# Mochi: Real-World Trading Cards on Web3

**Whitepaper v1.3**

**Date:** 26 December 2025

**Revision note:** This version introduces the Web2.5 Hybrid System, enabling users to access the platform via traditional login (email, social) alongside wallet-based authentication. Key additions include: custodial user accounts with credit balance system, virtual card inventory with mint-on-demand NFT withdrawal, internal marketplace for off-chain trading, and flexible payment options (USDC deposits, cryptocurrency from linked wallets). Previous Web3 functionality remains fully supported for users preferring direct wallet interaction.

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## 0. Disclaimer

This whitepaper is provided for informational purposes and may be updated from time to time.

Nothing in this document is intended to be, or should be construed as, financial, legal, tax, or investment advice.

MOCHI is designed and intended as a utility token for participation and interaction within the Mochi ecosystem.

The regulatory treatment of digital assets varies by jurisdiction and may change. You are responsible for complying with applicable laws in your jurisdiction and should seek independent professional advice where appropriate.

**Brand note:** Mochi is an independent project and is not affiliated with, endorsed by, or connected to The Pokémon Company, Nintendo, Game Freak, or any other IP holder. Any references to popular trading card games are descriptive only.

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## 1. Executive Summary

Trading cards have evolved into a global collector economy — driven by nostalgia, community, and an increasingly online marketplace. At the same time, Web3 has introduced new primitives for ownership, transferability, and transparency.

Mochi is building a platform that connects:

- **Real-world trading card products (RWA)** — starting with sealed packs/boxes and raw singles, and expanding into graded/slabbed cards and additional collectible product lines over time.
- **Flexible ownership models** — users can hold assets as on-chain NFTs (Web3) or as virtual cards in a custodial account (Web2.5), with seamless bridging between both.

- **Web2.5 hybrid access** — users can join via traditional login (email, Google, social) without needing crypto knowledge, while retaining the option to link a wallet and withdraw assets on-chain.
- **A community and game layer** — users can engage in competitive formats and events that make collecting more social and interactive.

At the center of this ecosystem is the **MOCHI token**, a fixed-supply utility token intended to support:

- Access to special packs, limited drops, and event-based products.
- Participation in competitive game formats and community events.
- Use of the marketplace (e.g., optional fees and advanced features, introduced gradually).
- Vault services, including redeeming NFTs for physical cards and (in future) integrated grading workflows with partners.
- Long-term alignment between collectors, traders, and ecosystem development.

This whitepaper covers:

- The problems in trading card markets (trust, condition, cross-border friction).
- The Mochi platform design and vault-to-NFT pipeline.
- MOCHI utilities and tokenomics.
- The Launch Sales plan (two stages, total 10% allocation).
- A phased roadmap, and risk considerations.

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## 2. Vision & Problem Statement

### 2.1 Vision

Most collectors still complete their collections the "old way": they buy packs locally, travel to shops or expos to trade, or take a risk buying raw cards online from strangers. Condition can be mis-described, authenticity can be uncertain, and cross-border shipping and dispute resolution can be slow and costly.

Mochi's vision is to become a Web3 home for trading card collectors, starting with raw cards and sealed products, and expanding into graded cards and additional collectible verticals over time — where:

- Cards and sealed products can be digitally represented and traded in a way that is transparent and globally accessible.
- Cross-border trading can happen with clear condition disclosure and a consistent vaulting standard.
- Collecting is made more engaging through events and competitive formats designed for fun, skill expression, and community participation.
- The ecosystem is designed to reward real participation rather than bot farming.

While Mochi's initial focus is on Pokémon-style TCG products, the platform is designed to expand into additional TCGs and collectible categories as the ecosystem grows.

### 2.2 Current Problems

1. **Trust, authenticity, and condition uncertainty (especially for raw cards)** Online listings are inconsistent: photos can be misleading, conditions can be subjective, and counterfeit risks exist. Disputes, returns, and chargebacks are common and slow.
2. **Cross-border friction and delivery delays** Global e-commerce exists, but cross-border collecting still suffers from shipping time, customs, packaging quality variance, and higher risk of damage — especially for higher-value singles.
3. **Fragmented markets and inconsistent discovery** Liquidity is spread across marketplaces, social channels, local communities, and card shows, making price discovery and search fragmented and inefficient.
4. **Limited digital utility for verified ownership** Even when collectors have valuable collections, there are limited ways to use verified ownership for digital experiences, events, and social mechanics.
5. **Unsustainable "play-to-earn" patterns in Web3** Many Web3 games failed because rewards became "infinite faucets" for bots. Mochi's goal is to use games and events as engagement tools — not as unlimited token printers.

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## 3. The Mochi Platform

### 3.0 Platform Access Models

Mochi supports two parallel access models, allowing users to choose their preferred experience:

#### Web3 Mode (Direct Wallet)

- Connect a Solana wallet (Phantom, Solflare, etc.)
- Purchase packs directly with SOL or crypto
- Receive NFTs immediately upon pack opening
- Trade on-chain via the marketplace
- Full self-custody of assets

#### Web2.5 Mode (Custodial Account)

- Sign up via email, Google, or social login (powered by Privy)
- No crypto wallet or blockchain knowledge required

- Purchase packs using credits (funded via USDC deposits)
- Receive virtual cards stored in your account (database)
- Trade virtual cards on the internal marketplace (no gas fees)
- Optionally link a wallet and withdraw virtual cards as real NFTs
- Pay directly from your linked wallet using cryptocurrency
- MOCHI token rewards are sent on-chain to your linked wallet

**Bridging Between Modes:** - **Withdrawal:** Convert virtual cards → on-chain NFTs (minted to your wallet) - **Deposit:** Convert on-chain NFTs → virtual cards (NFT escrowed/burned)

This hybrid approach removes friction for new users while preserving full Web3 functionality for crypto-native collectors.

### 3.1 Core Components

Mochi consists of five main components:

**1) RWA Inventory & Vault** Mochi sources real-world products from multiple channels:

- Online marketplaces
- Physical card shops
- Card shows and expos
- Partners and consignors (as the platform matures)

Inventory is stored using secure procedures. Each vaulted item is processed through a consistent pipeline:

- Authenticity checks and condition assessment
- Categorization into internal condition tiers (e.g., Mint/Near-Mint, Lightly Played, etc.), based on published guidelines
- Imaging: each vaulted card is photographed or scanned (front/back where applicable) and viewable in-app and/or referenced in NFT metadata (where applicable)

**Minting Models:** - **Web3 Mode:** Vault in → NFT minted immediately - **Web2.5 Mode:** Vault in → Virtual card created (NFT minted only on user withdrawal request) - **Redemption:** Vault out (physical shipping) → NFT burned/destroyed

This maintains a 1:1 relationship between ownership (on-chain or custodial) and what is held in custody.

**Physical redemption & services**

- Users can redeem eligible NFTs for physical delivery, paying handling/shipping/insurance fees.
- Future: If a user decides to "burn" their NFT to redeem the physical card from the secure vault, they may pay a redemption fee (withdrawal fee) in

MOCHI based on the card's insured value, plus shipping and insurance costs.
- As Mochi grows, it may explore regional vault and logistics partners to reduce delivery time and costs.
- In the future, Mochi may support grading submissions from the vault through partners, where users can pay service fees in MOCHI.

**2) Pack Store**

- Users can purchase pack drops and curated bundles tied to real-world inventory.
- Packs may be purchasable via:
  - **Web3:** Crypto/stablecoins or MOCHI (optionally with perks such as access priority or pack variants)
  - **Web2.5:** Credits (funded via USDC deposits) or direct wallet payment

Some products may be MOCHI-only to create clear in-platform demand.

**Credit System (Web2.5):** - Users maintain a credit balance in USD cents - Credits can be added via USDC deposits to a unique deposit address (auto-credited) - All credit transactions are logged for audit trail - Credits are non-refundable but fully usable for platform purchases

**Third-Party On-Ramp Services:** - Users may use third-party on-ramp providers (such as MoonPay) to purchase cryptocurrency - On-ramp services allow users to fund their own wallets using traditional payment methods - Users contract directly with the on-ramp provider, not with Mochi - Mochi does not process card payments or control on-ramp transactions

**3) Marketplace** Mochi operates two parallel marketplaces:

**On-Chain Marketplace (Web3):** - Users can buy/sell/trade card-backed NFTs - Atomic on-chain settlement via escrow programs - Royalty fee: all Mochi NFT/CARDS include a 2% royalty collected automatically during a sale - Optional MOCHI utility: listing features, transaction features, advanced tools

**Internal Marketplace (Web2.5):** - Users can buy/sell/trade virtual cards (database-only, no gas fees) - Transactions settle instantly via credit balance - Seller receives credits; buyer pays credits - No blockchain interaction required - Same cards, same metadata — just off-chain until withdrawal

Fees may be introduced gradually (starting low) to bootstrap liquidity and activity.

**4) Game & Community Layer**

- Competitive formats where users participate using eligible assets and/or MOCHI.

- Design principle: rewards should be player-funded or event-budgeted, not unlimited emissions.
- Example formats:
  - Head-to-head matches with an entry pool where winners receive the pool minus a small platform fee (if enabled).
  - Seasonal events and tournaments with prize pools funded from pre-allocated community budgets.

**5) Web2.5 Custodial System** The custodial system enables non-crypto users to fully participate in the Mochi ecosystem:

**User Accounts:** - Accounts created via Privy (email, Google, social login, or embedded wallet) - Each account has a unique ID and credit balance - Optional: link an external Solana wallet for MOCHI rewards and NFT withdrawals

**Virtual Card Inventory:** - Cards from pack openings are stored as virtual cards (database records) - Each virtual card tracks: template ID, rarity, condition, count - Virtual cards can be traded on the internal marketplace - No gas fees for any virtual card operations

**Withdrawal Bridge (Virtual → NFT):** - Users can withdraw virtual cards to their linked wallet - Withdrawal triggers real NFT minting (Metaplex Core) - Virtual card is removed from inventory; NFT appears in wallet - Small withdrawal fee may apply

**Deposit Bridge (NFT → Virtual):** - Users can deposit on-chain NFTs into their custodial account - NFT is escrowed or burned; virtual card credited to inventory - Enables on-chain collectors to access the internal marketplace

**MOCHI Token Rewards:** - Pack purchases (both Web3 and Web2.5) earn MOCHI rewards - Rewards are transferred on-chain from the admin treasury - Requires a linked wallet to receive rewards

Note: In practice, the same person can be a collector, trader, player, and token holder. Roles are separated in this paper to clarify incentive flows.

### 3.2 User Journeys (Examples)

**Web3 Collector / Trader**

- Connect Solana wallet and browse drops
- Buy packs with SOL/crypto or MOCHI
- Receive NFTs immediately for eligible items
- Trade on the on-chain marketplace or hold
- Redeem NFTs for physical delivery when desired

**Web2.5 Collector / Trader (New)**

- Sign up with email or social login (no wallet needed)
- Add credits via USDC deposit

- Buy packs using credits or pay directly from linked wallet
- Receive virtual cards in your inventory
- Trade on the internal marketplace (no gas fees)
- Optionally: link wallet and withdraw cards as NFTs
- Optionally: redeem virtual cards for physical delivery
- Use third-party on-ramps (e.g., MoonPay) to fund your wallet if needed

**Player / Event Participant**

- Acquire cards via packs or marketplace (Web3 or Web2.5)
- Join matches/events using MOCHI and/or eligible assets
- Earn event rewards (where applicable)
- Reinvest into collecting, trading, or future platform features

**Shop / Partner (future)**

- Provide inventory / consignment
- Access global demand and on-chain settlement tooling
- Participate in partner campaigns as the ecosystem expands

### 3.3 Fees (Draft)

Fee parameters may be introduced gradually and may change over time. The following definitions are intended to clarify the planned fee categories:

**Platform Fees (future)**

A number of MOCHI tokens charged for transactions on the Mochi platform itself.

**Royalty Fee (NFT/CARDS)**

The royalty component of the platform fee is 2%. This fee is collected automatically during a sale on the Mochi platform for Mochi-issued NFT/CARDS.

**Redemption Fee (future)**

If a user decides to burn their NFT to redeem the physical card from the secure vault, they pay a number of MOCHI tokens as a withdrawal fee based on the card's insured value, plus shipping and insurance costs.

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## 4. Technology Overview

This section is intentionally high-level and may be refined as implementation evolves.

### 4.1 Blockchain Layer (Web3)

- **Chain:** Solana
- **Token:** SPL Token (MOCHI)
- **NFTs:** Solana NFT standards (Metaplex Core for minting)

Key on-chain components:

- Token programs and distribution controls for vesting and sale allocations
- Pack purchasing and opening programs (Web3 mode)
- Marketplace escrow programs (atomic exchange of assets)
- Game/event programs (entry pools, reward distribution)
- NFT minting for withdrawal bridge

### 4.2 Backend Layer (Web2.5)

- **Database:** SQLite for user accounts, credits, virtual cards, transactions
- **Authentication:** Privy (email, Google, social login, embedded wallets)
- **API:** FastAPI backend with JWT-based authentication

Key backend components:

- User account management (registration, login, wallet linking)
- Credit balance system with full audit trail
- Virtual card inventory tracking
- Internal marketplace (listing, buying, selling)
- Withdrawal/deposit bridge orchestration
- USDC deposit address generation and monitoring
- Wallet payment processing for pack purchases

### 4.3 Data Models

| Table | Purpose |
|---|---|
| UserAccount | User identity, Privy ID, credit balance, linked wallet |
| CreditTransaction | Audit log for all balance changes |
| VirtualCard | Card inventory (template, rarity, count) |
| VirtualListing | Internal marketplace listings |
| WithdrawalRequest | NFT withdrawal queue |
| DepositRequest | NFT deposit tracking |
| UsdcDeposit | USDC top-up tracking |

### 4.4 Security Approach

**On-Chain:** - Multi-sig treasury controls - Time-locked or constrained admin actions (where applicable) - Code review and external security assessments where appropriate

**Off-Chain:** - Encrypted storage for sensitive data - JWT-based authentication with Privy verification - Idempotency protection on all credit operations - Audit trail for all transactions

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## 5. MOCHI Token

### 5.1 Overview

- **Name:** Mochi
- **Ticker:** MOCHI
- **Type:** Utility token for the Mochi ecosystem
- **Chain:** Solana
- **Standard:** SPL Token
- **Total Supply:** 1,000,000,000 (1B) MOCHI (fixed)
- **Decimals:** 9

Key properties:

- **Fixed supply:** no new MOCHI intended to be minted beyond the fixed supply.
- **Utility-driven:** MOCHI is intended to support in-platform access, participation, and services.

### 5.2 Utilities (Non-Exhaustive)

1. **Purchasing packs & products**
   - MOCHI can be used for certain packs and products.
   - Some drops may be MOCHI-only.
2. **Game and event participation**
   - MOCHI may be used for entry pools, tournaments, and community events.
3. **Redemptions & services (vault / grading)**
   - Users may pay vault-related fees (handling/shipping/insurance) in MOCHI.
   - Future: a redemption (withdrawal) fee may apply in MOCHI based on the item's insured value, plus shipping and insurance costs.
   - Future: MOCHI may be used to pay integrated service fees (e.g., grading workflows with partners).
4. **Marketplace features (introduced gradually)**
   - Optional MOCHI-based platform fees and/or feature unlocks may be introduced for marketplace operations, tooling, and advanced features.
   - Royalty component: Mochi-issued NFT/CARDS include a 2% royalty collected automatically during a sale on the Mochi platform.
5. **VIP-style access & perks**
   - Holding/using MOCHI may unlock benefits such as early access windows, special product eligibility, or event whitelisting (subject to

anti-abuse and fair-use policies).

6. **Community signalling (future)**
   - Mochi may run non-binding polls and community input processes.
   - Examples: preference signalling for future drops, event themes, supported TCG categories, etc.

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## 6. Tokenomics

### 6.1 Allocation (Fixed Supply: 1,000,000,000 MOCHI)

| Category | % | Tokens | Notes |
|---|---|---|---|
| Founders & Team | 30% | 300,000,000 | Vesting schedule (see 6.2) |
| Community & Ecosystem | 40% | 400,000,000 | Rewards, events, ecosystem growth (capped release) |
| Treasury Reserve | 10% | 100,000,000 | Operations buffer, partnerships, safety |
| Launch Sales (I + II) | 10% | 100,000,000 | Two-stage sales (5% + 5%) |
| Strategic & Liquidity | 10% | 100,000,000 | Liquidity provisioning & strategic needs |

### 6.2 Vesting & Release (Founders & Team)

Vesting is designed to align the team with long-term execution.

- **Vesting start date:** 21 December 2025
- **Cliff:** 6 months
- **Vesting:** linear monthly vesting after cliff until fully vested
- **Example:** after the 6-month cliff, 1% of total supply per month (10,000,000 MOCHI) unlocks to the team until the 30% allocation is fully vested.
- **Exact wallet addresses and on-chain vesting accounts** may be published separately.

**Note:** vesting parameters may be refined for operational reasons (e.g., shifting from monthly to continuous linear vesting), while maintaining the same overall vesting intent and schedule transparency.

### 6.3 Distribution, Rewards, and Sustainability

**No continuous inflation:** MOCHI is fixed-supply; ecosystem incentives are funded from allocated pools.

**Primary distribution channels:**

1. **Pack Rewards (loyalty-style)**
   - Users may receive small MOCHI incentives when purchasing packs or participating in eligible campaigns.
   - These are intended as loyalty-style rewards for participation and are subject to change, limits, and anti-abuse rules.
2. **Skill-based and event-based rewards**
   - Competitive formats may be funded by entry pools and/or event budgets.
   - Seasonal events may distribute MOCHI or non-token rewards (NFTs, access, perks) based on participation and performance.
3. **Targeted campaigns**
   - Rewards may be distributed based on real activity (opening packs, trading, participating in events), rather than random "airdrop to inactive wallets".

**Token sinks (utility consumption):**

- MOCHI spent on MOCHI-only packs and products
- Optional marketplace fees/features payable in MOCHI (introduced gradually)
- Vault services paid in MOCHI (redemption and future service flows)
- Event entries and competitive participation pools (where applicable)

### 6.4 Treasury Operations (Ecosystem Replenishment)

Mochi may manage treasury resources to support ecosystem operations. Depending on platform conditions and community needs, the treasury may:

- Acquire MOCHI from the open market for operational purposes such as:
  - Funding ecosystem rewards and campaigns
  - Supporting liquidity needs (where applicable)
  - Partner programs, marketing campaigns, and operational buffers

Any treasury activity is discretionary and will be governed by internal policy, available resources, and applicable legal considerations. Mochi does not make any promise or obligation regarding market operations.

### 6.5 Virtual Card System

**Web2.5 Custodial Cards:**

In Web2.5 mode, ALL cards from pack openings are stored as virtual cards in the user's account:

- Virtual cards are database records (not on-chain NFTs)
- Each card tracks: template ID, rarity, condition, quantity
- Users can trade virtual cards on the internal marketplace
- No gas fees for virtual card operations

**Withdrawal to NFT:**

Users can convert virtual cards to on-chain NFTs at any time:

- Link a Solana wallet to the account
- Request withdrawal of specific virtual cards
- Platform mints real NFTs to the user's wallet
- Virtual cards are removed from inventory

**Virtual Card Recycling (Future)**

Users may be able to recycle virtual cards in batches. On recycle:

- Virtual cards are removed from the account record
- The user may receive a small MOCHI reward from the Community & Ecosystem allocation

**Auditability & anti-abuse**

Because virtual cards live off-chain, Mochi implements safeguards such as:

- Full transaction audit trail (CreditTransaction logs)
- Pack opening records with deterministic card generation
- Recycling logs enabling auditors and the community to compare:
  - packs opened → virtual cards generated → virtual cards recycled → rewards distributed

**Balancing & limits**

- Recycling value per card will be kept small (designed as a bonus, not a farm)
- Per-account limits and/or global emission caps may apply
- Parameters may be adjusted to protect the economy and reduce bot incentives

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## 7. Launch Sales

### 7.1 Purpose

Launch sales are intended to:

- Expand real-world inventory (packs, boxes, singles)
- Fund operations (warehousing, logistics, platform development)
- Cover legal and incorporation costs
- Build an initial user base aligned with using MOCHI within the ecosystem

### 7.2 Sale Structure

**Total allocation:** 10% (100,000,000 MOCHI), split into two strategic stages:

**Stage I: Platform Direct Sale — 5% (50,000,000 MOCHI)** This stage is conducted directly on the Mochi platform to reward early community members.

- **Status:** Live (Listed 21 December 2025)
- **Price:** 0.005 per MOCHI
- **Duration:** Until allocation is exhausted or 21 January 2026
- **Vesting:** 100% unlocked at TGE (Token Generation Event)

**Stage II: External Launch & Liquidity Provision — 5% (50,000,000 MOCHI)** To broaden exposure and ensure healthy market conditions, the remaining launch allocation is divided as follows:

- **External Launchpads (1-3%):** Allocation reserved for third-party launchpad partners to expand the holder base and increase visibility across the wider Web3 ecosystem.
- **Liquidity Provision (2-4%):** The remaining balance from this stage will be paired with proceeds to form the initial Liquidity Pool (LP) on decentralized exchanges (DEX). This ensures a stable floor price and sufficient trading depth upon public listing.

### 7.3 Utility-First Transfer Policy (Early Phase)

Tokens sold may be immediately usable for in-platform utility (packs, services, events). Transfers to external venues (e.g., DEX/CEX) may be enabled later based on ecosystem readiness and risk controls, with details communicated in advance.

### 7.4 Use of Proceeds (Indicative)

- **70%** — inventory acquisition and product expansion
- **30%** — development, operations, legal, and marketing

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## 8. Anti-Bot, Transparency & Fairness Measures

Mochi aims to avoid infinite token faucets and bot farming. Planned measures may include:

- Cost-to-participate mechanics (rewards are tied to purchases, ownership, or competitive performance)
- Behavior and anti-sybil detection (multi-account farming patterns, abnormal activity)
- Reward caps and emission budgets (per-account, per-event, and/or global)
- Anti-abuse controls on recycling and event participation
- A planned public transparency dashboard (as the ecosystem matures), covering:
  - emissions by bucket

– ecosystem rewards distributed
– vault statistics
– marketplace and event activity indicators

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## 9. Roadmap (Phases, Not Dates)

This roadmap reflects intended sequencing and may evolve.

**Phase 0 — Concept & Prototype**

- Tokenomics drafts, product design, early vaulting workflow, and initial community building.

**Phase 1 — Core Launch (TGE)**

- **Goal:** deliver the core loop: buy packs → receive NFTs → trade → redeem.
- Pack store launch with initial inventory
- Vaulting + NFT minting pipeline
- Basic marketplace listing and trading
- NFT redemption flow (physical delivery)
- Launch Sale I
- Initial mini-game / AI-based mode (PvP later)

**Phase 2 — Product Expansion & PvP Alpha**

- **Goal:** increase engagement, improve trading UX.
- UX/UI improvements and analytics
- PvP competitive mode with entry pools
- Expanded product range (more regions/languages/TCGs)
- Virtual card tracking + recycling v1

**Phase 3 — Ecosystem & Infrastructure Growth**

- **Goal:** improve scale and operational robustness.
- Larger inventory expansion
- Tournaments and ranked ladders
- Gradual introduction of small MOCHI fees/features (where appropriate)
- Transparency dashboard v1
- Explore regional vault/logistics partners and audit-readiness

**Phase 4 — Locking & Community Participation**

- **Goal:** formalize long-term alignment.
- Optional MOCHI locking for access/perks
- Non-binding community signalling for ecosystem direction
- Evaluate multi-chain expansion where it adds user value

**Phase 5 — Mature Ecosystem & Global Expansion**

- **Goal:** become a multi-TCG collectibles infrastructure layer.
- Broader collectibles support (raw + graded, multiple TCGs)
- Strong logistics coverage across regions
- Ongoing ecosystem operations and community-led development

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## 10. Risks & Legal Considerations

Participation in Mochi may involve significant risks, including:

- **Market risk:** cryptoassets can be volatile.
- **Regulatory risk:** requirements vary by jurisdiction and may change.
- **Technology risk:** smart contract bugs, wallet compromise, and infrastructure failures.
- **Business risk:** adoption may be lower than expected; roadmap may change.
- **Custody risk:** vault partners, logistics, and insurance introduce operational risks.
- **Token classification risk:** authorities may interpret token features differently over time, which may require ecosystem changes (including restrictions on transfers, utilities, or availability in certain regions).

This section is not exhaustive. Users should conduct their own due diligence.

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## 11. Contact

- **Website:** getmochi.fun
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