RIVYU WHITEPAPER V1.4

The Community-Driven Web3 Ecosystem on TON *Version 1.4 · July 2026 — aligned with the live Rivyu Telegram Mini App and on-chain design as implemented in the Rivyu-Cyberpunk codebase.*

> ***What's new in V1.4.*** *This release documents the systems shipped since V1.2 — the full **Clan system** (June–July 2026): five factions, on-chain clan creation with a **50% burn**, non-withdrawable clan treasuries backed by a dedicated **ClanTreasury** contract, Clan Points, weekly bracketed **Clan Wars**, co-op missions, the provably-fair **Ghost_Net Heist**, and a mercenary economy. It also documents **Active Score** (a 0–1000 per-user reputation engine), the **Voting DAO** (Active-Score-weighted advisory governance with a RIV burn per vote), **Chest Fusion** (combine chests upward through the tier ladder, fee 50% burned), **Partner Tasks** and **partner campaign links**, **guest onboarding**, and the **staged beta rollout model** used for new feature launches. Sections describing shipped behavior are marked **(implemented)**; planned work is marked **(planned)** or **(in design)** and should be treated as direction, not commitment.*

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1. EXECUTIVE SUMMARY

Rivyu is a **Telegram Mini App** on **The Open Network (TON)** that turns real engagement into **RIVYU (RIV)** token rewards. Users **mine** with an energy-limited session model, **stake** in multiple pools, **claim** daily and milestone rewards, complete **social missions**, grow through **referral tiers**, **open chests** for boosts and rare loot, **fuse** chests up the rarity ladder, trade RIV in the **Black Market**, play the **weekly Lottery**, band together in **Clans** that compete in weekly wars, and steer the product through **Active-Score-weighted governance** — with value moving on-chain through **signed claims** into dedicated reward pools.

Supply is **deflationary**: every Black Market chest purchase, Chest Fusion fee, clan-creation fee, and governance vote permanently **burns 50%** of the RIV spent, with the other 50% recycled into the Utility Pool; the Lottery pot and clan rent route additional spend into the same ecosystem treasury. The original vision remains: **fair distribution**, **transparent rules**, and **users over pure speculation**. This document supersedes earlier whitepaper drafts where they differ from what is **actually built**: parameters, pool economics, backend architecture, and security model are taken from the deployed design (testnet-ready stack; mainnet subject to final launch decisions and audits).

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2. TOKENOMICS

Total supply: 1,000,000,000 RIVYU — fixed at mint; no additional minting after genesis.

2.1 TOKEN DISTRIBUTION

ALLOCATION	TOKENS	%
Mining pool	300,000,000	30%
Staking rewards	200,000,000	20%
Liquidity pool	120,000,000	12%
Founder allocation	120,000,000	12%
Strategic round	50,000,000	5%
Growth & Partnerships†	50,000,000	5%
Airdrops	80,000,000	8%
Treasury	50,000,000	5%
Public sale*	30,000,000	3%
Total	**1,000,000,000**	**100%**

The former **10% Marketing** allocation is now split into two equal **5%** tranches: a **Strategic round** (50M RIV) reserved for **partners & marketing**, and **Growth & Partnerships** (50M RIV). †**Growth & Partnerships** tokens are **locked for 12 months post-TGE**.

2.2 MINING POOL USAGE (300M)

The mining-side pool on-chain funds **mining claims**, **daily login**, **streak milestones**, **welcome bonuses**, **social-task payouts**, **partner-task payouts**, and related engagement rewards. Off-chain logic enforces budgets and eligibility; **claims** are executed against the **Mining Rewards Pool** contract using **backend-authorized signatures**.

2.3 DEFLATIONARY BURN (IMPLEMENTED)

While genesis supply is fixed at **1B RIV**, circulating supply **decreases over time** through sinks that burn RIV permanently on-chain:

SINK	RULE
Black Market chest purchase	**50% burned**, 50% → Utility Pool
Chest Fusion fee	**50% burned**, 50% → Utility Pool
Clan creation fee	**50% burned**, 50% → Utility Pool (pro-rata first-month rent held in clan treasury custody)
Governance vote (100 RIV per vote)	**50% burned**, 50% → Utility Pool
Weekly Lottery pot	40% → Utility Pool (ecosystem recycling), 60% → winners
Clan rent & disband flush	**100% → Utility Pool** (recycling, no burn)
Level-up fees & emergency-exit penalties	routed to Utility Pool

Burns are verified on-chain (TEP-74 burn legs correlated by query id) and surfaced in ecosystem metrics — including a live **clan treasury flow** aggregate in the app's Burn & Utility panel — so the **total RIV burned** is publicly auditable. The more the in-app economy is used, the tighter circulating supply becomes.

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3. PRODUCT ARCHITECTURE (IMPLEMENTED)

Rivyu is built in **three layers**:

1. **Client — Telegram Mini App** React, Vite, TypeScript, Tailwind-inspired cyberpunk UI, **TON Connect**, **Telegram SDK**, **i18n** for multiple locales.
2. **Application backend — Convex** Real-time database and server functions for users, mining sessions, energy, rewards, referrals, leaderboards, staking mirrors, clans, governance, admin tools, rate limits, ads, and time-boxed events.
3. **Settlement layer — TON** FunC smart contracts: jetton (RIV), staking, rewards pools, mining pool, founder vesting, utility pool, chest shop, lottery pool, clan treasury; **Ed25519-signed claims** link off-chain accrual to on-chain payouts.

This replaces a generic "Supabase + Python" stack from early materials with the **Convex-first** architecture in production code.

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4. MINING SYSTEM (PROOF OF ENGAGEMENT)

Mining is **session-based**: the user starts a session; **energy** depletes at **1 unit per second** while mining; when energy hits zero, mining stops until regeneration (or ad-based top-ups).

4.1 BASE RATE AND FORMULA

- **Base rate: 125 RIV per day** (before halvings and level multipliers), implemented as a per-second rate in the backend.
- **Level multiplier:** Levels apply a **mining bonus** from **0% (Level 1)** up to **+100% (Level 10)** — i.e. up to **2×** effective rate versus Level 1.
- **Effective rate** after halvings: the base daily rate is divided by **2^phase**, where **phase** is the current halving phase (**0–5**, see §5).
- **Clan-lane boosts:** clan members can earn additional additive mining bonuses on top — Resonance Flame streaks (**+2% / +4%**), faction synergy (**+1%**), and timed Clan Surges (**+6%** for 30 minutes) — see §16.

Minimum claim: 100 RIV accumulated before a mining claim can be prepared for on-chain payout.

4.2 DESIGN INTENT

Mining is **not** proof-of-work; it is **proof of engagement**: recurring opens, session time bounded by energy, and progression systems that reward consistent participants.

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5. HALVING AND FAIR EMISSION (IMPLEMENTED)

Halvings tighten emission as the network grows. The live model is **phased**: there are **five halving phases**, and the network advances **one phase** each time **either** the user-count threshold **or** the mining-pool emission threshold for that phase is crossed — **whichever comes first**. The two conditions are an **OR trigger** for a single shared phase counter; they are **not** added together.

5.1 PHASE THRESHOLDS

PHASE	ADVANCES WHEN TOTAL USERS ≥	…OR MINING-POOL RIV EMITTED ≥
1	1,000	10,000,000
2	2,500	25,000,000
3	5,000	50,000,000

PHASE	ADVANCES WHEN TOTAL USERS ≥	…OR MINING-POOL RIV EMITTED ≥
4	7,500	100,000,000
5	10,000	150,000,000

5.2 EFFECT ON THE RATE

Daily mining rate = 125 / 2^phase (before level multipliers), where `phase` runs from **0 to 5**. At the final phase the base rate floors at **125 / 2^5 ≈ 3.906 RIV/day**. Phases only ever advance — the base rate **never increases** — and the active phase is persisted so the effective rate is deterministic and cache-safe.

Clan economics are **denominated in "miner-days"** (multiples of the current base daily rate), so clan fees and rent **automatically halve together with mining** — the relative cost of running a clan stays constant across halvings (§16.2).

5.3 GOVERNANCE NOTE — MINING AND STAKING EMISSION KEPT SEPARATE

A community governance poll closed with a clear majority (**~79%**) choosing to **keep mining and staking emission accounted separately** for halving purposes, rather than combining the two so that halvings arrive sooner. Accordingly, the emission threshold above counts **mining-pool emission only** — staking-reward distribution does **not** push the mining halving forward. This gives the network **more room and more time before each halving**, exactly as the community asked for.

This supersedes earlier drafts that described an **additive** "user-milestones + token-milestones" count, a flat "every 10M RIV" step, or a single milestone table with X = 1,200.

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6. ENERGY SYSTEM

- **Consumption:** 1 energy per second while mining (fixed across levels).
- **Capacity and regeneration** scale with level (excerpt):

LEVEL	MAX ENERGY	REGEN (PER SECOND)
1	5,000	1.0
2	6,347	1.5
…	…	…

LEVEL	MAX ENERGY	REGEN (PER SECOND)
10	100,000	5.5

6.1 WATCH-AND-EARN (ADS)

Users can earn **instant energy** by viewing ads, subject to **daily caps** and tiered rewards, for example:

TIER	MAX VIEWS / DAY	ENERGY PER VIEW
50_ads	50	100
20_ads	20	500
5_ads	5	1,000

In addition to energy, ads can now also yield **RIFT tokens** — the currency used in the **Data Rift** mini-game (§8.5). These are **separate, additional** ad tiers; completing all views in a tier during the ad day grants a lump-sum RIFT payout:

TIER	MAX VIEWS / DAY	RIFT TOKENS EARNED
10_ads_rift	10	1
25_ads_rift	25	5

Daily reset logic aligns with a defined **UTC boundary** (including an IST-based reset window for consistency across regions).

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7. LEVELS AND PROGRESSION

Users advance from **Level 1 to 10** by spending **RIV**; payments route to the **Utility Pool** on-chain.

TO LEVEL	COST (RIV)	MINING BONUS (ADDITIVE)
2	1,000	+20%
3	5,000	+30%
4	10,000	+40%

TO LEVEL	COST (RIV)	MINING BONUS (ADDITIVE)
5	50,000	+50%
6	100,000	+60%
7	250,000	+70%
8	300,000	+80%
9	400,000	+90%
10	500,000	+100% (2× vs L1)

Higher levels increase **max energy** and **regeneration**, not just mining speed. Level 5 additionally unlocks **badge passives** (§20), **clan founding eligibility** (§16.2), and Ambassador-program eligibility (§10).

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8. REWARDS SYSTEM

8.1 DAILY LOGIN

- **10 RIV** per successful daily claim (calendar rules enforced server-side).

8.2 STREAK MILESTONES

Consecutive daily claims unlock **extra** RIV on milestone days:

STREAK DAY	EXTRA BONUS (RIV)
3	+50
7	+150
14	+500
30	+1,000

Missing a day resets the streak.

8.3 WELCOME BONUS

- **5,000 RIV** per eligible user, capped at **100** users total.
- Eligibility is enforced via an **admin-managed whitelist** (email-based onboarding).

8.4 SOCIAL TASKS

One-time missions reward RIV through the same **signed claim** path as other mining-pool payouts. Implemented tasks include (labels may vary by locale):

TASK ID	TYPICAL REWARD (RIV)	NOTES
Instagram follow	500	Reward **scales down** with halving count
Telegram channel	500	Reward **scales down** with halving count
First stake	100	Campaign task; **fixed** reward; claim window closed (ended end of March 2026 UTC)
Telegram discussion	100	**Fixed** reward

Users complete actions in-app; **cooldown/unlock** UX prevents instant double-claims.

8.5 DATA RIFT (IMPLEMENTED)

Data Rift is a daily spin/coupon mini-game. A spin draws from a weighted reward table that can yield **RIV**, **energy**, **chests**, **boosts**, **fragments** (craftable), and rare cosmetic outcomes (e.g. a collectible *rift signature*). Spins are powered by **free daily spins**, **energy**, and **RIFT tokens** earned from the RIFT ad tiers (§6.1).

RIV won in Data Rift accrues to an explicit, claimable balance and is paid out through the **same signed-claim path** as mining — claimable once the **100 RIV minimum** is reached — so Data Rift winnings settle on-chain with the same nonce/replay protection as every other reward.

Beyond direct rewards, Data Rift includes deeper loops: **fragments** accumulate and **craft into a DATA.RIFT chest** (an earn-only legendary tier with boosted loot); a **Temporal Cache** outcome awards a delayed chest that **auto-opens after a set window** at elevated odds; a weekly **Fracture** intensity curve raises jackpot weighting as the week progresses (peaking on the Sunday "Full Collapse"); a silent **pity timer** guarantees a rare-or-better outcome after a dry streak; and players may **purge** a spent board (spending RIFT tokens) to roll a fresh token-only board.

8.6 RECURRING ENGAGEMENT LOOPS (IMPLEMENTED)

Layered on top of the core rewards are several recurring, mostly chest-driven loops that keep daily and weekly play fresh:

- **Idea Lab.** A community proposal board where users submit and vote on ideas. Approved proposals award a chest (and implemented ones a higher-tier chest); accurate early voters can earn a small RIV prediction reward. Idea Lab outcomes also feed **Active Score** (§14).
- **Network Bounty (weekly).** One rotating mission per UTC week (first breach → deep network → grow syndicate → daily operator → jackpot hunter), each with a progress target and a chest payout.
- **Syndicate Heist.** A nightly squad-based breach job that awards chests to participating operators.
- **Cipher Fragments.** A daily ritual: collecting the day's fragments awards a chest.
- **Free Daily Chest.** A once-per-UTC-day claimable chest gate.

All chest awards from these loops flow through the same idempotent award path and provably-fair opening described in §12.

8.7 PARTNER TASKS (IMPLEMENTED)

Admin-managed **cross-promotion tasks** appear pinned in the missions area: complete a partner's action (e.g. try a partner Mini App) and claim a **fixed RIV reward** (negotiated per deal; **not** subject to halving scaling). Partner tasks display the partner's **logo** and support two validation modes:

- **Honor timer** — complete the linked action, then claim after a short cooldown.
- **Partner API ("Verify & Claim")** — the backend calls the partner's validation endpoint server-side and only credits the reward on a positive verification (fail-closed on errors).

Payouts settle through the same signed-claim path as other rewards.

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9. REFERRAL SYSTEM

9.1 ONGOING COMMISSION

Referrers earn a **percentage** of referred users' qualifying earnings (mining, daily, staking rewards, etc.), implemented in Convex with **claim** flows to on-chain where applicable.

9.2 REFERRAL TIERS (IMPLEMENTED)

Activity unlocks **tiers** with higher commission and one-time-style **referrer bonuses**:

TIER	NAME (THEME)	MIN ACTIVE REFERRALS	COMMISSION	REFERRER BONUS (RIV)
0	SOLO RUNNER	0	10%	500
1	NETRUNNER	3	12%	750
2	FIXER	10	15%	1,000
3	SHADOW BROKER	25	18%	1,500
4	SYNDICATE BOSS	50	20%	2,500

New referred users may receive a **one-time welcome-style bonus** (e.g. **250 RIV**) per configured rules.

9.3 REFERRAL COUNT MILESTONES (IMPLEMENTED)

Separate from the commission **tiers** above, reaching cumulative **active-referral counts** unlocks one-time rewards — energy at the first referral, then escalating loot chests:

ACTIVE REFERRALS	REWARD
1	1,000 energy
3	Data Shard chest
5	Encrypted Cache chest
10	Neural Vault chest
20	Quantum Core chest
50	**Glitch Core chest** (the only deterministic mythic-chest path)

9.4 PARTNER CAMPAIGN LINKS (IMPLEMENTED)

For growth partnerships, the referral system supports **campaign links**: a partner receives a branded **campaign slug**, and every signup through that link is attributed to the partner's account as the referring parent — flowing through the normal referral commission and milestone machinery. Partner integrations authenticate with **scoped, hashed API keys**, and a public **partner validation endpoint** lets partners verify Rivyu-side task completion for their own campaigns (the reverse of §8.7).

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10. AMBASSADOR PROGRAM (IMPLEMENTED)

The Ambassador program is a **structured leadership layer above the referral system** (§9): top referrers apply for an ambassador role that pays a **higher commission**, a **weekly network bonus**, and **deep commission** on sub-ambassadors. It is distinct from referrals (1-to-1 recruiting) and from the Clan system (§16, team competition) — though ambassadors gain one exclusive clan power: **sponsoring war prize pools** (§16.5).

10.1 ELIGIBILITY AND ONBOARDING

Applicants must meet **all three** gates: **account level ≥ 5**, **account age ≥ 30 days**, and **Referral Tier 4 (Syndicate Boss)**. Applications include a short intent statement and are **reviewed manually** (approve/reject; re-apply after 14 days). Approved ambassadors enter a **7-day trial** requiring **5 new active recruits** to become fully active.

10.2 RANKS

Rank is evaluated automatically (daily) from a **Network Health Score** combining active recruits, activation rate, and sub-ambassadors:

RANK	COMMISSION	WEEKLY NETWORK BONUS	WEEKLY CAP
Ghost Signal (entry)	20%	—	—
Neon Agent	22%	0.5% of network mining	500 RIV
Grid Warden	24%	1.5% of network mining	1,000 RIV
Neural Commander	27%	3% of network mining	2,000 RIV
Protocol Architect	30%	5% of network mining	5,000 RIV

Protocol Architect is capped at 5 ambassadors globally. New ranks get a **30-day grace period**; sustained under-performance triggers a warning (14 days) then a one-rank demotion (28 days), and the score **decays 5%/week** without new active recruits.

10.3 EARNINGS AND SPECIALISATION

Ambassadors earn (1) **referral commission** (20–30% by rank), (2) a **weekly network bonus** (a small % of total network mining, capped) from Neon Agent up, and (3) **deep commission** — an extra **2%** of a sub-ambassador's sub-network activity. From Neon Agent, ambassadors pick a **specialisation track** — *Signal Hunter*, *Neural Broadcaster*, or *Grid Keeper* — switchable once per 60 days.

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11. STAKING SYSTEM

11.1 POOLS (PRODUCT NAMES)

POOL ID	PRODUCT NAME	LOCK	REFERENCE APY*
flex	Core Flex	None	**5%**
30d	Cryo Stasis	30 days	**12%**
90d	Deep Freeze	90 days	**25%**
365d	Absolute Zero	365 days	**60%**

*The **reference APY** is the **target at a defined TVL** for each pool. **Displayed APY** moves with **total value locked** under a **fixed-emission** model over **720 days** (24×30-day months), aligned with on-chain staking logic: each pool has an **allocation** of RIV emitted linearly over the program; **higher TVL → lower APY**, lower TVL → higher APY, with a **display cap** to keep UI values bounded.

Minimum stake: 1,000 RIV (as enforced in the app configuration).

11.2 REWARD CADENCE

- **Flexible pool:** epoch aligned to **daily** accrual settlement.
- **Locked pools: weekly** epoch alignment, matching contract behavior.

11.3 EMERGENCY EXIT

Users may exit locked positions early: **10% penalty on accrued rewards** (principal protected per contract rules); penalty flows to the **Utility Pool** for ecosystem use.

11.4 UPGRADES AND MIGRATIONS

The **current staking contract generation is V4** (cut over at the 2026-05-24 audit-remediation deployment). Earlier generations (**V1, V2, V3**) are **frozen**: V2 stakes were migrated 1:1 into V3 storage, and each stake carries a `contractVersion` tag so users always route unstake/emergency-exit actions to the contract where their position actually settled on-chain. New stakes are created on V4 only. This version-routing model is part of Rivyu's **upgrade story** on TON.

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12. CHESTS AND THE BLACK MARKET (IMPLEMENTED)

The chest system is Rivyu's loot economy: a provably-fair way to earn boosts, rare RIV drops, and collectible-grade chests, plus a **Black Market** where RIV is spent (and partly burned) to buy chests directly.

12.1 CHEST TIERS

Seven chest types span common to mythic, plus two special earn-only tiers:

TIER	THEME	RARITY	SOURCE
`data_shard`	Data Shard	Common	Earn + Black Market
`encrypted_cache`	Encrypted Cache	Rare	Earn + Black Market + Fusion
`neural_vault`	Neural Vault	Epic	Earn + Black Market + Fusion
`quantum_core`	Quantum Core	Legendary	**Earn-only** (incl. Fusion)
`glitch_core`	Glitch Core	Mythic	**Earn-only** (incl. Fusion)
`data_rift`	DATA.RIFT	Legendary	**Earn-only** — crafted from Data Rift fragments (§8.5); boosted loot vs. Neural Vault
`signal_core`	Signal Core	Ambassador	**Earn-only** — Ambassador-program reward chest (§10)

Chests are awarded from **referral tier milestones**, **referral count milestones** (§9.3), **streak days** (3/7/14/30), **ad milestones**, in-app naming events, **Idea Lab** approvals, **Bug Bounty** confirmations, weekly **Network Bounty / Syndicate Heist** loops, **Cipher Fragment** daily rituals, **Data Rift** fragment crafting, clan **level-ups** and **Ghost_Net Heists** (§16), and chest-upgrade/breach rolls. Only the first three tiers are purchasable; all higher tiers must be earned (or fused).

12.2 PROVABLY-FAIR OPENING

Chest outcomes use a **commit-reveal** scheme so users can verify no result was tampered with after the fact:

1. At award time the server commits `sha256(serverSeed)` (the **serverSeedHash**) — published before the chest can be opened.
2. On open, the server reveals the original `serverSeed` and a `clientSeed`.

3. `HMAC-SHA256(serverSeed, "clientSeed:chestId")` deterministically selects the reward against a published weighted loot table.
4. Both seeds and the outcome are stored permanently, so **anyone can re-compute and verify** the draw.

Loot includes RIV drops (paid through the same signed-claim path as mining), **mining multipliers** (multiplicative, capped at 10×), **infinite-energy windows**, **referral boosts**, and rare chest-upgrade / mythic-drop outcomes.

12.3 BLACK MARKET AND THE 50% BURN

In the Black Market, users buy `data_shard`, `encrypted_cache`, or `neural_vault` chests with RIV. Every purchase is settled on-chain through the **Chest Shop** contract with a **3-leg verification** (transfer → burn → utility-pool forward):

- **50% of spent RIV is burned permanently** (deflationary).
- **50% is forwarded to the Utility Pool** for ecosystem use.

Each leg is independently verified against on-chain data before the chest is credited, so a purchase can never be granted without a confirmed, correctly-split settlement.

12.4 CHEST FUSION (IMPLEMENTED)

Chest Fusion lets users combine several **unopened** chests of one tier plus a RIV fee into **one chest of the next tier** — the only repeatable path to legendary and mythic chests:

FUSE	INPUTS	BASE FEE (RIV)	OUTPUT
Data Shards →	7	300	Encrypted Cache
Encrypted Caches →	5	850	Neural Vault
Neural Vaults →	3	3,000	Quantum Core
Quantum Cores →	3	5,000	Glitch Core

- **Fee settlement:** the fusion fee is paid on-chain through the same **Chest Shop** rails and 3-leg verification as purchases — **50% burned, 50% → Utility Pool**.
- **Supercharge:** every fusion has a base **10% chance** to come out **supercharged** (it opens on a boosted ceremony loot table). A **pity counter guarantees a supercharge after 8 non-supercharged fusions**.
- **Reactor modules:** before fusing, users pick a module that trades fee against odds — *Standard* (baseline), *Stable* (+15% fee, +8 pp supercharge), *Efficient* (−15% fee, no supercharge chance), or *Breach Amp* (+10% fee, 1.5× weighting on chest-upgrade/breach outcomes).

- **Fusion resonance:** an activity streak grants temporary perks (up to **+5 pp supercharge** and a **15% fee discount**).

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13. WEEKLY LOTTERY (IMPLEMENTED)

A recurring **weekly prize pool** lets users buy tickets with RIV for a chance at a large RIV payout.

TICKET	PRICE (RIV)
Bronze	100
Silver	500
Gold	1,000

- **Cap:** up to **25 tickets per user, per pool, per week** (anti-whale).
- **Payout split: 60% to 5 winners** (30% / 12% / 9% / 4.5% / 4.5%); **40% → Utility Pool**.
- Pots, draws, and winner selection are settled on-chain through the **Lottery Pool** contract; the Utility-Pool share recycles value back into the ecosystem.

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14. ACTIVE SCORE (IMPLEMENTED)

Active Score is Rivyu's per-user reputation engine: a **0–1000** score recomputed **daily** for every full account (guests are excluded), derived from **six native signals** with per-axis caps so **no single behavior can dominate**:

SIGNAL	CAP	BASIS
Mining	250	RIV mined in the trailing **30 days** (flow, not lifetime)
Staking	250	Amount staked
Idea Lab	150	Approved (**+50**) and implemented (**+100**) proposals
Bug Bounty	150	Confirmed/resolved reports, scaled by severity
Ads	100	Watch-and-earn participation

SIGNAL	CAP	BASIS
Account level	100	Level (1–10) × 10

The mining, staking, and ads axes combine an **absolute on-ramp** (predictable progress that never shifts with other users) with **relative elite bands** awarded at the **top 10% / 3% / 1%** of the population, estimated from a daily distribution snapshot. Scores map to cosmetic **tiers** — *Drifter* (0), *Operator* (100), *Runner* (250), *Architect* (450), *Overlord* (700), *Legend* (900) — and the formula is **versioned**, so historical snapshots (e.g. for airdrops) remain auditable when weights are tuned.

Active Score is the shared spine for **governance vote weight** (§15), **beta-access eligibility** (§18.2), leaderboard surfaces, and future airdrop criteria.

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15. GOVERNANCE — THE VOTING DAO (IMPLEMENTED)

Rivyu runs **advisory, Active-Score-weighted governance** in-app. It gives committed users a real, costly signal on product direction while remaining **advisory**: outcomes guide the roadmap but confer **no ownership or control** over the project (see §24).

- **Proposals** are created by the team across three categories — **event**, **feature**, **integration** — with **2–8 options** and a default **72-hour** voting window. Closed proposals stay visible with full tallies in a **Past proposals** archive.
- **Vote allowance** derives from Active Score: `votes = floor(score / 100)`, minimum **1** vote once the score reaches 100, hard-capped at **10** votes per proposal. Votes may be **split across options**.
- **Every vote costs 100 RIV**, settled on-chain through the Chest Shop rails with the same 3-leg verification — **50% burned, 50% → Utility Pool**. Voting is therefore sybil-resistant twice over: allowance is reputation-gated and each vote has a real burn cost.
- **Outcome** is decided by **plurality**, gated by a configurable **quorum** (minimum distinct voters and minimum total votes; initially disabled). Below quorum → *No Decision*.
- Votes already cast are **never clawed back**, even if a user's live allowance later drops.

Earlier governance polls run under this model include the **halving-accounting decision** documented in §5.3.

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16. CLAN SYSTEM (IMPLEMENTED)

Clans (in-app: **syndicates**) are Rivyu's competitive team layer, launched **July 2026**: player-run crews with a shared treasury, daily co-op streaks, weekly bracketed wars, and a faction meta-layer. Clans are

distinct from referrals (§9) and the Ambassador program (§10) — they are about **team competition**, not recruiting commissions.

16.1 FACTIONS AND ONBOARDING

New operators go through a cinematic **Glitch Night** story onboarding, then swear an oath to one of **five factions** — *Netrunners*, *Edgerunners*, *Nomads*, *Corpo*, or *Independent*. **Every faction is mechanically equal** (identity, not advantage). **Independents ride solo**: they cannot found or join clans, but they can be **hired as mercenaries** (§16.7). Matching your operator faction to your clan's faction lights a passive **+1% mining** faction-synergy bonus.

16.2 FOUNDING A CLAN AND THE MINER-DAY ECONOMY

Founding requires **account level ≥ 5**, **account age ≥ 7 days**, and a **connected TON wallet**. Clan costs are denominated in **miner-days** — multiples of the current base daily mining rate — so all clan pricing **halves automatically together with mining emission** (§5.2):

- **Creation fee: 40 miner-days** (5,000 RIV at the pre-halving base rate) **plus pro-rata first-month rent**, paid on-chain in RIV through the **ClanTreasury** contract with **3-leg verification** (transfer → burn → forward): **50% of the fee is burned**, **50% → Utility Pool**, and the pro-rata rent is held in clan treasury custody. A **reconciliation cron** automatically recovers any payment stranded by chain-indexing lag.
- **Clan levels 1–10** grow the member cap from **8 → 52** and mission slots from **1 → 3**. Leveling up costs pooled **CP** (500 → 50,000) **plus treasury RIV** (5 → 80 miner-days) on a super-linear ramp, and awards the leader a **Glitch Core** chest.
- **Rent:** monthly upkeep of **3 → 30 miner-days** by clan level, paid from the treasury (prepayable up to 3 months). Rent and disband flushes route **100% to the Utility Pool** (recycling, no burn). Falling behind: *rent overdue* → **frozen** after 7 days → **auto-disband** after 30 more.

16.3 TREASURY — NON-WITHDRAWABLE BY DESIGN

Each clan has a pooled RIV **treasury** funded by on-chain member **donations** (single-leg verified transfers into a dedicated custody wallet) and an optional **"donate 10% of mining claims"** toggle. The treasury is **intentionally non-withdrawable** — there is no withdraw function, as an anti-exit-scam measure. Treasury RIV can only be **consumed by clan operations** (rent, missions, level-ups, mercenary cuts) or forfeited to the Utility Pool on disband. Physical custody is reconciled on-chain: internal ledger debits are swept to the Utility Pool in **batched settlement transactions**, and a reconciliation job checks ledger totals against the custody wallet.

16.4 CLAN POINTS (CP) AND DAILY PLAY

CP is the clan-side activity currency: earned by member activity (capped at **500 CP per member per day**), **non-transferable**, and **never convertible to RIV**. Clans spend pooled CP on:

- **Clan Surge** — 800 CP for a **+6% mining boost for the whole clan for 30 minutes** (6-hour cooldown).
- **Level-ups** (§16.2) and **CP cosmetics** (emblem FX, banner FX, name auras; 250–650 CP).

The **Resonance Flame** is a daily co-op streak: when **≥ 50% / ≥ 80%** of members are active in a day the flame burns Orange/Gold, granting **+2% / +4%** clan mining boosts; seven consecutive Gold days ignite **Inferno**. Every clan action feeds a permanent **Chronicle** archive and a real-time live feed.

16.5 WEEKLY CLAN WARS

Clans are matched every **Monday 00:00 UTC** into **brackets of 8** and battle all week on **CP score driven by member mining**. Structure:

- **Sunday Showdown** (23:00–23:59 UTC): war-score multiplier goes **2×** and claims broadcast to a bracket kill-feed.
- **Prizes:** the top three clans in a bracket earn **250 / 150 / 75 bonus CP**, plus a **RIV prize pool** (5,000 RIV baseline) paid to the winners' treasuries.
- **Sponsor-a-War: Ambassadors** (§10) can wire on-chain RIV into a bracket's prize pool, capped at **10,000 RIV per war week**.
- **Rivals:** a clan can pin a rival — beating your rival **doubles the CP swing**; faction lore-enemies are highlighted.
- **Seasons:** wars roll up into **4-week seasons**; the **top 10 clans each season** enter a permanent **Hall of Fame** and receive an exclusive name aura.

16.6 CO-OP MISSIONS AND THE GHOST_NET HEIST

- **Missions:** officers start treasury-funded team objectives (e.g. *mine 1,000,000 RIV collectively*, *open 50 chests*, *5 members reach Level 7*) with 7-day windows and CP rewards; slots scale with clan level.
- **Ghost_Net Heist:** a weekly, unannounced, **provably-fair vault crack**. When it fires, enough of the clan must be **actively mining** during the window (participation gates of 60% / 45% / 30% by clan size) to breach the vault; one participant is then drawn — `winner = SHA-256(serverSeed + clientSeed) mod participants`, with the commit hash posted **before** close — and wins a chest ranging from Data Shard up to a rare mythic roll.

16.7 MERCENARIES (RONIN ECONOMY)

Independent operators can be hired as **Ronin**: clans post **War or Heist contracts** to a specific Independent with an offered **cut %** of the settled reward; the Ronin accepts or declines. Swearing to a faction forfeits pending offers.

16.8 ROLES, LIFECYCLE, AND SAFETY RAILS

Roles are **Leader / Co-Leader / Officer / Member** with scoped permissions (settings, level-ups, kicks, application approvals, missions). Lifecycle guards include: **72-hour disband grace** (cancellable), **leaderless clans** claimable within a grace window before auto-disband, a **24-hour cooldown** after leaving before joining another clan, and a **60-day cooldown** before a leader who disbanded can found again. Clan states surface in-app as *Active / Rent overdue / Frozen / Disbanding / Leaderless / Disbanded*. Join modes are **Open**, **Invite-only**, or **Application** (leaders review applicants); every clan is browsable with a public **preview** before joining.

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17. ON-CHAIN CONTRACTS AND TREASURY FLOWS

Implemented contract set (FunC on TON):

CONTRACT	ROLE
Jetton minter	1B RIV genesis; TEP-74 compliant
Jetton wallet	Per-holder balances, transfers, burns
Staking	Four pools, stakes, unstake, emergency exit
Rewards pool	**200M** staking reward budget; signed claims
Mining rewards pool	**300M** mining/engagement budget; signed claims
Founder vesting	**120M** locked; cliff unlock after vesting period
Utility pool	Level-up RIV, staking penalties, chest/lottery/clan forwards, admin withdrawal rules
Chest Shop	Black Market + Chest Fusion + governance-vote settlement: burns 50%, forwards 50% to Utility Pool
Lottery Pool	Weekly pot: 60% to winners, 40% to Utility Pool

CONTRACT	ROLE
Clan Treasury	Clan creation (50% burn / 50% Utility Pool forward), donation custody, batched rent settlement to the Utility Pool

Claims: Convex issues **Ed25519** signatures; contracts verify signer, amounts, and **nonces** to prevent replay. Pools can be **paused** and signing keys **rotated** under admin controls for incident response. Money paths that flow **into** the ecosystem (chest purchases, fusion fees, votes, clan creation, donations) are verified **leg-by-leg against on-chain data** (TonCenter) before anything is credited, with reconciliation crons that recover payments stranded by chain-indexing lag.

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18. SECURITY, ABUSE PREVENTION, AND IDENTITY

- **Rate limits** on claims, mining toggles, and staking-related actions.
- **CAPTCHA** integration on the client for high-risk flows.
- **Email OTP** (e.g. via Resend) plus **wallet connection** for account recovery and sybil resistance.
- **TON proof** support where configured, binding Telegram identity to wallet ownership more strongly.
- **Admin panel:** global feature toggles, whitelist management, audit logging, contract registry — restricted to **founder/admin** identities.

18.1 GUEST ACCOUNTS (IMPLEMENTED)

New users can **start mining immediately as guests** — no wallet or email required. Guest accounts are sandboxed: **on-chain actions (claims, staking, purchases) are gated** behind promoting to a full operator account, guests are **excluded from the public user count** and Active Score, and **referral attribution is deferred** until promotion so referral rewards only ever count real, promoted accounts.

18.2 STAGED BETA ROLLOUTS (IMPLEMENTED)

Major new features (e.g. Chest Fusion, Clans) launch through a **beta window**: for roughly the first **9 days** after a feature's launch, access requires either an **allowlist entry** or an **Active Score above 500**; after the window the feature **opens automatically to everyone**. This throttles risk on new money paths while rewarding the most engaged operators with early access.

18.3 BUG BOUNTY PROGRAM (IMPLEMENTED)

A structured **responsible-disclosure** program rewards verified vulnerability reports in RIV, scaled by severity, plus a confirmation chest:

SEVERITY	RIV REWARD	CHEST
Low	100	—
Medium	500	—
High	2,500	Encrypted Cache (on confirmation)
Critical	10,000	Quantum Core

Reports are reviewed manually; RIV payouts settle through the same **signed-claim path** as other rewards once a report is resolved and marked pool-eligible. Confirmed reports also feed **Active Score** (§14).

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19. LEADERBOARDS AND SOCIAL PROOF

- **Global** ranking by mined totals.
- **Weekly** leaderboard with scheduled reset.
- Scores incorporate major **reward sources** (mining, daily, welcome, social, referral) per backend aggregation; clan wars and seasons add team-level rankings and a seasonal **Hall of Fame** (§16.5).

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20. OPERATOR BADGES (IMPLEMENTED)

Rivyu awards **collectible badges** for milestones across **mining, staking, referrals, chests, the weekly Lottery, and community programs**. Badges live in **About → My Badges** and appear as compact strips on profile surfaces.

- **Equipped loadout:** users may **equip up to ten** badges at once. Only equipped badges contribute passive boosts.
- **Passive boosts:** equipped badges grant **mining-rate %** and **energy-regen %** bonuses. Passives **sum by stat**, then each stat is **clamped to a cap** (currently 20% / 20%).
- **Level gate:** passives are **inactive below account level 5** — badges remain earned and visible, but the numeric boost is zero until level 5.
- Badge boosts are a **derived layer** from ownership and equip state; they are distinct from time-limited chest boosts.

Rarity tiers and per-badge boost values are being **tuned** and may change before final sign-off; the badge *system* and vault UI are live today.

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21. SEASONAL EVENTS (EXAMPLE: EASTER 2026)

The platform supports **time-boxed events** (configuration-driven). The **April 2026 Easter event** includes:

- **Daily** engagement checks rewarding **egg** progression.
- **Referral milestones** granting higher-tier eggs.
- **Loot tables** with weighted outcomes: RIV payouts (on-chain claim), **energy shards**, **mining boosts**, **infinite energy windows**, **referral boosts**, and rare **syndicate-style** multipliers.

Event windows and **grace periods** are defined in server config so future seasons can reuse the same framework.

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22. TECHNOLOGY STACK (AS IMPLEMENTED)

LAYER	TECHNOLOGY
Blockchain	TON
Contracts	FunC; Blueprint/tooling; tested deployment pipeline
Client	React 18, Vite, TypeScript, TON Connect UI
Backend	Convex (queries, mutations, actions, crons)
Auth / comms	Email OTP, Telegram WebApp APIs
Localization	i18next

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23. STATUS AND ROADMAP

23.1 SHIPPED TODAY (IMPLEMENTED)

Mining, energy, levels, daily/streak/welcome rewards, social tasks, referrals (commission tiers **and** count milestones), the **Ambassador program**, staking and dynamic pool economics (on **V4** contracts with frozen-legacy version routing), signed claims, leaderboards, **operator badges**, ads (energy **and RIFT** tiers), the **Data Rift** mini-game, the full **Chest & Black Market** loot economy with provably-fair opening and the **deflationary 50% burn**, the **weekly Lottery**, the recurring engagement loops (**Idea Lab**, **Network Bounty**, **Syndicate Heist**, **Cipher Fragments**, **Free Daily Chest**), the **Bug Bounty** program, admin tooling, antibot/rate limits, multi-language UI, and contract integration/migration handling.

Shipped in the June–July 2026 wave: **Active Score** (§14), **Chest Fusion** (§12.4), the **Voting DAO** governance layer (§15) — all June 2026 — and the full **Clan system** (§16, July 2026), plus **guest onboarding** (§18.1), **Partner Tasks** (§8.7), **partner campaign links** (§9.4), and the **staged beta rollout** model (§18.2).

23.2 LAUNCHING NEXT (IN DESIGN)

- **Soulbound NFT membership passes — with perks.** On-chain, **soulbound** (non-transferable) TON NFTs minted on mainnet as a permanent badge of membership, while the perks themselves run on an in-app timer. The line spans a one-time, capped **Founder Pass** and a recurring, tiered **Citizen Pass** (good/better/best). Perks reuse shipped systems — **infinite energy**, **mining multipliers** (stacked outside the 10× chest cap under a new global ceiling), and **bonus chest / Lottery gifts** — and payment rails include both **TON** and **Telegram Stars**.

23.3 ON THE HORIZON (PLANNED)

- **GameFi — Rivyu Arena.** A skill-based **1v1 PvP arena** with ELO and bracket rewards, plugging into the shipped Clan season cadence (§16.5) — Rivyu's evolution from an engagement app into a competitive GameFi experience.

23.4 PATH TO PUBLIC LAUNCH

Independent **security audit**, **mainnet** deployment, liquidity and **TGE** execution per regulatory constraints, sustained **monitoring** and **incident playbooks**, and optional **contract upgrades** (e.g. gas-forwarding patterns) documented in engineering specs. Clan treasury custody carries an additional pre-mainnet gate: **multisig control** of the ClanTreasury admin key.

Roadmap items in §23.2–§23.3 are **direction, not commitment**; scope, mechanics, and timing may change. Dates in legacy roadmaps (website, TGE, airdrops) should be treated as **planning placeholders** until confirmed by official channels.

24. LEGAL DISCLAIMER AND RISK DISCLOSURE

Please read this section carefully. By accessing the Rivyu application or interacting with the RIVYU (RIV) token or any Rivyu smart contract, you acknowledge and agree to the following.

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This whitepaper describes the **intended and implemented behavior** of the Rivyu software and smart contracts to the best of the project's technical documentation. It is provided for **informational purposes only** and does **not** constitute, and must not be relied upon as, **investment, financial, trading, legal, accounting, or tax advice**, nor a recommendation by any person to buy, sell, hold, or otherwise transact in any token or digital asset. Nothing herein creates any fiduciary relationship between you and the project, its contributors, or its affiliates.

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Digital assets are **highly volatile and speculative**. **Token prices can fall to zero.** Smart contracts carry **implementation, economic, and operational risk**, including bugs, exploits, key compromise, network congestion, and loss of funds. Rewards, rates, halving parameters, clan economics, perks, and roadmap items are **subject to change** and are **not guaranteed**. Forward-looking statements (including §23) describe **direction, not commitment**. **Never commit funds you cannot afford to lose.**

24.5 USER RESPONSIBILITY

You are solely responsible for your own decisions, security, custody of keys, and compliance. Always **verify contract addresses on official sources**, **read the on-chain code**, and **consult your own qualified legal, financial, and tax advisors** before interacting with the project. To the maximum extent permitted by law, the project, its contributors, and its affiliates **accept no liability** for any loss or damage arising from use of, or reliance on, this whitepaper or the Rivyu software.
