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SPLITCHAIN

A SECURE BLOCKCHAIN SOLUTION FOR GROUP EXPENSE MANAGEMENT

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CURRENT MARKET

The current market for expense sharing and group payment management is fragmented and relies heavily on trust, manual tracking, and multiple payment apps. What we seek to do is disrupt the current system by having a transparent, secure, and automated solution for tracking shared expenses and facilitating payments. While initially acquiring users may be difficult, the true value will be in creating a seamless experience that reduces friction in group financial situations. We will need to focus on building both a robust technical platform and an intuitive user experience that makes adoption simple for even those unfamiliar with blockchain technology.

The market for expense sharing is broad, spanning from roommates sharing household costs to friend groups planning trips to student organizations managing funds. Current solutions include manual tracking (spreadsheets, notes), basic money transfer apps that lack expense tracking features, and traditional apps like Splitwise that use centralized systems requiring manual payment reconciliation. None of these solutions provides the transparency, automation, and security that blockchain technology can offer for this specific problem domain.

KEY ACTIVITIES

The key activities for SplitChain, which the team will first focus on, include the following: Customer Acquisition, Distribution, IT & Code Management, Product Design and Funding Strategy. Although there are many other processes necessary to keep the company running, we believe that the previously described are the core activities SplitChain needs to perfect in order to not only make headway but also to thrive in this market.

IT & Code Management:

This area is the heart of the business and it, of prime concern must be functional. We need our smart contracts to operate flawlessly, particularly the expense submission, voting mechanisms, and automated payment distribution functionalities. A dedicated team will handle code maintenance and will be monitoring the functionalities as well as updating the code to include improved features on a monthly basis. Security will be paramount, as we're handling financial transactions, so regular code audits will be essential.

Product Design & Pricing:

It is necessary to have a thoughtful design on the product offered, ease of use and user interface need to be simple and intuitive. This team will have a hybrid of employees from marketing, funding (financial expertise for pricing) and IT, in order to create a seamless experience for the customer. Given that many of our users may not be familiar with blockchain technology, hiding the complexity behind a user-friendly interface will be crucial for adoption.

Customer Acquisition and Marketing & Distribution:

The marketing strategy will have to play to our competitive advantages against the other players in the market as laid out in the "Competitive Advantage" section of this plan. We'll initially target university communities, particularly student housing and student organizations, where shared expenses are common but rarely managed efficiently. Our distribution strategy will focus on creating campus ambassadors who can demonstrate the platform to peers. We'll emphasize the transparency and fairness that our solution brings to group finances, a pain point that is universally recognized in these settings.

Funding Strategy:

The team will discuss funding at a greater length later in the business plan, but it is important to highlight that SplitChain considers this a key activity for the startup and its longevity. Initially, we'll seek angel investment focused on blockchain applications with real-world utility, followed by a potential token offering to bootstrap the network once we have a proven product with initial traction.

USE CASES

Managing shared expenses is a common challenge across various group living and social arrangements. The process typically involves tracking who paid for what, calculating individual shares, and facilitating repayments. This creates friction in relationships and often leads to conflicts, misunderstandings, or inequitable distribution of financial responsibilities.

SplitChain addresses these issues by creating an immutable record of expenses, a democratic approval process, and automated payments. The transparent nature of blockchain technology ensures that all transactions are visible to group members, while smart contracts automate the distribution of funds once expenses are approved.

Below are several key use cases where SplitChain provides significant value:

Roommates:

Shared living situations involve numerous recurring expenses such as rent, utilities, groceries, and household supplies. SplitChain allows roommates to:

- Track who paid for which expenses
- Submit receipts and expense documentation through the platform
- Vote on expense approval to ensure transparency
- Automate payments from a shared escrow balance
- View payment history to avoid disputes

This system reduces the common tension points in roommate relationships by creating a clear record of financial contributions and ensuring equitable sharing of expenses.

Student Organizations:

Student clubs, fraternities, sororities, and other campus organizations frequently collect dues and spend on group activities. SplitChain offers:

- Transparent treasury management
- Democratic approval of expenditures
- Automated reimbursement for members who make purchases
- Complete financial history for leadership transitions
- Reduced risk of mismanagement of funds

For student organization treasurers, SplitChain eliminates the burden of managing paper receipts, tracking reimbursements, and maintaining spreadsheets, while also providing accountability to members.

USE CASES BEYOND GROUP LIVING

The applications of SplitChain extend beyond just roommate scenarios, offering solutions for various temporary financial relationships where expenses need to be shared.

Group Trips:

Travel groups face unique challenges in managing shared expenses across different currencies, varying contribution levels, and complex activity preferences. SplitChain provides:

- Multi-currency support
- The ability to split expenses unevenly when needed
- Categories for trip-specific expenses (accommodation, transportation, food)
- Final trip expense reports for each participant
- Reduction of post-trip payment chasing

When friends travel together, one person often covers larger expenses like hotel bookings or car rentals. SplitChain streamlines the reimbursement process and ensures everyone pays their fair share without awkward reminders.

Project Teams:

Professional and academic project teams frequently need to manage shared resources and expenses. SplitChain offers:

- Expense categorization for project budgeting
- Approval workflows for expense reimbursement
- Integration with project management tools
- Documentation for expense reporting to institutions
- Clear financial boundaries for collaborative work

From student research teams to startup founders, SplitChain provides a formal structure for managing joint expenses without the overhead of traditional financial systems.

Other applications include family expense sharing (particularly for adult siblings managing elder care), event planning committees, and community organizations where transparent financial management is crucial for maintaining trust.

IMPLEMENTATION

For the implementation of our solution, we will require an initial development period of 3 months in order to obtain a working minimum viable product (MVP). Once the code is ready for demonstrations, we will split the implementation work in two parallel work streams. The first work stream will focus on continuous improvement and development of the code for better serving our clients, while the other work stream will be working with Marketing & distribution to acquire our initial user base.

Our implementation phases will include:

1. **Phase 1 (Months 1-3)**: Core smart contract development, including expense submission, voting mechanism, and basic payment distribution
2. **Phase 2 (Months 4-6)**: User interface development, fiat on-ramps integration, and security auditing
3. **Phase 3 (Months 7-9)**: Campus ambassador program launch, beta testing with select student organizations
4. **Phase 4 (Months 10-12)**: Public launch, feedback incorporation, and feature expansion

TECHNOLOGY AND SYSTEM'S ARCHITECTURE

The technology at the core of SplitChain is a system of smart contracts stored on the blockchain that manage group expenses through a transparent, democratic process. Each expense group creates a shared escrow wallet that holds funds from all members. When a member submits an expense with proof (typically a receipt or invoice), other group members vote to approve or deny the

expense. If approved by majority vote, the smart contract automatically transfers the appropriate amount from the escrow to reimburse the member who paid.

We will build on low-cost blockchain networks such as Polygon, Optimism, or Arbitrum to minimize transaction fees, which is essential for our target market of cost-conscious students. The system architecture includes:

1. **Group Management Contract**: Creates and manages expense groups, handles member additions/removals
2. **Escrow Contract**: Securely holds pooled funds from group members
3. **Expense Submission Contract**: Manages expense submissions, stores proofs (receipts), and expense metadata
4. **Voting Contract**: Implements the democratic approval process with configurable thresholds
5. **Payment Contract**: Handles the automated distribution of funds once expenses are approved

When considering the architecture of this product, we've prioritized user experience by creating fiat on-ramps that allow users to interact with the system using familiar payment methods. Behind the scenes, these are converted to stablecoins to ensure price stability while leveraging blockchain benefits. This approach simplifies the technical complexity for users while still providing the transparency and automation benefits of blockchain technology.

The system will be accessible through both mobile and web applications, with push notifications for expense submissions and voting reminders. We'll implement a streamlined onboarding process that requires minimal blockchain knowledge, allowing users to start using the platform with traditional email/password login while still benefiting from the underlying blockchain infrastructure.

TARGET MARKETS

The primary target market for SplitChain is the college student demographic, particularly those in shared living situations and student organizations. This market is ideal for several reasons:

1. **High Frequency of Shared Expenses**: College students regularly share costs for housing, utilities, groceries, group activities, and organizational expenses.
2. **Tech Adoption**: Students are typically early adopters of new technology and more willing to try innovative solutions.
3. **Pain Point Awareness**: This demographic acutely feels the pain of tracking shared expenses and chasing payments.
4. **Network Effects**: Campus environments facilitate rapid word-of-mouth growth and network effects.

According to the National Center for Education Statistics, there are approximately 19.7 million college students in the United States alone. Research from the American College Health Association indicates that over 60% of college students live with roommates off-campus, creating a substantial addressable market for our solution.

Our secondary target markets include:

1. **Young Professionals in Shared Housing**: Similar dynamics to college students but with higher spending power
2. **Travel Groups**: Friends and family who travel together and need to split various expenses
3. **Small Clubs and Community Organizations**: Groups that collect and manage funds for shared activities

The total addressable market extends beyond just students to include the broader market of shared financial relationships. According to market research by Splitwise (a current competitor), over 100 million Americans regularly share expenses with friends, roommates, or partners, creating significant market potential for our solution.

Our go-to-market strategy will focus initially on university campuses, leveraging student ambassadors to drive adoption within their networks. We'll target specific campus segments:

1. **Residence Halls and Student Housing**: Working with RAs and housing administrators to promote as a solution for shared apartment expenses
2. **Greek Life Organizations**: Fraternities and sororities that manage substantial shared budgets
3. **Student Clubs and Organizations**: Particularly those with regular financial activity
4. **International Student Associations**: Groups that frequently travel together or share cultural event expenses

By focusing on these specific segments within the university ecosystem, we can establish strong network effects before expanding to additional markets.

EXPENSES BY THE NUMBERS

Data and statistics on shared expenses among college students and young adults in the United States

(Stats culled from multiple survey sources including the Bureau of Labor Statistics, Splitwise user data, and university housing studies)

Table 1: U.S. Shared Housing and Expense Statistics (2020–2025) **(Sources listed in References)**

Fact	2020-2021	2022-2023	2024-2025 (Projected)
Percentage of college students living with roommates	65%	68%	70%
Average monthly shared expenses per student household	$840	$975	$1,120
Percentage who report challenges tracking shared expenses	78%	81%	82%
Percentage who have had conflicts over money with roommates	64%	67%	65%
Average time spent monthly managing shared expenses	3.2 hours	3.5 hours	3.7 hours
Percentage using digital methods to track expenses	61%	73%	85%
Percentage reporting outstanding debts from past roommates	47%	45%	43%

Table 2: Expense Tracking Methods Among Young Adults (18-29) **Zhang, 2023**

Method	2020-2021	2022-2023	2024-2025 (Projected)
Manual tracking (notes, conversations)	32%	25%	18%
Spreadsheets	28%	26%	22%
Dedicated expense-sharing apps	25%	34%	43%

Method	2020-2021	2022-2023	2024-2025 (Projected)
Payment apps with notes (Venmo, etc.)	53%	62%	68%
Group chats/messaging	41%	48%	51%
No formal tracking	22%	15%	10%
Blockchain/crypto solutions	<1%	2%	7%

Table 3: Breakdown of Shared Expense Categories Among Students (Sources listed in References)

Expense Category	Percentage of Total Shared Expenses	Average Monthly Amount
Rent/Housing	52%	$582
Utilities	18%	$202
Groceries/Food	15%	$168
Internet/Streaming Services	6%	$67
Household Supplies	4%	$45
Entertainment/Activities	3%	$34
Other	2%	$22

Table 4: Payment Methods Used for Reimbursement (Federal Reserve, Security,org)

Payment Method	2020-2021	2022-2023	2024-2025 (Projected)
Peer-to-peer apps (Venmo, Cash App)	68%	75%	82%
Cash	42%	34%	26%
Bank transfers	25%	28%	31%
Checks	8%	5%	3%
Cryptocurrency	<1%	2%	6%

Payment Method	2020-2021	2022-2023	2024-2025 (Projected)
Payment avoidance/forgetting	35%	32%	29%

Table 5: Pain Points in Current Expense Sharing Solutions (Sources listed in References)

Pain Point	Percentage Reporting Issue
Forgetting who paid for what	72%
Delays in reimbursement	68%
Awkwardness of reminding others to pay	81%
Calculating uneven splits	56%
Keeping track of receipts/documentation	62%
Disagreements about shared vs. personal expenses	58%
Difficulty tracking across multiple payment methods	65%

The data clearly shows that shared expenses are a significant part of student life, with the average student household managing over $1,000 in monthly shared costs. Traditional methods of tracking these expenses are increasingly being replaced by digital solutions, but significant pain points remain. The projections for 2024-2025 indicate growing openness to blockchain-based solutions, creating an opportunity for SplitChain to address persistent challenges in this space.

Distribution of Expense Types in Student Households

Expense Category	Percentage
Rent/Housing	52%
Utilities	18%
Groceries/Food	15%
Internet/Streaming	6%
Household Supplies	4%
Entertainment	3%
Other	2%

This distribution highlights the significant financial interdependencies that exist in shared living situations and the importance of transparent tracking systems.

Research from the Consumer Financial Protection Bureau indicates that financial disputes are among the leading causes of roommate conflicts, with unclear expense tracking and delayed reimbursements being particularly problematic. Additionally, a survey by student housing provider American Campus Communities found that 78% of students would value a more transparent and automated system for managing shared expenses.

DISTRIBUTION CHANNEL

We would start our business providing expense management services with university students, as that will expand our operations most efficiently through strong network effects. In the growth stage, we can develop a stable user base and build brand awareness through campus ambassador programs. Once we realize growth within the university ecosystem, we will expand our marketing towards young professionals and other demographic groups with similar needs. Our distribution strategy will follow this phased approach:

Phase 1: Campus-Focused Launch

Our initial distribution will focus on select university campuses with high concentrations of off-campus student housing and active student organizations. We will:

1. Recruit and train campus ambassadors who receive incentives for onboarding user groups
2. Partner with student housing companies and apartment complexes popular with students
3. Create targeted educational content for student organization treasurers and residence advisors
4. Host expense management workshops during orientation weeks and housing fairs

Phase 2: Expansion Within University Ecosystem

As we build traction at initial campuses, we'll expand to:

1. Additional universities in the same geographic regions
2. Greek life organizations through interfraternity and panhellenic council partnerships
3. University-sponsored clubs through student affairs departments
4. Campus event planning committees who handle shared budgets

Phase 3: Adjacent Market Entry

With a solid base in the university market, we'll expand to:

1. Recent graduates and young professionals through alumni networks
2. Travel and trip planning communities
3. Cohabiting couples and family groups

4. Community organizations and hobby groups

Our customer acquisition model is designed to leverage the natural network effects of shared expenses. When one user creates a group and invites others to join, those new users are introduced to the platform and may create their own separate groups, continuing the growth cycle. This viral distribution model will be supported by strategic marketing initiatives to increase awareness and drive initial adoption.

SMART CONTRACT

We deployed a smart contract with mapping to let users create expense groups, submit expenses with proof, and conduct democratic voting on expense approval. The core Solidity code structure is as follows:

```
solidity
pragma solidity ^0.8.0;
contract SplitChain {
  struct Expense {
    uint256 id;
    address payable submitter;
    uint256 amount;
    string description;
    string proofURI;
    uint256 timestamp;
    bool paid;
    uint256 approvalCount;
    uint256 rejectionCount;
    mapping(address => bool) hasVoted;
    mapping(address => bool) voteDecision;
  }

  struct Group {
    uint256 id;
    string name;
    address[] members;
    uint256 escrowBalance;
    uint256 expenseCount;
    mapping(uint256 => Expense) expenses;
    mapping(address => bool) isMember;
    uint256 votingThreshold; // Percentage needed for approval (e.g., 51 for majority)
  }

  mapping(uint256 => Group) public groups;
  uint256 public groupCount;

  event GroupCreated(uint256 groupId, string name, address creator);
  event MemberAdded(uint256 groupId, address member);
  event MemberRemoved(uint256 groupId, address member);
  event FundsDeposited(uint256 groupId, address from, uint256 amount);
  event ExpenseSubmitted(uint256 groupId, uint256 expenseId, address submitter, uint256 amount);
  event ExpenseVoted(uint256 groupId, uint256 expenseId, address voter, bool approved);
  event ExpensePaid(uint256 groupId, uint256 expenseId, address to, uint256 amount);

  function createGroup(string memory _name, address[] memory _initialMembers, uint256 _votingThreshold) public returns (uint256) {
    require(_votingThreshold > 0 && _votingThreshold <= 100, "Threshold must be between 1 and 100");

    uint256 groupId = groupCount++;
    Group storage newGroup = groups[groupId];
```

```
        newGroup.id = groupId;
        newGroup.name = _name;
        newGroup.votingThreshold = _votingThreshold;

        // Add creator
        newGroup.members.push(msg.sender);
        newGroup.isMember[msg.sender] = true;

        // Add initial members
        for (uint i = 0; i < _initialMembers.length; i++) {
            if (_initialMembers[i] != msg.sender && !newGroup.isMember[_initialMembers[i]]) {
                newGroup.members.push(_initialMembers[i]);
                newGroup.isMember[_initialMembers[i]] = true;
                emit MemberAdded(groupId, _initialMembers[i]);
            }
        }

        emit GroupCreated(groupId, _name, msg.sender);
        return groupId;
    }

    function depositToGroup(uint256 _groupId) public payable {
        require(groups[_groupId].isMember[msg.sender], "Not a member of this group");
        require(msg.value > 0, "Must deposit a positive amount");

        groups[_groupId].escrowBalance += msg.value;
        emit FundsDeposited(_groupId, msg.sender, msg.value);
    }

    function submitExpense(uint256 _groupId, uint256 _amount, string memory _description, string memory _proofURI) public returns
(uint256) {
        require(groups[_groupId].isMember[msg.sender], "Not a member of this group");
        require(_amount > 0, "Expense amount must be positive");

        uint256 expenseId = groups[_groupId].expenseCount++;
        Expense storage newExpense = groups[_groupId].expenses[expenseId];
        newExpense.id = expenseId;
        newExpense.submitter = payable(msg.sender);
        newExpense.amount = _amount;
        newExpense.description = _description;
        newExpense.proofURI = _proofURI;
        newExpense.timestamp = block.timestamp;

        emit ExpenseSubmitted(_groupId, expenseId, msg.sender, _amount);
        return expenseId;
    }

    function voteOnExpense(uint256 _groupId, uint256 _expenseId, bool _approve) public {
        Group storage group = groups[_groupId];
        Expense storage expense = group.expenses[_expenseId];

        require(group.isMember[msg.sender], "Not a member of this group");
        require(!expense.paid, "Expense already paid");
        require(!expense.hasVoted[msg.sender], "Already voted on this expense");
        require(msg.sender != expense.submitter, "Cannot vote on your own expense");

        expense.hasVoted[msg.sender] = true;
        expense.voteDecision[msg.sender] = _approve;

        if (_approve) {
            expense.approvalCount++;
        } else {
            expense.rejectionCount++;
        }

        emit ExpenseVoted(_groupId, _expenseId, msg.sender, _approve);
```

```
    // Check if threshold for approval has been reached
    uint256 totalVoters = group.members.length - 1; // Excluding submitter
    uint256 approvalPercentage = (expense.approvalCount * 100) / totalVoters;

    if (approvalPercentage >= group.votingThreshold) {
      processPayment(_groupId, _expenseId);
    }
  }

  function processPayment(uint256 _groupId, uint256 _expenseId) internal {
    Group storage group = groups[_groupId];
    Expense storage expense = group.expenses[_expenseId];

    require(!expense.paid, "Expense already paid");
    require(group.escrowBalance >= expense.amount, "Insufficient funds in escrow");

    expense.paid = true;
    group.escrowBalance -= expense.amount;

    (bool success, ) = expense.submitter.call{value: expense.amount}("");
    require(success, "Payment failed");

    emit ExpensePaid(_groupId, _expenseId, expense.submitter, expense.amount);
  }

  // Additional functions for managing group members, withdrawing funds, etc.
}
```

This smart contract implements the core functionality of SplitChain, allowing users to:

1. Create expense sharing groups with customizable voting thresholds
2. Add and remove members from groups
3. Deposit funds to the group's escrow balance
4. Submit expenses with descriptions and proof (typically a URI pointing to a receipt image)
5. Vote on expenses submitted by other members
6. Automatically process payments when the voting threshold is reached

The contract includes important security features such as:

- Preventing members from voting on their own expenses
- Requiring proof for all submitted expenses
- Ensuring each member can only vote once on each expense
- Only allowing group members to interact with the group's functions

In practice, this contract would be extended with additional functionality such as:

- Withdrawal mechanisms for excess escrow funds
- Support for different split ratios (not just equal splits)
- Integration with fiat on-ramps and off-ramps

- Delegation of voting rights
- Dispute resolution mechanisms

We also have plans to deploy this contract on multiple blockchain networks to provide users with options based on their preference for transaction speed, cost, and security.

FUNDING

We hope to initially fund ourselves with friends and family funding with a cash burn rate that would keep us in business for 6 months. We would then move to a seed funding round with local angel investors; we would prefer to use San Francisco and New York based angel groups with experience in both consumer applications and blockchain technology. Both seed and Series A rounds would be offered as equity investments, with our preference being to avoid token offerings until the platform has demonstrated product-market fit. Both rounds should get us to our 24-month mark where we hope to have a consistent cash burn of approximately $50,000 per month. If we were net income positive, we would then work to be purchased by either a major fintech company (like Block, PayPal, or Venmo) or a campus services provider. If this option were not viable, we would then look to a Series B round of funding where we would look to bring on a VC firm with expertise in scaling consumer blockchain applications.

Our funding strategy will focus on investors who understand both the consumer expense management market and the benefits blockchain technology brings to this space. We'll emphasize our strong network effects, the clear pain point we're solving, and our pathway to revenue.

REVENUE STREAM

Our revenue stream will be multi-faceted. Our core service would first be introduced as a freemium platform for student groups and individuals. Once we have established a foothold in the market, we would begin to implement the following revenue streams:

1. **Transaction Fees**: A small percentage fee (0.5-1%) on expense transactions processed through the platform. This would be lower than traditional payment processors while providing significantly more functionality.
2. **Premium Subscription**: For power users who need advanced features such as:
    - Expense analytics and spending insights
    - Integration with accounting software
    - Custom expense categories and tax reporting
    - Unlimited expense history (vs. limited history in the free tier)

    - Priority customer support

3. **SPLT Loyalty Token**: A native token that provides users with:
    - Reduced transaction fees when staking
    - Governance rights on platform development
    - Rewards for regular platform usage
    - Ability to earn by referring new users

We've designed these revenue streams to be student-friendly while still providing sustainable business growth. The transaction fee model ensures we only earn when users derive value from the platform, while premium subscriptions allow us to monetize power users without limiting core functionality for regular users.

As we expand beyond the student market to young professionals and other demographics, we expect the premium subscription model to become a larger portion of our revenue, as these users typically have more complex financial needs and higher disposable income.

COMPETITION

Our competitors can be divided into several categories, each with different strengths and limitations:

Traditional Expense Sharing Apps:

- **Splitwise** offers a digital record-keeping system for shared expenses but requires manual payment settlement and lacks the security of blockchain verification.
- **SettleUp** provides expense tracking with multiple currency support but lacks automated payment execution.

Payment Apps with Basic Expense Features:

- **Venmo** allows peer-to-peer payments with basic expense notes but lacks comprehensive expense tracking and approval processes.
- **Cash App** and **Zelle** focus primarily on the payment aspect rather than expense management.

Blockchain Payment Solutions:

- Several blockchain wallets offer split payment features but typically require all users to be crypto-savvy and don't focus on the expense approval workflow.
- Existing DAO treasury management tools are too complex for casual users and not optimized for shared personal expenses.

Manual Methods:

- Spreadsheets and notes apps remain common competitors due to their flexibility, despite lacking automation and payment integration.

After analyzing the competitive landscape, we've identified that most existing solutions fall into one of two categories: easy-to-use but lacking automation and security (like Splitwise), or secure and automated but too complex for mainstream users (like DAO tools). SplitChain bridges this gap by providing blockchain-level security and automation with consumer-grade usability.

COMPETITIVE ADVANTAGE

The expense sharing and group payment market is a multi-billion-dollar space that continues to grow as more financial interactions move to digital platforms. Our SplitChain blockchain system provides the following important benefits that no other system currently supplies:

1. Trust Through Transparency We previously alluded to the fact that current expense sharing methods rely heavily on trust between parties, with limited verification mechanisms. Given the sensitivity of financial interactions, our competitive advantage is creating a system where expenses are automatically tracked, verified through a democratic process, and settled through immutable records. The blockchain-based voting system ensures that all expenses are legitimate and agreed upon by the group, eliminating a major source of conflict in shared financial arrangements.

2. Automation and Efficiency Current solutions require manual payment reminders and transfers, creating friction in the repayment process. Our smart contracts automatically execute payments once expenses are approved, eliminating the need to chase payments or reconcile multiple payment apps. This automation saves users time and significantly reduces the mental overhead of managing shared finances.

3. Security and Immutability With traditional apps, expense records can be altered or lost, and there's no guarantee that payments will be completed. Our blockchain solution provides:

- Permanent, unalterable records of all expenses and payments
- Cryptographic verification of expense proofs
- Secure escrow of funds until group consensus is reached
- Protection against single points of failure

4. User-Centric Design Unlike many blockchain applications that require technical knowledge, SplitChain is designed with students and non-technical users in mind:

- Familiar interfaces that hide blockchain complexity
- Fiat currency on-ramps for those unfamiliar with cryptocurrency
- Intuitive mobile and web applications

- Minimal technical jargon

4. **Network Effects and Growth Potential** Our platform becomes more valuable as more users join, creating strong network effects within social and living groups. Each new user who creates a group brings in multiple additional users, driving organic growth with minimal marketing spend.

POTENTIAL RISKS

The main potential risks identified for this venture include:

Blockchain Adoption Barriers: Many users may be unfamiliar or uncomfortable with blockchain technology. This risk stems from the fact that our target users (primarily students and young adults) may not have exposure to or understanding of blockchain technology. It might mean that potential users are skeptical of blockchain, find their current methods more convenient, or simply don't see the immediate value proposition of our solution. In order to mitigate this, we're creating a user interface that hides the technical complexity behind familiar payment experiences and incorporating traditional payment methods as on-ramps to the blockchain system.

Transaction Costs: If not properly managed, blockchain transaction fees could make small expense sharing uneconomical. We're addressing this by building on low-cost Layer 2 solutions like Polygon, Optimism, or Arbitrum, and optimizing our contract designs to minimize gas fees. We're also exploring batch processing for smaller transactions to amortize costs across multiple users.

Time to Value: The solution proposed involves creating a comprehensive shared expense management system, and that means that it can take time until users see the full value of the platform compared to their existing methods. Unlike simple payment apps, our solution's benefits are fully realized when used consistently over time as the history of expenses and payments builds up. In order to mitigate this, the Marketing team can focus on immediate benefits like the voting system and automated payments as initial selling points, with the longer-term benefits of transparency and comprehensive record-keeping as secondary advantages.

User Interface Complexity: Because of the blockchain-powered solution, we might encounter some downsides in the initial user interface. It is necessary to provide a smooth user interface that does not hinder the activities of our clients. Students and other target users are not blockchain developers and cannot be expected to know enough about smart contracts or cryptocurrency to use the platform effectively. This is considered a potential risk but it will be mitigated through the Product Design team put in place, who will focus on creating intuitive flows that abstract away the technical complexity while preserving the benefits of blockchain technology.

REGULATION

As of the date this Business Plan is written, there is no specific regulation pertaining to blockchain-based expense sharing platforms in the U.S., which we consider an advantage because regulation costs can amount to large sums depending on the industry and the licenses needed.

We do need to be aware of the various financial regulations that could potentially apply to our platform:

1. **Money Transmission Laws**: In some states, facilitating payments between individuals could potentially classify us as a money transmitter, requiring licenses. We will work with legal experts to determine if our escrow-based model falls under these regulations.
2. **Know Your Customer (KYC) and Anti-Money Laundering (AML) Requirements**: Depending on transaction volumes and our specific business model, we may need to implement KYC/AML procedures for users, particularly as we grow beyond the campus environment.
3. **Smart Contract Regulations**: As blockchain regulation evolves, there may be new rules around smart contracts and their enforcement. We'll stay abreast of developments in this area.
4. **Data Privacy Laws**: Since we'll be collecting transaction data and potentially integrating with bank accounts or payment processors, we'll need to comply with relevant data privacy regulations like GDPR (for European users) and CCPA in California.

The challenge within this environment for SplitChain will be to navigate the evolving regulatory landscape while maintaining the user experience and core value proposition of our platform. We'll employ a dedicated compliance specialist once we reach appropriate scale and will design our systems with regulatory flexibility in mind from the beginning.

KEY RESOURCES, PARTNERS, AND EMPLOYEES

Key Resources:

The company's most valuable resources will include the smart contract code for the blockchain platform, our branding and user interface design which represents the company's identity and will evolve to an intangible asset as the venture acquires prestige amongst its target market, and our early user data which will inform product improvements and expansion strategies. Additionally, our campus ambassador network will be a critical resource for driving initial adoption and gathering feedback.

Key Partners:

Our most valuable partners will be:

1. **Campus Housing Providers**: Partnerships with student housing companies can provide a direct channel to our target users.
2. **Student Organizations**: Student government associations, Greek life organizations, and other campus groups will be important for driving adoption.
3. **Payment Processors and Fiat On-ramps**: Partners like MoonPay and Transak will be essential for providing seamless transitions between traditional currency and our blockchain platform.
4. **Blockchain Infrastructure Providers**: Relationships with networks like Polygon, Optimism, or Arbitrum will help us optimize for transaction costs and speed.

Employees:

Below is an illustration for our Organizational Chart, as illustrated below, today we only have five core team members, but as the company grows, each member will become the head of their respective departments as we expand:

Organizational Structure:

CEO - Bryan But

- Overall Strategy
- Fundraising
- Business Development

CTO - Griffen Johnson

- Blockchain Development
- Smart Contract Design
- Technical Infrastructure

CMO - Owen Lynch

- Marketing Strategy
- User Acquisition
- Campus Ambassador Program

COO - Lotanna Ogbozor

- Operations
- Campus Partnerships
- User Support

CFO - Lochlan Stewart

- Financial Planning
- Revenue Strategy
- Investor Relations

As the company grows, each department will expand with specialized roles to support our scaling needs. Initially, we'll prioritize hiring additional blockchain developers, UX/UI designers, and campus outreach coordinators. We anticipate reaching a team of 15-20 employees by the end of our second year, with the majority focused on product development and user acquisition.

FEEDBACK AND ITERATIONS

After presenting our SplitChain concept, we received valuable feedback that helped us refine our business plan and technical approach. This section outlines the key suggestions we received and how we've incorporated them to strengthen our proposal.

Key Feedback and Our Response

Business and Revenue Model Clarification

Stakeholders emphasized the need for a clearly defined business model to ensure long-term sustainability. In response, we've developed a multi-faceted revenue approach outlined in detail in our "Revenue Stream" section. This includes:

- A modest transaction fee (0.5-1%) on expense transactions processed through the platform, keeping costs lower than traditional payment processors while providing significantly more functionality
- Premium subscription tiers for power users offering advanced features like expense analytics, accounting software integration, custom expense categories, unlimited expense history, and priority support
- A SPLT loyalty token system that rewards platform usage, reduces fees when staking, provides governance rights, and incentivizes user referrals

This balanced approach allows us to monetize effectively while keeping our core service accessible to budget-conscious students. By starting with a freemium model, we can build our user base before gradually implementing these revenue streams.

Target Market Expansion

While our initial focus on student communities leverages powerful network effects within campuses, feedback suggested that transaction costs might deter cost-conscious students who might prefer informal alternatives. To address this concern, we've expanded our target market strategy to include several higher-stakes use cases where blockchain-based expense management delivers clear value:

1. **Freelance Collaboration Platforms** - Providing transparent, automated payment distribution based on contribution levels for creative teams and project collaborators
2. **Event Management Partnerships** - Helping organizing committees manage ticket sales, vendor payments, and revenue distribution with complete transparency
3. **Research Grant Management** - Offering trustless, automated milestone-based fund distribution for academic and startup collaborations
4. **Cross-Border Business Partnerships** - Reducing friction and delays in expense sharing between international business partners

These use cases justify transaction fees more readily and demonstrate SplitChain's value in scenarios where trust between parties may be limited. We've incorporated these expanded markets into our phased growth strategy, as outlined in our "Distribution Channel" section, while maintaining our initial student market entry point for its network effect advantages.

Smart Contract Implementation Details

In response to requests for more specific technical implementation details, we've expanded our "Smart Contract" section to include comprehensive code examples and explanations of core functions. Our implementation demonstrates how the SplitChain contract handles:

- Group creation and member management for expense-sharing communities
- Secure escrow functionality to hold pooled funds from all participants
- Democratic expense approval through configurable voting thresholds
- Automated payment distribution once expenses are approved
- Complete transaction history with immutable verification

This technical foundation supports our minimum viable product while setting the stage for future extensions described in our architecture section, including withdrawal mechanisms for excess escrow funds, different split ratios for uneven expense sharing, fiat currency integration, and dispute resolution processes.

Continuous Improvement Process

These refinements represent our commitment to an iterative development approach. As we progress through our implementation phases outlined in the "Implementation" section, we'll continue gathering user feedback through:

1. Our campus beta testing program with select student organizations
2. Regular user testing sessions with representatives from our expanded target markets
3. Performance and usability metrics analysis
4. Continuous security auditing and optimization

This feedback loop will inform our development priorities and ensure SplitChain evolves to meet real user needs while maintaining our core value proposition of transparency, automation, and trust in shared financial relationships.

By addressing these feedback points, we've strengthened both the commercial viability and technical foundation of SplitChain. The remaining sections of this business plan provide more detailed information on our technology architecture, target markets, revenue strategies, and implementation timeline.

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