SWGN Whitepaper

SWGN — Decentralized Drone Ecosystem: Technology & Economics v1.0 | 2026

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1. Abstract

SWGN is a blockchain-based decentralized drone ecosystem designed to connect global drone operators, task requesters, and data consumers through the SWGN token. It enables transparent airspace allocation, automated task incentives, and trustworthy storage and trading of aerial and telemetry data.

We are building a "fly-to-earn" network: participants earn SWGN rewards by completing delivery, inspection, and mapping tasks, and share in network revenue through airspace data contributions and governance. SWGN aims to become the infrastructure layer for the low-altitude economy.

2. Vision & Mission

The global low-altitude economy is projected to exceed $400 billion by 2030, spanning logistics, agriculture, emergency response, and smart city management. However, the industry today suffers from opaque airspace management, inefficient settlements, and fragmented data silos.

SWGN's mission: Reshape the drone ecosystem with blockchain—every flight creates value, every dataset is traceable.

3. Industry Pain Points

• Opaque airspace allocation: Centralized approval processes, low efficiency, lack of auditable records.
• Cumbersome settlement: Manual reconciliation and settlement in multi-party workflows increase cost and disputes.
• Data silos and copyright: Aerial and remote sensing data are scattered, hard to verify and trade; creator rights are unprotected.
• Insufficient incentives: Network contributors (e.g., remote delivery pilots, emergency volunteers) lack sustainable reward mechanisms.

4. Solution

4.1 On-Chain Airspace Registration & Scheduling

Within local regulatory frameworks, SWGN provides smart contract-based airspace registration, time-slot booking, and conflict detection. All operations are recorded on-chain for traceability and auditability.

4.2 Task-to-Earn

Participants completing delivery, inspection, and mapping tasks earn SWGN rewards. Reward amounts are tied to task difficulty, quality, and network contribution, dynamically adjusted to ensure sustainable incentives.

4.3 On-Chain Data & NFT

Aerial and telemetry data are stored on decentralized storage (e.g., IPFS, Arweave) and minted as NFTs for copyright and secondary market trading. Contributors receive SWGN or transaction revenue share.

4.4 Smart Contract Escrow Settlement

Task requesters lock payment in smart contracts; funds are released to executors automatically upon verification, reducing manual intervention and disputes.

5. Technical Architecture

SWGN uses a layered architecture:

• Chain layer: EVM-compatible chains (Ethereum, Base, Polygon) for token, governance, task escrow, and settlement.
• Storage layer: IPFS / Arweave for task proofs, aerial data, and metadata—tamper-proof and long-term available.
• Integration layer: REST API and SDK for third-party platforms, drone OEMs, and logistics systems.
• Application layer: Web and mobile DApps for task posting, acceptance, data browsing, and trading.

6. Token Economics

6.1 Basic Info

Item	Details
Token Name	SWGN
Symbol	SWGN
Standard	ERC-20

6.2 Allocation

Use	Share	Unlock
Initial circulation	15%	At TGE
Network rewards	40%	4–8 years, linear block release
Ecosystem	25%	Quarterly, partners & dev incentives
Team & advisors	15%	12-mo lock, then 4-year linear vest
Community airdrop	5%	Batched to early contributors & testnet users

6.3 Token Use Cases

• Pay for tasks, network services, and data access
• Stake for airspace governance votes and parameter changes
• Incentivize executors, data contributors, and node operators
• Share network revenue (e.g., fees, data trading)

7. Governance

SWGN will transition to DAO governance. SWGN holders may propose and vote on:

• Network parameters (reward rates, staking requirements)
• Airspace rules and compliance
• Ecosystem fund allocation

• Protocol upgrades and contract migration

Voting power is tied to holdings and lock duration. See governance docs for details.

8. Roadmap

• 2026 Q1: Testnet, token deployment, first partners
• 2026 Q2–Q3: Mainnet, DEX liquidity, logistics pilot cities
• 2026 Q4: Multi-chain, global nodes, Airspace DAO
• 2027+: Autonomous flight network, cross-region ops, scale

9. Risk Disclosure

Cryptocurrencies and blockchain projects carry market volatility, technical risks, and regulatory uncertainty. This whitepaper is for informational purposes only and does not constitute investment advice. Please exercise caution and comply with local laws.

Disclaimer: SWGN is in early stages. Roadmap and token economics may change. Read the full document and understand risks before participating.