

# Virtual Earth Nation - Appendix B: Adversarial Participation & Resilience Games (v1.0-textfix)

## B.1 Public Program Overview (Friendly Language)

**Program Name:** Open Security Research & Resilience Games

**Purpose:** Invite qualified researchers and operators to safely test and improve VEN. We focus on learning, transparency, and user protection.

### B.1.1 Eligibility & Onboarding

- KYC/KYB with privacy-preserving options; sign Code of Conduct.
- Complete training: safety, disclosure, synthetic data handling.
- Accept scope-of-work and Rules of Engagement (ROE).

### B.1.2 Scopes & Arenas

- Testnets and shadow environments with synthetic data.
- Adversarial Markets with capped value or play-VC.
- Blue/Red Exercises against cordoned subsystems.
- Capture-the-Flag (CTF) and tabletop scenarios.

### B.1.3 Rules of Engagement (ROE)

- Written authorization and explicit scope per test.
- No user harm; no real PII; safe payloads only.
- Evidence required: PoC, logs, reproducible steps.
- Coordinated disclosure timelines; fix-first policy.
- Immediate stop and report on accidental spillover.

### B.1.4 Rewards & Recognition

- Bug/Exploit bounties (severity and blast radius tiers).
- Resilience points for chaos drills that improve SLOs/MTTR.
- Fraud-prevention prizes measured by prevented-loss uplift.
- Reputation badges and leaderboard standing.
- **\*\*Payouts:\*\*** WT -> VEX -> VC (optional off-ramp).

### B.1.5 Safety & Privacy

- Synthetic or minimized data; capped-value arenas.
- Kill switches and instant rollback.
- Third-party audits of program processes.

## B.1.6 Disclosure & Patch

- Severity-based SLAs; emergency hotfix paths.
- Public advisories after fix; researchers credited (opt-in).

## B.1.7 Transparency

- Publish quarterly metrics: vulns closed, MTTR deltas, chaos coverage, fraud-prevention uplift.
- Annual public report reviewed by independent oversight.

## B.2 Internal Addendum (Restricted Use)

**Distribution:** SOC/Trust & Safety/Engineering leadership; Oversight Board.

### B.2.1 Guild Types (Licensed)

- Red Team Guild: scoped offensive testing, model/red-team prompts, model jailbreak containment.
- Fraud & Market Stress Guild: collusion, wash-trade, payout-abuse simulations.
- Chaos Engineering Guild: fault injection, dependency outages, rollback validation.
- Social Resilience Guild: misinformation/brigading labs, content abuse drills (opt-in cohorts only).

### B.2.2 Arena Types & Configuration

- Testnets/Shadow: mirror prod, synthetic users, bounded financial value.
- Adversarial Markets: play-VC or capped-VC, reversible ledgers, supervised oracles.
- Blue/Red Live Drills: cordoned subsystems, maintenance windows, full rollback plans.
- Tabletop/CTF: no prod systems, replayable traces, graded scoring.

### B.2.3 Rules of Engagement (Detailed)

Allowed:

- Scoped exploitation, fuzzing, chaos faults, traffic replay with consent.

Prohibited:

- Data exfiltration of real PII, ransom/extortion, irreversible damage, persistence beyond scope, social engineering of non-consenting users.

Evidence:

- Packet/session logs, before/after metrics, PoC artifacts, timeline with UTC stamps.

Disclosure:

- Triage within 24h; severity-based patch windows (Critical:  $\leq 72h$ , High:  $\leq 7d$ , Medium:  $\leq 30d$ , Low: backlog).

Release:

- Publish after fix or after max window with mitigation.

### B.2.4 Staking, Slashing, and Bonds

- Entry bond required for high-impact arenas; size scales with potential blast radius.
- Slashing for ROE violations; partial refunds for good-faith errors.
- Repeat-offender lockouts with appeal to Oversight Board.

## **B.2.5 Safety & Ops Controls**

- Change windows; kill switches; golden rollback tests before drill.
- Air-gapped secrets; least-privilege ephemeral creds; session recording for high-privilege actions.
- Dual-approval for production-adjacent drills; independent safety officer sign-off.

## **B.2.6 Incentives and Tiers**

- Severity payouts benchmarked to historic impact and time-to-detect improvements.
- Bonus multipliers for reproducible PoCs and cross-team runbooks.
- Reputation tiers unlock broader scopes and higher payouts.

## **B.2.7 KPIs & Targets**

- Security: MTTD/MTTR reduction vs. baseline; vulnerabilities closed within SLA.
- Fraud: % prevented pre-payout; false-positive rate of detectors.
- Resilience: chaos coverage %, rollback success rate, dependency recovery times.
- Safety: 0 user-harm incidents; compliance audit pass rate.
- Program ROI: payout per critical fix; cost per hour of avoided downtime.

## **B.2.8 Governance & Oversight**

- Ethics & Safety Board: approves scopes, reviews incidents, publishes annual report.
- Immutable audit trail: signed scopes, artifacts, and outcomes.
- Appeals: structured process, time-bounded decisions, remedies.

## **B.2.9 Legal & Compliance**

- AML/CFT at on/off-ramps; export controls; platform-specific policies.
- Child safety: dedicated flows, vetted reviewers, strict retention controls.
- Jurisdiction-aware sanctions and privacy obligations.

## **B.2.10 Incident Classes**

- Sev-0: active exploitation or safety risk -> immediate kill switch, public status page.
- Sev-1: critical vuln without active exploitation -> hotfix within 72h.
- Sev-2+: tracked via backlog with scheduled remediation.

## **B.3 Interoperability**

- Section 2: payouts via WT -> VEX -> VC; anti-hoarding applies.

- Section 3: due process and appeals; sanctions schedules.
- Sections 4-7: drills for infra, services, mobility; Appendix A for airspace and corridors.
- Section 8: credential tiers and access controls for guilds.
- Section 9: SOC, abuse ops, DR/BCP, emergency coordination.

## **B.4 Roadmap**

- Q1: Launch public program and bounty portal; seed CTFs; train first guild cohort.
- Q2: Blue/Red live drills on cordoned systems; publish first resilience report.
- Q3: Expand adversarial markets; add fraud stress league; refine staking tables.
- Q4: Independent external audit; adjust payouts and ROE; scale to partner ecosystems.