



WHITEPAPER

Introduction

Referrio is a Telegram-first arcade. Players tap, auto-mine, and play multiple mini-games. Gameplay yields off-chain points called Shards.

Shards are periodically claimed on-chain as \$RFR. Claims batch via transparent Merkle drops to cut fees.

Growth is referral-native: Refer-to-Earn. Rewards prioritize quality, active invitees not raw counts. Robust anti-bot systems protect fair play and rewards.

Adaptive emissions balance supply with real engagement. Strong token sinks (passes, boosts, crafting, tournaments) keep the economy healthy.

Vision & Market Problem

The Problem (Why most tap apps die)

- Inflation spiral: Points are printed too fast with weak or no sinks → rewards devalue fast → players cash out → economy collapses.
- Bot farming: Simple input patterns are easy to script → bots out-earn humans → real players churn.
- No token utility: Tokens have few things worth spending on → one-way sell pressure at TGE/listing.
- Single-game fatigue: One mechanic burns out; no fresh loops to recycle attention.
- Opaque rewards: Players can't verify drops/claims → trust erodes; "hype → dump → desert."

How Referrio fixes it

1) Human-first Auto-Mining (respects time away, rewards activity)

- Buffer cap: Auto-earn continues while you're offline but only for ~3-6 hours (no 24/7 idle farms).
- Decay & cooldowns: Bonuses decay with inactivity and trigger cooldowns on bot-like tap cadence.
- Upgradeable hashrate: Progression via play, quests, and referrals—not raw device uptime.
- Proof-of-play signals: Tap jitter/entropy, device binding, IP/velocity checks, anomaly CAPTCHAs.
- Player Impact: You're not punished for sleeping/working, but active play still wins.
- Economic Impact: Throttles passive extraction; keeps emissions tied to real engagement.

2) Multi-Game Arcade → One Shared, Sink-Rich Economy

- **Multiple loops:** Core tapper + runner + puzzle + events/spin modes = varied ways to earn/spend.
- **Unified currency:** All games feed **Shards** (off-chain) → weekly **\$RFR** claims (on-chain).
- **Real sinks players want:** Season Pass, cosmetic skins/frames, time-boxed boosters, **crafting burns**($3 \times L1 \rightarrow 1 \times L2$), re-rolls, tournament entries, marketplace fees.
- **Rotating content:** New boards/maps, timed modifiers, limited sets to refresh demand.
- **Player impact:** Always something new to chase; spend feels rewarding, not mandatory.
- **Economic impact:** Diverse, recurring sinks balance sources → lower sell pressure and longer lifespan.

3) Referral-as-a-Primitive (quality > spam)

- **Quality-weighted Rewards:** Your referral yield scales with **invitee activity** (active days, session length, sinks used) and **no-fraud flags**.
- **Two Tiers Only:** L1 full weight, $L2 \leq 20\%$ to prevent pyramids and farm rings.
- **Time-decay:** Highest boosts in the first 30 days after a friend joins; taper to a fair floor.
- **Referrer Reputation:** Fraud by invitees reduces your score; serial abusers are throttled/blocked.
- **Player Impact:** Help real friends get started and play together; duo quests share bonuses.
- **Economic Impact:** Growth tied to retention and spend—not raw invite counts—so CAC stays efficient.

Adaptive Emissions (stability across DAU swings)

- **Per-cap targets:** Daily emissions E_t modulate toward a target reward per active user (based on DAU/retention moving averages).
- **Bands & caps:** Soft/hard bands stop runaway printing in spikes; gentle tapering in dips to avoid whiplash.
- **Seasonal re-pricing:** Each season can retune difficulty and sinks as cohorts evolve.
- **Telemetry-driven:** Sink:Source ratio, fraud rate, claim %, and retention drive automatic dials.
- **Player impact:** Rewards feel steadier; fewer “day-1 whale, day-7 dust” moments.
- **Economic impact:** Smoother token velocity → healthier markets and stickier ecosystems.

On-Chain Transparency (weekly Merkle claims)

- **Ledger → Merkle → Claim:** Off-chain play ledger (post anti-cheat) → publish **Merkle root** on-chain → 1-tap claim in weekly windows.
- **Gas-efficient & Auditable:** Batch claims reduce fees; public roots and reports make allocations verifiable.
- **Circuit Breakers:** Flagged cohorts can be paused/clawed back without halting the whole system.
- **Player Impact:** Clear, predictable claim schedule; funds arrive to your wallet (exportable).
- **Economic Impact:** Trust via verifiability; fewer disputes; smoother liquidity planning.

Core Loops

- **Tap Loop:** Skill taps with streaks/crit windows; quick quests for bonus Shards.
- **Auto-Mining:** Earn in the background with a 3-6h buffer; decay if inactive; upgradeable hashrate.
- **Arcade Loop:** Multiple games (runner, puzzle, reaction, prediction-lite) sharing one energy + rewards pool.
- **Progression:** Level up, craft (burn 3→1 upgrades), prestige; spend Shards on boosts/cosmetics.
- **Refer-to-Earn:** Quality-weighted invites—both referrer and invitee get boosted yields.
- **Synergy:** Playing refreshes auto-mining; arcade drops fuel crafting; good referrals amplify all loops.

\$RFR Token — Use Cases

Core Gameplay & Economy

- **Weekly Claims:** Convert off-chain **Shards** → **\$RFR** via Merkle claim (player payout source).
- **Season Pass / Spin Pass:** Buy premium tracks and season perks (sink).
- **Boosts & Energy:** Time-boxed hashrate/crit/energy boosts purchasable in \$RFR (sink).
- **Tournament Entries & Re-rolls:** Pay entries or re-roll bad boards with \$RFR (sink; prizes partly in \$RFR vouchers).
- **Crafting Catalysts & Upgrade Slots:** Pay \$RFR to fuse items faster or unlock extra slots (sink, plus item burns).
- **Cosmetics & Skins (cNFTs):** Purchase limited cosmetics, frames, emotes (sink; tradable).
- **Marketplace Fees (2-5%):** Trades pay fees in \$RFR → part burned, part to stakers (sink + yield).

Growth & Ecosystem

- **Refer-to-Earn Leagues / Tickets:** Pay small \$RFR to enter referral ladders or duo quests (sink; prizes from Referral Pool).
- **Partner Quests:** Projects fund tasks and bounties in \$RFR; users earn \$RFR on completion (source for players; sink for partners).
- **Ambassador/KOL Rewards:** Transparent payouts in \$RFR tied to quality activations (growth utility).
- **Guild Creation & Upgrades:** Found/upgrade Spin Guilds with \$RFR (naming, vault perks, banners) (sink).
- **PvP Spin Battles:** Optional \$RFR-staked duels; winner takes pool minus fee (sink + engagement).
- **Cross-Chain Access (ETH/BSC):** Mint/authorize cross-chain spin rights by paying in \$RFR (sink).

Governance & Alignment

- **Staking:** Stake \$RFR to share arcade + marketplace + partner quest fees (player yield).
- **veRFR (time-lock):** Lock \$RFR for boosted votes, rewards, allowlists/priority (alignment utility).
- **Voting:** Decide emissions bands, sink ratios, grant slates, listing budgets (governance utility).
- **Proposal Deposits:** Small refundable \$RFR bond to submit governance proposals (anti-spam sink).
- **Treasury Programs:** Grants paid in \$RFR to studios/creators; milestone-based vesting (ecosystem growth).

Auto-Mining

- **Hashrate:** $HR = \text{base level} + \text{season rank} + \text{referral score} + \text{equipped boosts}$ (all within min/max caps).
- **Buffer Cap:** Earns while offline up to ~3-6h, then pauses until you log in.
- **Decay:** Long inactivity lowers bonuses; a short human session restores them.
- **Overheat/Cooldown:** Bot-like cadence triggers temporary HR cuts; pass a quick human check to reset.
- **Anti-Exploit:** Device binding, tap-jitter/entropy analysis, IP/velocity rules, anomaly CAPTCHAs.
- **Accrual → Claim:** Auto Shards merge with gameplay Shards; weekly Merkle claim pays out \$RFR.
- **Upgrades & Referrals:** Craftable upgrades, timed boosts, and quality referrals raise HR—within strict caps.

Token (\$RFR)

Basics

- **Max Supply:** 10,000,000,000 \$RFR
- **Chain:** Solana (SPL)
- **Role:** utility + governance + fee + staking

Utilities

- **Shards** → \$RFR **weekly Merkle claims**
- **Staking:** share of arcade fees + partner quest fees (+ part of burns redirected as rewards)
- **Boosts/Access:** season passes, premium tourneys, limited boosts
- **Governance:** emissions bands, sink ratios, treasury & partner programs

Allocation (unchanged %, doubled amounts)

Bucket	%	Amount (\$RFR)
Community Rewards (Play & Auto-mine)	30.00%	3,000,000,000
Referral Pool (Refer-to-Earn)	7.00%	700,000,000
Ecosystem/Grants	10.00%	1,000,000,000
Liquidity	5.00%	500,000,000
Public Sale / Launchpads	3.00%	300,000,000
Strategic / KOL	6.00%	600,000,000
Private / Seed	8.00%	800,000,000
Team & Advisors	12.00%	1,200,000,000
Treasury / Reserve	10.00%	1,000,000,000
Marketing / Growth	6.00%	600,000,000
Community Airdrop	3.00%	300,000,000
Total	100%	10,000,000,000

Vesting & TGE (max-vesting settings)

- **Community Rewards:** 0% TGE; programmatic weekly emissions over 60 months (S0-S5)
- **Referral Pool:** 0% TGE; seasonal unlocks with a hard cap equivalent to $\leq 1.67\%$ of pool/month (i.e., a 60-month cap)
- **Ecosystem/Grants:** 0% TGE; 3-month cliff, then 48-month linear
- **Liquidity:** 20% TGE, remainder 36-month linear (keeps markets functional yet slow)
- **Public Sale / Launchpads:** 10% TGE, 1-month cliff, then 12-month linear
- **Strategic / KOL:** 5% TGE, 2-month cliff, then 36-month linear
- **Private / Seed:** 2% TGE, 12-month cliff, then 36-month linear
- **Team & Advisors:** 0% TGE, 12-month cliff, then 48-month linear (total 60m)
- **Treasury / Reserve:** 0% TGE, 60-month linear under DAO policy
- **Marketing / Growth:** 5% TGE, 36-month linear
- **Community Airdrop:** up to 10% claimable at TGE.

These settings reflect “maximum vesting” while preserving launch practicality (liquidity + public sale). If you want even stricter, we can push Public/Liquidity/Marketing TGEs down another notch and lengthen lines to 48-60m.

Monthly Unlock Snapshot (by bucket)

(Post-cliff linear releases; shows both % of bucket per month and tokens/month at 10B supply.)

Bucket	TGE	Cliff	Linear	Monthly unlock (% of bucket)	Monthly unlock (tokens)	Monthly unlock (% of total)
Community Rewards	0%	—	60 mo	1.67%	50,000,000	0.50%
Referral Pool	0%	—	60 mo (cap)	1.67%	11,666,667	0.12%
Ecosystem/G rants	0%	3 mo	48 mo	2.08%	20,833,333	0.21%
Liquidity	20%	—	36 mo	2.22%	11,111,111	0.11%
Public Sale / Launchpads	10%	1 mo	12 mo	7.50%	22,500,000	0.23%
Strategic / KOL	5%	2 mo	36 mo	2.64%	15,833,333	0.16%
Private / Seed	2%	12 mo	36 mo	2.72%	21,777,778	0.22%
Team & Advisors	0%	12 mo	48 mo	2.08%	25,000,000	0.25%
Treasury / Reserve	0%	—	60 mo	1.67%	16,666,667	0.17%
Marketing / Growth	5%	—	36 mo	2.64%	15,833,333	0.16%
Community Airdrop	up to 10%	—	6 mo	15.00%		

Immediate TGE tokens (for reference):

- *Liquidity* 100,000,000
- *Public* 30,000,000
- *Strategic/KOL* 30,000,000
- *Private/Seed* 16,000,000
- *Marketing* 30,000,000
- *Airdrop (up to)* 30,000,000.

Quick “standard duration” cheat-sheet

- 12-month linear: 8.33%/mo of bucket
- 18-month linear: 5.56%/mo
- 24-month linear: 4.17%/mo
- 36-month linear: 2.78%/mo
- 48-month linear: 2.08%/mo
- 60-month linear: 1.67%/mo

Tournaments, Crafting & Marketplace

Leagues & Tournaments

- **Cadence:** Daily micro-ladders + weekly leagues across tapper, runner, puzzle, and spins; separate **Referral League** for quality invites.
- **Entries & Prizes:** Enter with **Shards** or small **\$RFR**; rewards paid as **\$RFR vouchers**, rare cosmetics, and boost fragments. Prize pools draw from **Community Rewards + Referral Pool** (DAO-capped).
- **Skill & Fairness:** MMR brackets, anti-smurf checks, server-seeded RNG with public logs; suspicious scores quarantined pre-payout.
- **Formats:** Solo runs, time trials, boss rounds, duo/co-op challenges; seasonal finals with amplified rewards.
- **Player value:** Predictable weekly goals, real prizes, and visible status (badges/frames on profile).

Crafting (Burn Economy)

- **Core loop:** $3 \times L1 \rightarrow 1 \times L2 \rightarrow 3 \times L2 \rightarrow 1 \times L3$; combining burns components to curb supply and create chase tiers.
- **Item types:** Energy boosts, crit/luck charms, hashrate enhancers, cosmetic upgrades (animated frames, trails).
- **Rules:** Time-boxed boosters don't stack beyond **global caps**; higher tiers give **stronger but shorter** effects to prevent power-creep.
- **Sources & Costs:** Lootboxes, tournaments, quests \rightarrow fragments; crafting paid in **Shards/\$RFR**, scaling by tier.
- **Player value:** Turn duplicates into upgrades; targeted progression without pay-to-win spikes.

Marketplace (cNFT Cosmetics & More)

- **Listings:** In-app market for **compressed NFT** cosmetics, badges, crafted skins; escrow with instant delivery.
- **Fees:** 2-5% marketplace fee: **portion burned** (deflationary), **portion to stakers** (fee share). Creator royalties supported on collabs.

- **Safety:** Fake/duplication checks, listing locks to prevent double-spend, cooldown on cancel/relist spam.
- **Pricing:** Primarily \$RFR; periodic Shards events to boost liquidity for new players.
- **Player value:** Monetize rare drops, hunt limited sets, and signal status on leaderboards/PvP intros.

Quick Examples

- **Tournament:** 5-run best-score ladder → top 5% get \$RFR vouchers + exclusive Season frame.
- **Crafting:** 3× "Energy Sip" (L1) → 1× "Energy Surge" (L2, +10% for 6h) → 3× Surge → 1× "Surge+Crit" (L3).
- **Marketplace:** Sell a limited Q4 "Neon Coil" frame; 3% fee → 1% burn, 2% to stakers.

Roadmap

Referrio Roadmap

Q3 2025

- **Testnet launch** — try spins/taps early, no real tokens yet.
- **Daily Free Spin** — log in daily for rewards.
- **Referral System** — invite friends, both earn more.
- **TGE on Raydium/MEXC** — \$RFR goes live, weekly claims begin.

Q4 2025

- **Lootbox Spins** — open boxes for cosmetics/boosts.
- **Leaderboards** — climb daily/weekly ranks.
- **NFT Boosters** — time-limited power-ups as cNFTs.
- **Ambassador Program** — perks for KOLs/community leaders.

Q1 2026

- **NFT Marketplace** — trade skins/boosters.
- **Governance** — vote on seasons/economy.
- **Staking dApp** — stake \$RFR, share fee rewards.

Q2 2026

- **Cross-chain spin (ETH/BSC)** — access spins from other chains.
- **Spin Pass S1** — battle-pass for spin content.
- **Mobile Mini-App** — faster, lighter Telegram experience.

Q3 2026

- **Spin Guilds** — team up for quests/perks.
- **PvP Spin Battles** — 1v1 spin duels with prizes.
- **Custom NFT Avatars** — ownable, customizable profiles.

Why Referrio Wins (vs. other tap-to-earn)

- **Referral-as-a-Primitive:** rewards quality, not spam—time-decay, L1/L2 caps, and reputation keep it fair.
- **Multi-game, one economy:** fun loops + many sinks (passes, cosmetics, re-rolls, leagues).
- **Adaptive emissions:** per-cap targets stabilize rewards across DAU swings.
- **Human-first anti-bot:** entropy checks, device binding, live risk scoring.
- **Transparent claims:** weekly on-chain Merkle proofs; public emissions + fraud stats.
- **Partner-ready:** quest rails, cNFT items, marketplace economics for collabs.

**THANK
YOU**

REFERRIO 

TURN TAPS INTO TOKENS