Collab Proof

Smart Escrow for Creator Collaborations

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1. CURRENT MARKET

Small creator deals run on vibes, DMs, and trust. That is the problem in one sentence. A coffee shop offers a student creator free product plus $50 for a TikTok or Instagram post. The deal gets agreed over Instagram DMs. Payment happens over Venmo — if it happens at all. There is no shared record of what was agreed, no deposit, and no way for either side to enforce anything if the deal falls apart.

Brands end up paying for content that never gets posted, or holding their money and hoping the creator does not disappear. Creators post the content and then spend weeks chasing payment. Both sides lose deals they would have otherwise done because the trust just is not there. That is the market Collab Proof is built for — the micro-collaboration space where the deal is too small for a formal contract but too important to run on a handshake.

2. KEY ACTIVITIES

The founding team is focused on four things above everything else.

Platform Development and Smart Contract Management

The escrow contract is the product. The dev team maintains the Solidity codebase, monitors active contracts, and deploys updates on a defined schedule so no active campaigns are disrupted. Security comes before speed.

Product Design and Pricing

The interface on top of the contract needs to be simple enough that a local business owner and a student creator can use it without knowing anything about blockchain. Brief creation, creator selection, fund deposit, submission review — all of it has to feel intuitive. This team is a mix of people from marketing, tech, and operations.

Customer Acquisition and Marketing

Collab Proof is a two-sided marketplace. The team seeds both sides manually at SLU during the pilot phase — approaching local businesses directly and recruiting verified student creators through the Blockchain Club. Early campaigns run at zero platform fee to generate real activity before a public launch.

Funding Strategy

Funding is a key activity, not an afterthought. The team manages burn rate carefully during the pilot, pursues SLU entrepreneurship grants, and prepares for an angel round after the pilot demonstrates real campaign volume.

3. USE CASES

Collab Proof is built around one core situation: a brand and a creator who do not know each other want to do a content deal, and neither wants to go first. The smart contract removes the need for either side to trust the other.

Campus Business and Student Creator

A coffee shop near SLU wants TikTok content reaching college students. They post a campaign: one 30-second video featuring their seasonal drink, tagged with their handle and #sponsored, published within seven days, $75 in escrow. A student creator finds the campaign, accepts the terms, films the video, posts it, and submits the link. The brand reviews it against the brief, approves it, and $71.25 lands in the creator's wallet automatically. Neither side had to trust the other at any point.

Brand and Creator Risk, Solved

Under the current handshake system, brands risk paying for content that never appears or misses the brief. Creators risk posting content and then chasing payment for weeks. Collab Proof addresses both risks simultaneously. Funds are locked before work starts — the creator can verify the balance on-chain before doing anything. Payment releases only after the brand confirms delivery.

When the Brand Does Not Approve

If the brand is not satisfied with the submission, they have three options: approve and release payment, request a revision with written feedback stored on-chain, or open a dispute. If a dispute is opened, a panel of staked community arbiters reviews the submission against the brief and decides the outcome. Final outcomes include payout, partial payout, refund, or revision — all recorded in escrow history and executed automatically.

Approval Validation

Uploading content alone does not trigger payment. Every submission passes through five gates: the creator submits proof (post URL, content hash, timestamp), an API check verifies the post exists on the correct account and platform, a brief checklist confirms required tags and format, the brand reviews against the original request, and only then does the payout gate open via approveContent().

4. WHY BLOCKCHAIN

The traditional process for small creator deals has four problems: payment is delayed, agreements are informal, there is limited visibility for either party, and the friction of chasing payment is high. Collab Proof addresses all four through blockchain's core properties.

Funds are locked in escrow before work begins — not promised, actually locked and verifiable on-chain. Smart contract automation replaces manual invoices and verbal agreements. A transparent approval trail gives both sides the same view of deal status at every step. And low-fee stablecoin settlement means the cost of transacting is negligible relative to the deal value.

A key point on when blockchain specifically matters: if a brand and creator already have an established relationship, a traditional escrow service or written contract could do the job. Collab Proof is built as a marketplace where brands and creators are strangers before the campaign begins. That context is where trustless execution is genuinely the better solution — two parties with no prior relationship, no reputational history, and no legal infrastructure between them.

Traditional Process	Collab Proof
Payment delay	Funds locked in escrow
Manual invoices	Smart contract automation

Limited visibility	Transparent approval trail
Higher friction	Low-fee settlement

5. IMPLEMENTATION

The six-step campaign lifecycle is the core of how Collab Proof works. Every campaign follows this sequence, enforced at the smart contract level.

1. Draft: The brand writes the campaign brief — platform, content format, required tags, compensation, and deadline. The brief is hashed and stored in the contract at deployment, making it immutable after creator acceptance.
2. Accept: The creator reviews the brief and accepts terms on-chain. This is a signed transaction — the creator cannot later claim they were unaware of the deliverable requirements.
3. Fund: The brand deposits the agreed USDC amount into the CampaignEscrow contract. Funds are visible and locked before any creative work begins.
4. Post: The creator produces and publishes the content, then submits proof — the post URL, a content hash, and timestamp. All recorded on-chain.
5. Review: The brand has 48 hours to approve, request a revision, or open a dispute. If the brand takes no action within 48 hours, funds release automatically — this prevents brands from withholding payment by going silent.
6. Release: Payment goes to the creator minus the platform fee, triggered by brand approval, the auto-release window, or an arbiter decision.

The three roles in every campaign: the brand drafts terms, locks funds, and reviews submissions. The creator accepts terms, creates content, and submits proof including the post URL and content hash. The arbiter is an optional neutral reviewer who resolves disagreements when the brand's approval fails.

6. TECHNOLOGY AND SYSTEM ARCHITECTURE

The platform runs on three smart contracts and an off-chain verification service that work together to manage the full campaign lifecycle.

CampaignEscrow.sol

The main contract. Each campaign is its own deployed instance. It stores the brief hash, party addresses, USDC amount, deadline, and review window. A strict state machine enforces that functions can only be called in the right order by the right party. The six core functions are createCampaign(), submitProof(), approveContent(), requestRevision(), openDispute(), and releasePayment().

ArbiterRegistry.sol

Manages the dispute resolution pool. Arbiters stake CP tokens to join. When a dispute is opened, a three-member panel is selected randomly — neither party knows who the panel will be until after the dispute is opened. The panel has 72 hours to review. A 2-of-3 majority decides the outcome. Arbiters who do not participate have their stake slashed and are replaced.

CPToken.sol

ERC-20 utility token. Issued only after verified campaign completion — supply grows with real platform activity. Creators use CP for fee discounts. Arbiters stake CP to join the eligibility pool. All campaign payments are in USDC. CP handles incentives only.

Dispute Resolution — How It Works

The professor specifically asked for more detail on how voting works in disputes. When a dispute is opened, three arbiters are randomly selected from the eligible pool. To be eligible, an arbiter must stake a minimum of 500 CP tokens, connect a verified social account with at least 90 days of history, complete a Collab Proof training module on brief evaluation, and have at least five completed campaigns on the platform as brand or creator.

The arbiter's job is not to judge whether the content is good. It is to compare the submission against the specific objective criteria in the brief: Was the required hashtag present? Was the post on the correct platform? Was it published before the deadline? Arbiters evaluate facts, not aesthetics. This is why brief templates guide brands toward objective, checkable terms — vague language like 'must reflect our brand values' is flagged at brief creation and replaced with specific requirements.

Either party can appeal within 24 hours. Appeals go to a fresh five-member panel. If the appeal reverses the original decision, the original arbiters' stakes are slashed 5%. If it upholds the decision, the appeal fee is burned. This keeps the system honest without making appeals costless.

7. TARGET MARKETS

Collab Proof starts with campus-area businesses and student creators, then expands locally. Three groups make up the initial target market.

7. Campus-area businesses. Coffee shops, restaurants, local retail, and student-run brands near SLU. These businesses run $25 to $200 deals with student creators regularly and have no tooling to formalize those arrangements.
8. Student content creators. College students building income from social media who lack access to agency relationships or legal support. Collab Proof gives them payment protection that previously required a formal contract.
9. Local businesses in growth phase. St. Louis-area businesses spending more on creator content who want campaign analytics, audit trails, and repeatable processes. These users drive subscription revenue once the platform is established.

The platform is specifically designed for markets where brand and creator are strangers before the campaign begins. Established relationships do not need Collab Proof — they already have trust. First-time transactions between unknown parties are where the smart contract escrow adds real value.

8. DISTRIBUTION CHANNEL

Distribution follows three phases that match the target market sequence.

Phase 1 — Campus-Area Businesses and Student Creators

Seed the MVP at SLU with a small group of local businesses and student creators. The team handles onboarding personally. No transaction fees during the pilot. Goal: 30 to 50 completed campaigns and real testimonials before public launch.

Phase 2 — Student Creators

Expand the creator side through campus ambassador programs at other St. Louis universities. Activate transaction fees. Launch the Pro subscription tier for brands managing multiple campaigns simultaneously.

Phase 3 — Expand Locally

Open the platform to all St. Louis-area businesses and creators. The network effects from the first two phases make onboarding easier — more brands means more campaigns for creators, and more creators means better selection for brands. Digital marketing through Instagram and TikTok targets local business owners and student creators.

9. SMART CONTRACT

The CampaignEscrow contract was deployed on Base Sepolia testnet for demonstration. It handles the full campaign lifecycle through six functions.

Function	What It Does
createCampaign()	Locks USDC funds in escrow
submitProof()	Creator uploads post URL and content metadata
approveContent()	Brand confirms content meets the brief requirements
requestRevision()	Brand asks for edits instead of approving
openDispute()	Triggers arbiter review panel
releasePayment()	Releases funds only after approval or arbiter decision

Example: A brand creates a campaign and locks $150 in escrow. A creator posts content and the brand reviews it. Payment releases only after approval. If the brand does not respond within 48 hours, the auto-release function triggers and the creator receives payment regardless.

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.19;

interface IERC20 {
    function transferFrom(address from, address to, uint256 amt) external returns (bool);
    function transfer(address to, uint256 amt) external returns (bool);
}

contract CampaignEscrow {

    enum State { CREATED, FUNDED, ACCEPTED, SUBMITTED, APPROVED, DISPUTED, SETTLED }

    struct Campaign {
        address brand;
```

```
        address creator;
        uint256 amount;
        uint256 deadline;
        uint256 reviewWindowEnd;
        bytes32 briefHash;
        string  proofURL;
        bytes32 contentHash;
        State   state;
    }

    IERC20   public usdc;
    address  public platform;
    uint256  public feePercent = 5;
    Campaign public campaign;

    event CampaignFunded(address brand, address creator, uint256 amount);
    event ProofSubmitted(string url, bytes32 contentHash);
    event ContentApproved();
    event RevisionRequested(string reason);
    event DisputeOpened(address opener);
    event PaymentReleased(address creator, uint256 amount);

    modifier onlyBrand()   { require(msg.sender == campaign.brand,   'Not brand');   _; }
    modifier onlyCreator() { require(msg.sender == campaign.creator, 'Not creator'); _; }

    constructor(
        address _usdc, address _creator,
        uint256 _amount, uint256 _deadline, bytes32 _briefHash
    ) {
        usdc = IERC20(_usdc); platform = msg.sender;
        campaign = Campaign({ brand: msg.sender, creator: _creator,
            amount: _amount, deadline: block.timestamp + _deadline,
            reviewWindowEnd: 0, briefHash: _briefHash,
            proofURL: '', contentHash: bytes32(0), state: State.CREATED });
    }

    function fundCampaign() external onlyBrand {
        require(campaign.state == State.CREATED, 'Already funded');
        usdc.transferFrom(msg.sender, address(this), campaign.amount);
        campaign.state = State.FUNDED;
        emit CampaignFunded(campaign.brand, campaign.creator, campaign.amount);
    }

    function acceptCampaign() external onlyCreator {
        require(campaign.state == State.FUNDED, 'Not funded yet');
        campaign.state = State.ACCEPTED;
    }

    function submitProof(string calldata _url, bytes32 _hash) external onlyCreator {
        require(campaign.state == State.ACCEPTED);
        require(block.timestamp <= campaign.deadline, 'Deadline passed');
```

```
        campaign.proofURL = _url; campaign.contentHash = _hash;
        campaign.reviewWindowEnd = block.timestamp + 48 hours;
        campaign.state = State.SUBMITTED;
        emit ProofSubmitted(_url, _hash);
    }

    function approveContent() external onlyBrand {
        require(campaign.state == State.SUBMITTED);
        require(block.timestamp <= campaign.reviewWindowEnd, 'Window closed');
        campaign.state = State.APPROVED;
        emit ContentApproved(); _releasePayment();
    }

    function autoRelease() external {
        require(campaign.state == State.SUBMITTED);
        require(block.timestamp > campaign.reviewWindowEnd);
        campaign.state = State.APPROVED; _releasePayment();
    }

    function openDispute() external {
        require(campaign.state == State.SUBMITTED);
        require(msg.sender == campaign.brand || msg.sender == campaign.creator);
        campaign.state = State.DISPUTED;
        emit DisputeOpened(msg.sender);
    }

    function settleDispute(bool creatorWins) external {
        require(msg.sender == platform);
        require(campaign.state == State.DISPUTED);
        campaign.state = State.SETTLED;
        if (creatorWins) { _releasePayment(); }
        else { usdc.transfer(campaign.brand, campaign.amount); }
    }

    function _releasePayment() internal {
        uint256 fee = (campaign.amount * feePercent) / 100;
        usdc.transfer(platform, fee);
        usdc.transfer(campaign.creator, campaign.amount - fee);
        emit PaymentReleased(campaign.creator, campaign.amount - fee);
    }
}
```

Tested on Base Sepolia with mock USDC. Scenarios covered: successful campaign end-to-end, brand withholding approval past 48 hours (auto-release triggered), creator missing deadline, and dispute settled by the platform address. Average gas per function call: approximately $0.009 on Base L2.

10. FUNDING

The founding team funds the pre-launch pilot personally and through SLU entrepreneurship grants. Cash burn during the pilot stays under $2,000 per month — cloud infrastructure, the security audit, and basic marketing.

After 50 or more completed pilot campaigns, the team pursues a seed round of $150,000 to $250,000 from local St. Louis angel investors and fintech-focused seed funds. This covers the full platform build, a part-time marketing hire, and legal work to formalize the company and review the CP token's regulatory position.

If the platform reaches $50,000 in monthly transaction volume within 18 months — roughly 330 completed campaigns per month at $150 average — a Series A from a fintech or creator economy VC becomes viable. Exit paths include acquisition by an established creator marketplace or a social platform building native escrow infrastructure.

11. REVENUE STREAM

Revenue comes from three sources. The model scales as repeat campaigns increase.

Transaction Fee — 5% on Completed Campaigns

Five percent is deducted automatically from escrow at payment release. At a $150 average campaign that is $7.50 per deal. The rate steps down to 4% after 25 completed campaigns and 3% after 100, creating a retention incentive for repeat brands.

Business Subscriptions for Dashboards and Analytics

Brands running multiple campaigns or needing analytics dashboards subscribe to a Pro plan. $49 per month for single-location businesses, $149 per month for multi-location operators. Subscribers get campaign ROI reporting, creator performance history, and custom brief templates.

How the Model Scales

Small businesses get simple, trusted marketing. Creators get faster payment and clearer expectations. Collab Proof earns recurring subscription revenue plus transaction fees. The model scales as repeat campaigns increase — each completed campaign builds the on-chain track record that attracts new users to both sides of the marketplace.

12. COMPETITION

Existing competitors fall into three categories, none of which serve the micro-campaign market Collab Proof targets.

Established Influencer Platforms — Aspire, Grin, Creator.co

Built for brands with monthly budgets above $5,000. Require account managers and per-seat licensing fees. A campus coffee shop running a $75 deal has no realistic access to these tools.

General Freelance Escrow — Fiverr, Upwork

Have centralized escrow for service work but do not verify social media post delivery, do not integrate with social APIs, and are not built for the campaign model where a brand selects from creator applicants.

Instagram and TikTok Creator Marketplaces

Both platforms have introduced native creator marketplace features. Payment is handled off-platform, there is no escrow, and there is no enforcement. The same trust problem that exists in DMs exists inside their tools.

13. COMPETITIVE ADVANTAGE

No current competitor gives the micro-campaign market all of these simultaneously: on-chain payment escrow, automated content verification, brief-anchored dispute resolution, and a discovery marketplace for strangers.

The auto-release mechanic is something no centralized platform can match. If the brand ignores a submission for 48 hours, funds release automatically. No one can prevent a creator from being paid for work they completed.

Brief-anchored arbitration cuts through the subjectivity problem in creative disputes. Arbiters evaluate factual questions against the brief — not whether the content is good, but whether it met the objective terms the brand wrote before the campaign started.

Starting on a college campus gives Collab Proof a natural distribution channel with strong word-of-mouth dynamics. A creator who gets paid fast tells their friends. A business that runs one clean campaign comes back for more.

14. POTENTIAL RISKS

Cold Start Risk

A two-sided marketplace needs both sides before either gets value. Mitigation: seed the MVP at SLU with a small group of local businesses and student creators before opening publicly.

Subjective Approval

A brand could use vague brief language to reject content in bad faith. Mitigation: structured brief templates with checklist criteria guide brands toward objective terms. The 48-hour auto-release means brands cannot go silent to avoid paying.

AI-Generated Content

A creator could submit AI-generated content that misrepresents their authentic voice. Mitigation: briefs can specify human-created content requirements. Submissions require proof URL, content metadata, and a content hash. When disputed, arbiters review authenticity as part of the brief compliance check.

Smart Contract Vulnerabilities

Bugs in Solidity code can lock or drain funds permanently. Mitigation: independent security audit before mainnet deployment, bug bounty program, and a $500 campaign cap during the pilot.

15. REGULATION AND LEGAL FRAMEWORK

The professor specifically asked for more depth on the legal aspects — contract enforcement, dispute resolution liability, and compliance. This section addresses each directly.

Contract Formation and Enforceability

A smart contract transaction alone does not constitute an enforceable legal contract under U.S. law. Courts require offer, acceptance, consideration, and mutual assent. Collab Proof addresses this with a hybrid

approach: when a creator accepts a campaign on-chain, they also digitally sign a Terms of Service that incorporates the campaign brief by reference. This ToS is a binding electronic contract under the E-SIGN Act (15 U.S.C. § 7001 et seq.), which gives full legal validity to electronic contracts and signatures in U.S. commerce. The brief is stored as an IPFS hash in the smart contract — immutable and publicly retrievable — so neither party can dispute what the terms were.

Dispute Resolution and Liability

The platform's arbiter system is an internal dispute resolution mechanism, not a legal arbitration service under the Federal Arbitration Act. Arbiter decisions are binding within the platform — the smart contract executes the outcome — but either party can still pursue legal action in court. To manage liability, Collab Proof's ToS includes a mandatory informal dispute resolution clause (requiring use of the arbiter system before filing suit), a limitation of liability capping Collab Proof's exposure to the value of the campaign in dispute, and an indemnification clause requiring brands to cover any claims arising from brief terms that violate IP rights or FTC requirements.

FTC Disclosure Compliance

The FTC requires clear disclosure for sponsored content. Collab Proof's brief template includes a mandatory disclosure field — creators must use #ad, #sponsored, or an equivalent tag. The verification service checks for these tags as part of the approval pipeline. Campaigns where the brand instructs the creator not to disclose the sponsorship relationship are flagged and blocked at brief creation, protecting both the creator and the platform.

Money Transmission and USDC Custody

Collab Proof the company never takes custody of user funds. The smart contract holds the USDC. The brand can call refundBrand() before creator acceptance, and payment goes directly from the contract to the creator. This non-custodial architecture mirrors how DeFi protocols have avoided money transmitter licensing in most U.S. states. The team will seek a legal opinion from a fintech attorney before scaling beyond the pilot.

CP Token Classification

Under the Howey Test (SEC v. W.J. Howey Co., 328 U.S. 293, 1946), a security requires an investment of money in a common enterprise with an expectation of profit from others' efforts. CP does not satisfy this: it is not sold publicly, holders do not receive platform profits, and its value comes from utility (fee discounts, staking rights) not speculation. There is no public token sale in the MVP. The team will monitor SEC guidance and get a formal legal opinion before any broader token distribution.

Intellectual Property

Collab Proof's default brief template assigns the brand a non-exclusive, royalty-free license to repurpose and distribute the campaign content for marketing. The creator retains underlying copyright. Brands requiring full work-for-hire assignment can specify this in the brief, which the creator acknowledges explicitly at acceptance.

16. KEY RESOURCES, PARTNERS, AND EMPLOYEES

Key Resources

The smart contract codebase is the most critical asset — it is the product. The brief management system and on-chain campaign history build on top of it. Over time, that campaign history becomes a proprietary dataset that improves creator matching and makes the platform harder to replicate.

Key Partners

Our most valuable partners are our customers. The value Collab Proof provides comes from the size and quality of the marketplace — brands and creators who consistently complete campaigns and generate reliable on-chain data. Chainlink provides the randomness and oracle infrastructure. Base provides the low-cost deployment network. SLU's Blockchain Club is the initial go-to-market channel.

Employees

The five of us cover everything needed to launch. As the company grows, each person leads the department they own today.

Name	Role	Function
Pranav Gupta	Chief Executive Officer	Strategy, fundraising, business development
Janvi Sharma	Chief Product Officer	Platform design, user experience, brief tooling
Zach Dinusson	Chief Technology Officer	Smart contract development, oracle integration
Brendan Guzman	Chief Marketing Officer	Brand acquisition, creator recruitment, growth
Jaden Schertz	Chief Financial Officer	Financial modeling, compliance, treasury

17. REFERENCES

Electronic Signatures in Global and National Commerce Act (E-SIGN Act), 15 U.S.C. § 7001 et seq. (2000). U.S. Government Publishing Office. https://www.govinfo.gov/content/pkg/PLAW-106publ229/pdf/PLAW-106publ229.pdf

Federal Trade Commission. (2023). FTC's Endorsement Guides: What People Are Asking. https://www.ftc.gov/business-guidance/resources/ftcs-endorsement-guides-what-people-are-asking

SEC v. W.J. Howey Co., 328 U.S. 293 (1946). Supreme Court of the United States. https://supreme.justia.com/cases/federal/us/328/293/

Chainlink. (2024). Chainlink VRF — Verifiable Randomness for Smart Contracts. https://docs.chain.link/vrf

Chainlink. (2024). Chainlink Functions — Connect Smart Contracts to Any API. https://docs.chain.link/chainlink-functions

Base. (2024). Base Developer Documentation — Building on Base. https://docs.base.org

OpenZeppelin. (2024). OpenZeppelin Contracts — ERC-20 Standard and Security Patterns. https://docs.openzeppelin.com/contracts

Szabo, N. (1997). Formalizing and Securing Relationships on Public Networks. First Monday, 2(9). https://firstmonday.org/ojs/index.php/fm/article/view/548

Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). Bitcoin and Cryptocurrency Technologies. Princeton University Press. https://press.princeton.edu/books/hardcover/9780691171692/bitcoin-and-cryptocurrency-technologies

Influencer Marketing Hub. (2024). The State of Influencer Marketing 2024: Benchmark Report. https://influencermarketinghub.com/influencer-marketing-benchmark-report/

Coinbase. (2024). Base — A Secure, Low-Cost, Developer-Friendly Ethereum L2. https://www.base.org

Wood, G. (2014). Ethereum: A Secure Decentralised Generalised Transaction Ledger. Ethereum Project Yellow Paper. https://ethereum.github.io/yellowpaper/paper.pdf