmin Kim (CEO):** Founder of SmartGolf, leading the vision to integrate golf and blockchain technologies.
- **HK Yoon(CSO):** Leads strategic development for Web3 golf business expansion and ecosystem growth.
- **Moon Jang(Software Development):** Responsible for the development of SmartGolf platform software and integration of AI and IoT technologies.
- **Sion Lee(Server / Blockchain Integration):** Manages scalable and secure server systems and integrates blockchain technologies.

### Professional Golf Ambassadors:

- **Steve Parker, JJ Wood, Steve Jurgenson, Matthew Williams** : PGA coaches and



tour players endorsed SmartGolf accuracy, helping to increase SmartGolf's brand recognition and credibility.

#### **Global Partners:**

- [Terry Williams](#)(USA), [Lee Dewerson](#)(Oceania), [Iñigo Gesto Castromil](#)(EU) : Assisting in regional market expansion and user adoption strategies.

#### **Advisors:**

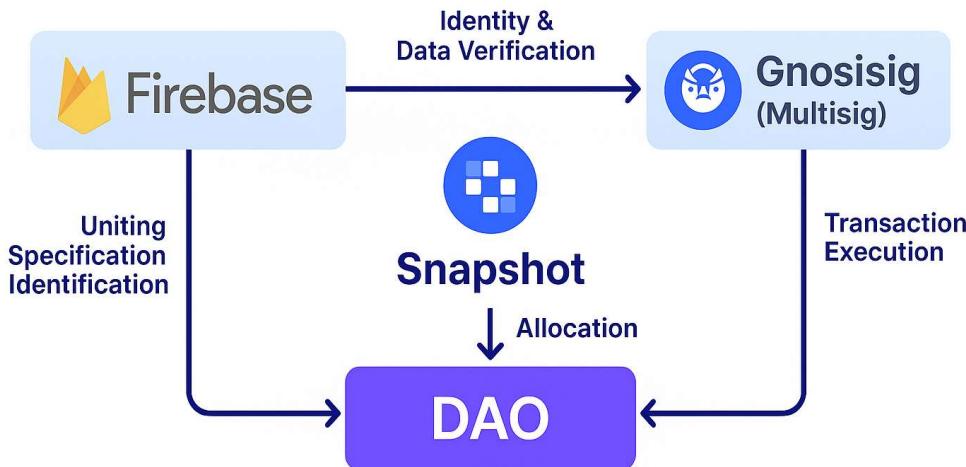
- [Jason Oh](#) - **Tokenomics Strategy**, [Fraser Warren](#) - **Global Marketing**.

## **7. Roadmap Highlights**

- **2015–2023**: R&D, crowdfunding, hardware launch, PGA endorsement
- **2024**: School partnerships, major exhibitions partner (VivaTech, ExpandNorthStar)
- **2025 Q2**: Token smart contract deployed (SGi live on-chain)
- **2025 Q3**: Launch staking & utility token features (CEX listing under partner review)
- **2025 Q4**: Activate NFT swing minting & DAO voting rights

## **8. Governance & DAO Structure**

- **SGi Holders:** Participate in votes on platform upgrades, tokenomics adjustments, and coach onboarding protocols.
- **Financial Management:** Multi-signature DAO board oversees finances, providing quarterly transparency reports.
- **Community Proposals:** Open governance portal for community suggestions, utilizing Snapshot-style voting.
- **Gallery participation:** Gallery members (spectators) can participate in token-backed cheering by predicting match outcomes. This participation contributes to engagement and excitement in the ecosystem. A portion of the token-based cheering pool is redistributed to winners, while another portion is allocated to the DAO treasury to support future events. Future initiatives may include city-level franchise tournaments—where SmartGolf battles are hosted across hotels or venues, enabling gallery participation as a core entertainment layer. (e.g., hotel-based events in entertainment hubs like Las Vegas).



## 9. Token Burn & Supply Management

To ensure long-term value stability and align user incentives with ecosystem health, SGi adopts a hybrid token supply mechanism involving controlled token burns and capped minting:

- **Token Burn:**
  - A portion of tokens used for in-game betting fees, tournament entry fees, and SmartGolf virtual course purchases are automatically burned.
  - This deflationary mechanism prevents oversupply and enhances the long-term value of the SGi token.
- **Controlled Minting:**
  - New SGi tokens may be minted only in limited, governance-approved scenarios such as:
    - Ecosystem expansion into new regions
    - Strategic partnerships or franchise launches
    - Rewards pool replenishment (subject to DAO voting)
  - Minting is subject to a hard cap and transparent governance via SmartGolf DAO.
- **Treasury Reserve Policy:**
  - A portion of SGi tokens are held in the DAO treasury and gradually released according to performance milestones, with unclaimed rewards subject to periodic burn cycles.



## 10. Risk Factors

### Standard Web3 Risks:

- **Blockchain Volatility:** As with any Web3 project, fluctuations in the blockchain market can impact token values.
- **Regulatory Uncertainty:** While the regulatory landscape for cryptocurrencies is still evolving, SmartGolf Token (SGi) has been designed as a **Utility Token** rather than a Security Token. This distinction ensures that SGi complies with regulatory frameworks governing utility tokens, which are typically more favorably accepted by regulatory authorities. The token's creation and use are fully integrated within the **SmartGolf ecosystem**, which mitigates regulatory risk by ensuring that SGi's primary function is as a utility for real-world golf training, AI coaching, and community participation. We believe this approach reduces exposure to the potential risks associated with Security Token regulations.
- **Security Vulnerabilities:** Risks related to wallet security and potential exploits of smart contracts remain prevalent. However, SmartGolf's smart contracts are built with upgradeable architecture and undergo regular audits to minimize vulnerabilities.
- **Market Adoption Dependency:** The success of SmartGolf is largely dependent on its adoption by golfers, coaching professionals, and the global golf community. Scaling the platform and ensuring widespread user participation is key to the ecosystem's success.

## 11. Conclusion

SmartGolf Token (SGi) combines golf and blockchain innovation to open new horizons in the sports industry. With tangible applications like IoT golf clubs, PGA endorsements, and strong partnerships with educational systems, SGi is building a trustworthy and scalable ecosystem. By converting swing data into valuable on-chain assets and providing a decentralized yet proven infrastructure, SGi turns physical golf swings into blockchain utility. **SmartGolf is not an idea. It's a real product with real users – and now, a real token.**

The future of golf is data-driven, decentralized, and rewarding.

**More info:**



- 🌐 Website: [smartgolf.io](http://smartgolf.io)
- 🔗 GitHub: [github.com/SmartGolf/SmartGolfDAO](https://github.com/SmartGolf/SmartGolfDAO)
- 💬 Telegram: [t.me/SmartGolfSGi](https://t.me/SmartGolfSGi)
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