Project Requirements Document (PRD)

Project Name: Creator Rewards Platform (Hackathon MVP)

Powered by: Vibe Coin

1. Project Overview

The Creator Rewards Platform is designed to empower African creators by linking their social media activity with direct on-chain payouts. Using Vibe Coin as the payment token, creators will earn when their content gains engagement (likes, shares, clicks).

Core Rule:
- For each creator, once total engagements cross 1,000 likes, every additional like generates $0.03 (USD equivalent), paid in Vibe Coin.

This MVP will demonstrate how creators can link wallets, connect social accounts, and receive transparent crypto payouts for their social influence.

2. Objectives

- Enable creators to monetize content fairly, bypassing restrictions from traditional platforms.
- Prove a scalable and transparent model for payouts via blockchain.
- Showcase an MVP with working social linking → engagement tracking → reward calculation → payout flow.

3. Key Features

Creator Features:
- Sign-up & Wallet Connect (MetaMask/WalletConnect)
- Link Social Accounts (Twitter/X, Instagram, TikTok)
- Engagement Tracker: dashboard showing likes, shares, and progress towards payout threshold
- Earnings Display: total USD equivalent and Vibe Coin earned
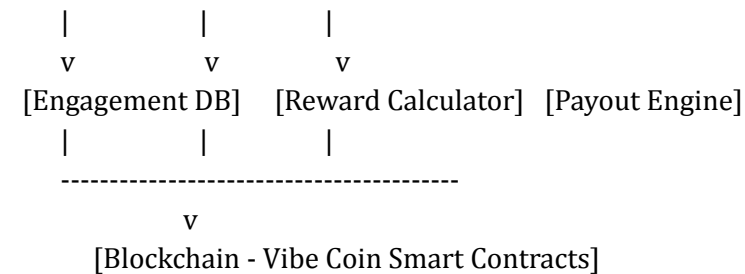- Payout History: past transactions visible with blockchain explorer links

Admin Features:
- Dashboard: overview of creators, payouts, and flagged accounts
- Fraud Monitoring: detect suspicious engagement spikes or bot activity
- Payout Manager: batch payout execution with audit trail

Reward Logic:
- 0–999 likes: no payouts
- 1,000+ likes: $0.03 per additional like (converted to Vibe Coin)
- Payouts batched daily/weekly for efficiency

4. System Architecture

```
[Social Platforms] --> [API Ingest] --> [Backend Processing]
        |           |           |
        v           v           v
 [Engagement DB]    [Reward Calculator]   [Payout Engine]
        |           |           |
    -----------------------------------------
              v
       [Blockchain - Vibe Coin Smart Contracts]
```

5. Technical Requirements

Backend:
- Node.js/TypeScript or Python FastAPI
- PostgreSQL database
- Redis caching
- APIs for Twitter, Instagram, TikTok
- Reward Engine for payout logic

Frontend:
- React / Next.js
- Wallet Connect integration
- Creator & Admin dashboards

Blockchain:
- RewardsManager & BatchPayout smart contracts
- Oracle for USD↔Vibe conversion
- Testnet deployment

6. User Flows

Creator Flow:
1. Sign up → Connect wallet
2. Link social accounts (OAuth)
3. Post content → Engagements tracked
4. Reach 1,000 likes → payouts start at $0.03 per like
5. Weekly payout → Vibe Coin sent to wallet

Admin Flow:

1. Log in → Review dashboard
2. Monitor flagged accounts
3. Approve payouts → Trigger batch payout contract
4. Handle disputes and fraud cases

7. Fraud Prevention

- Engagement velocity checks
- Bot/collusion detection
- Manual admin approval for large payouts
- KYC triggers for high-value accounts

8. Non-Functional Requirements

- Security: JWT, encryption, multisig
- Scalability: 10k+ users, millions of engagements
- Reliability: retries, fallback systems
- Monitoring: logs, audits

9. Hackathon Deliverables

- Creator wallet connection
- Social linking (at least 1 platform)
- Engagement ingestion + threshold logic
- Reward calculator ($0.03/like after 1k)
- Admin batch payout trigger
- Demo dashboard (creator + admin)

10. Risks & Mitigation

- API Limits → caching & manual verification
- Gas Fees → batch payouts, L2 scaling
- Fraud → detection rules + admin review
- Regulatory Risk → limit payouts for MVP

11. Roadmap

Day 1–2: Backend setup, DB schema
Day 3–5: Social API + dashboard
Day 6–8: Reward calculator + payout
Day 9–11: Smart contracts + testnet payout
Day 12–14: QA, polish UI, demo prep

12. Acceptance Criteria

- Wallet & social linking works
- Likes ingested from 1 platform minimum
- Payouts start after 1,000 likes
- Testnet payout successful
- Admin dashboard functional