

CharityFlow: Decentralized Crowdfunding Ecosystem.

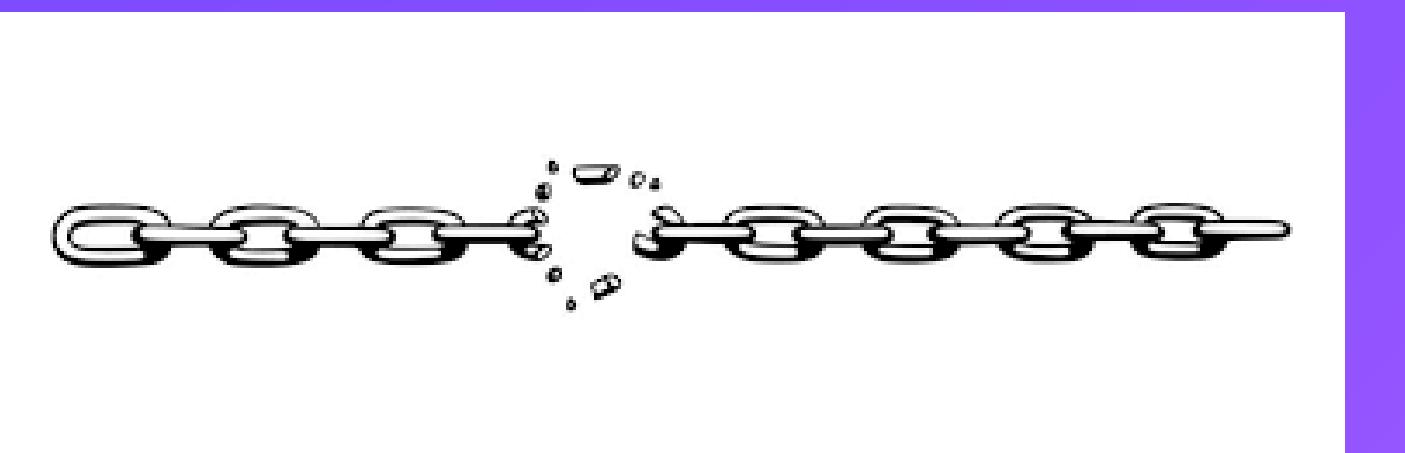
"Transparency by design. Accountability through Blockchain."

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The Problem

- Lack of Trust: Donors don't know where their money goes.
- Intermediaries: High fees and slow transfers in traditional charity.
- Manual Rewards: Difficult to track and reward loyal supporters.



The Solution

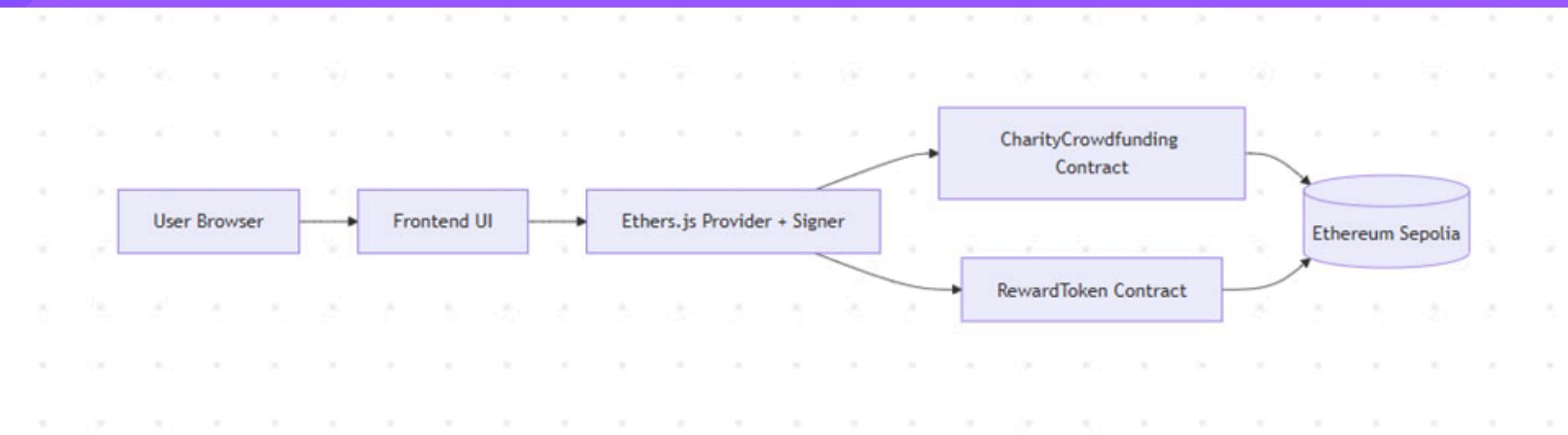
- Direct Impact: Funds go directly to campaign creators.
- Public Ledger: Every cent is traceable via Etherscan.
- CRWD Tokens: Automatic "Proof of Contribution" for every donor.



System Architecture

3-Tier Technical Architecture.

- Frontend: Simple static web app (HTML/JS).
- Web3 Bridge: Ethers.js connects the user's wallet to the network.
- Blockchain: Solidity smart contracts manage the state and assets.



Smart Contract

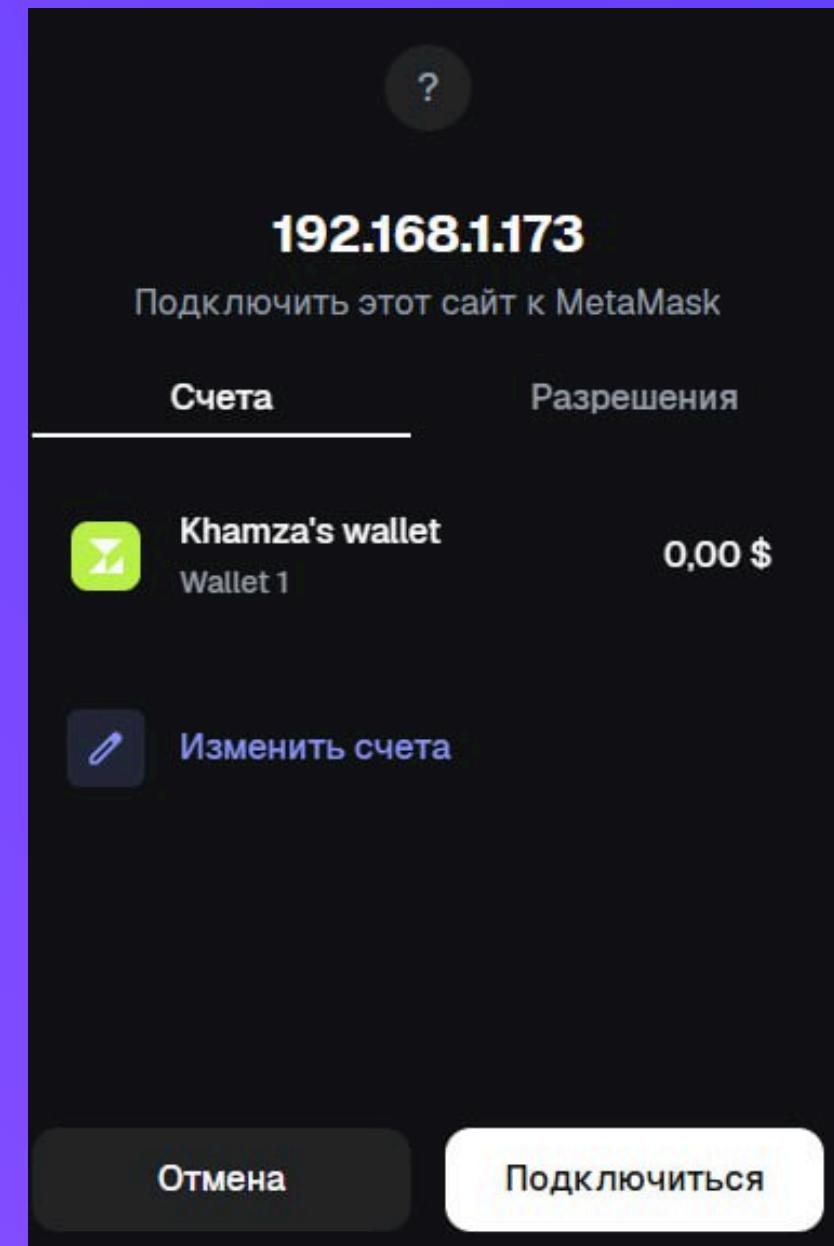
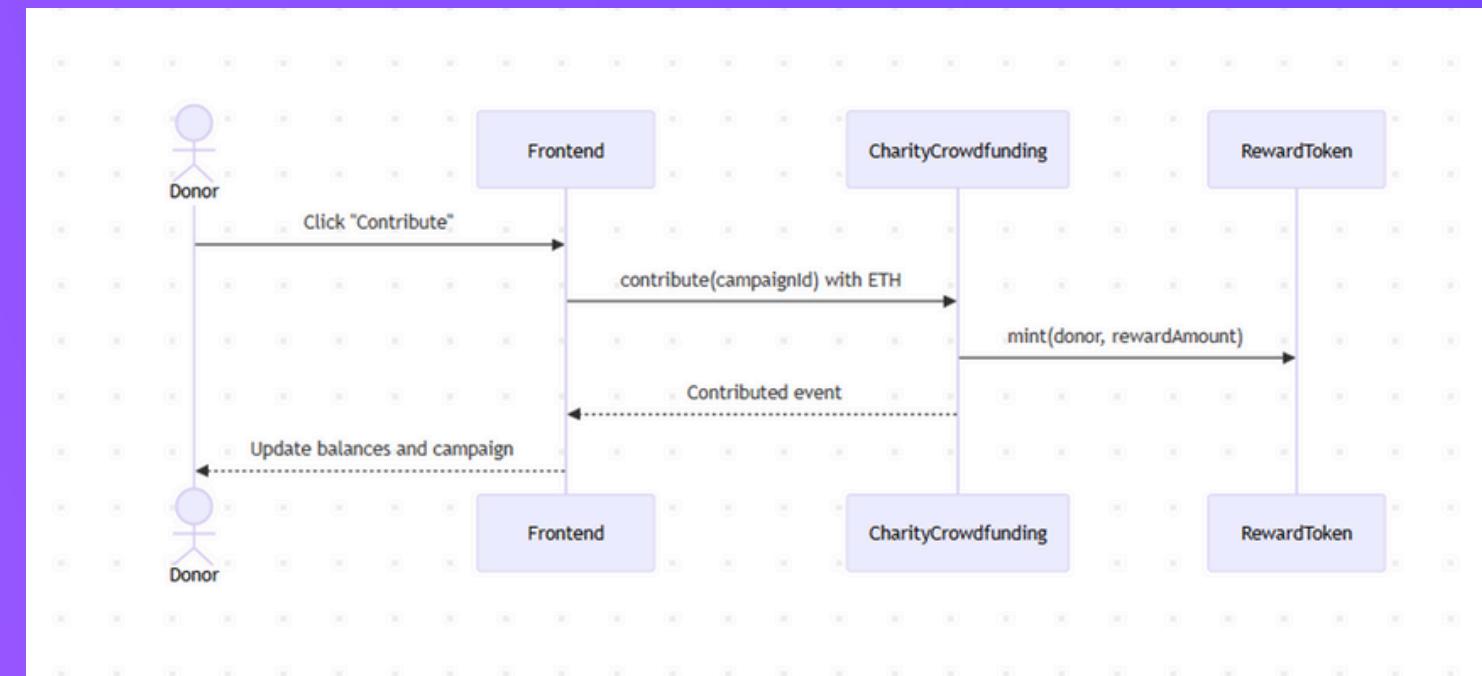
Logic

- CharityCrowdfunding.sol: Logic for goal tracking, deadlines, and fund distribution.
- RewardToken.sol (ERC-20): Minting engine for donor rewards.
- Security: Ownership is transferred to the main contract to prevent unauthorized minting.



User Experience: Connecting Wallet

- Automatic wallet detection via `window.ethereum`.
- Secure account linking for identity verification.



Platform Demo:

Active Campaigns

Live Charity Dashboard

- Real-time tracking of ETH raised.
- Display of contract addresses for full transparency.

The screenshot displays a web-based crowdfunding platform for the Ethereum Testnet. At the top, it says "ETHEREUM TESTNET CROWDFUNDING". Below that is a "Charity Crowdfunding" section with a sub-section for "Create campaigns, fund meaningful goals, and earn CRWD reward tokens for every contribution. Built for Sepolia." It shows a "Crowdfunding" address: 0x5D53b80deDbaAc0387C00d3d3f84d3d2687aa04 and a "Reward token" address: 0xD9F90571bE945643cE041840ba24033c38c8F7a1. A "Wallet" sidebar on the right shows a Sepolia network connection with an address 0x3e9a...2e34, an ETH balance of 0.0000 ETH, and a CRWD balance of 0.00 CRWD. It also includes links to "Connect MetaMask", "Switch to Sepolia", and "Get test ETH (faucet)".

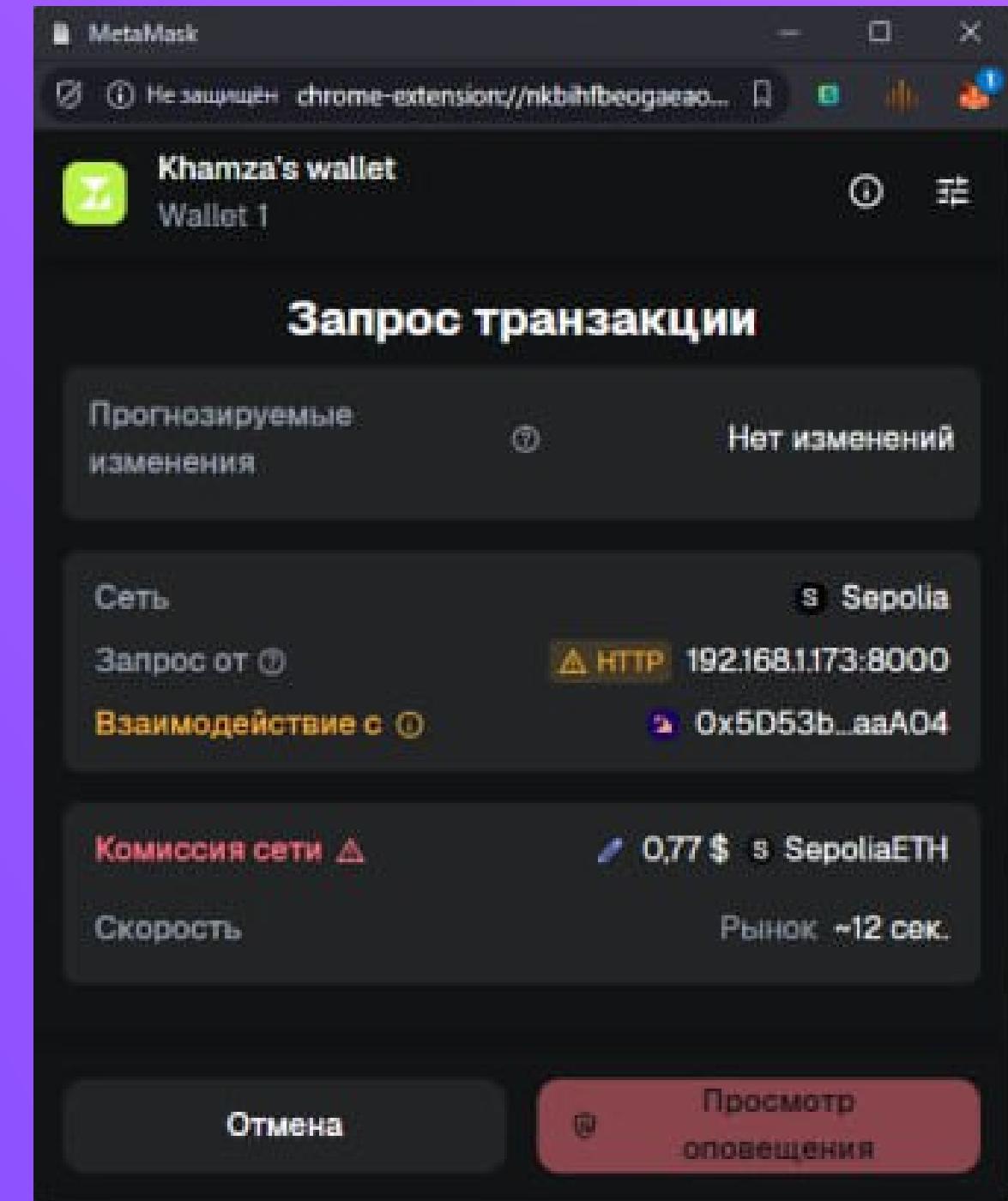
Create campaign
Set a title, funding goal, and duration.
Title: Clean Water Drive Goal (ETH): 1.5 Duration (hours): 72 Create campaign

Live campaigns
Track progress, contribute, or finalize after deadline.
Demo preview (not on-chain)
Clean Water Drive Demo
Creator: 0x1234...BEEF
Goal: 5.0000 ETH
Raised: 1.2500 ETH
Deadline: 2026-02-28 18:00
Status: Active

Transaction Verification

Verified On-Chain Security

- Transaction confirmation on the Sepolia Network.
- Direct interaction with the Crowdfunding contract address.



Security & Design

Decisions

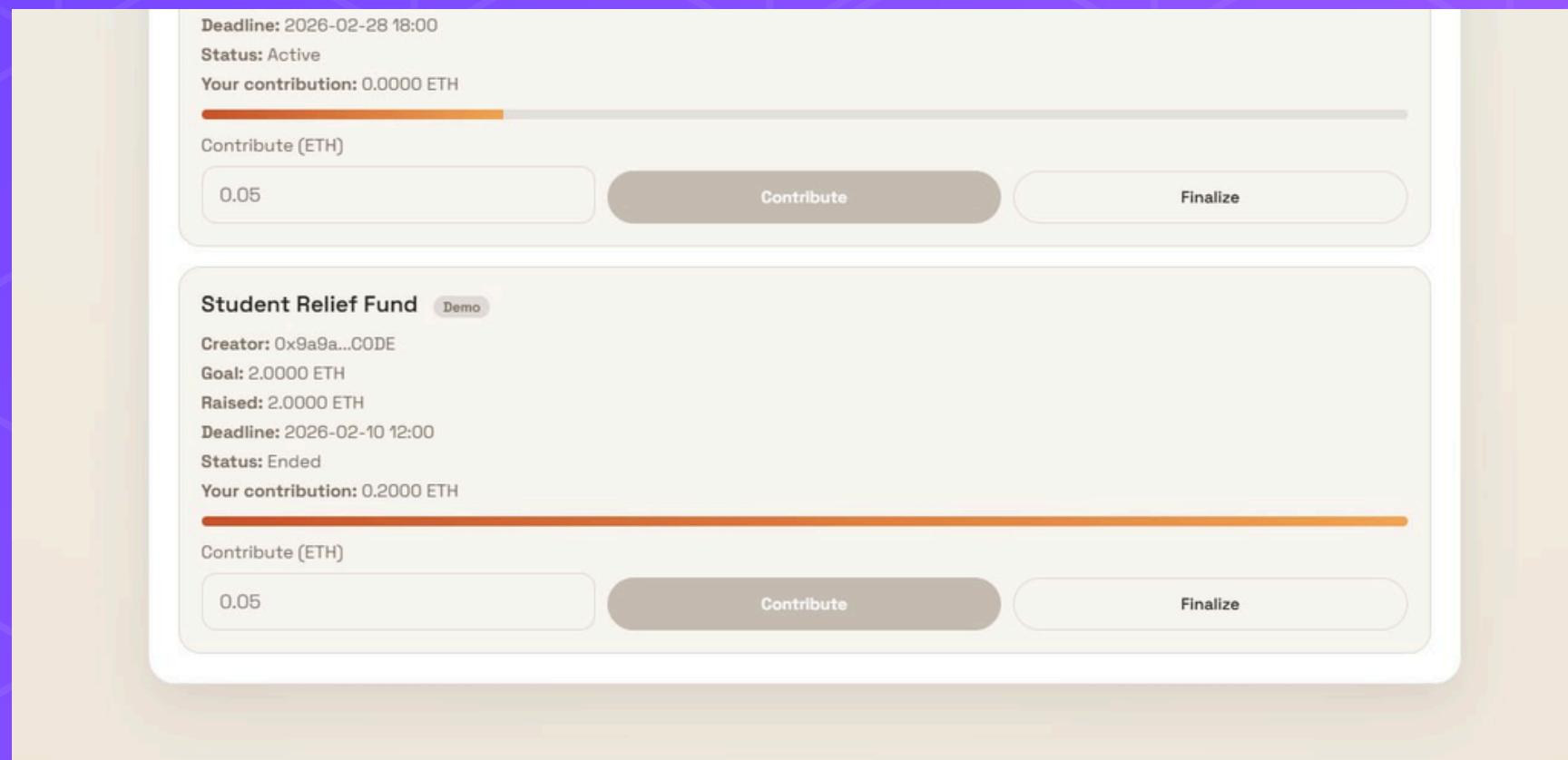
Ensuring Trust and Safety

- Restricted Minting: Only the Charity contract can mint CRWD tokens.
- Time-Locked Goals: Funds are only released after reaching deadlines.
- No Custody: Developers never have access to donor funds.



Conclusion & Future Roadmap

The Future of CharityFlow



- Next step: Adding automated refunds for failed campaigns.
- Next step: Integrating IPFS for decentralized media storage.