

MorphoPymes – MVP Requirements

Functional Requirements

User Management

- The system must allow users to register and log in using email or Ethereum wallet (MetaMask).
- The platform must support two roles: entrepreneur (borrower) and investor (lender).
- Users must be able to edit and manage their profiles.

Project Management

- Entrepreneurs must be able to create and publish a project with basic information: business description, funding goal, and repayment plan.
- Each project must be linked to a unique ENS subdomain.
- The platform must display a list of active projects with their funding progress.

Investment Flow

- Investors must be able to browse, search, and filter projects.
- Investors must be able to contribute with micro-investments starting at \$10.
- A smart contract must handle the collection of funds and release them to the entrepreneur once the funding goal is achieved.

Reputation System

- The system must record and display a simple reputation score for entrepreneurs, based on completed projects and repayment status.
- Reputation information must be publicly visible.

Payments & Blockchain

- The platform must process investments and repayments through Ethereum smart contracts.
- The MVP must support at least one stablecoin (e.g., DAI or USDC) on a testnet.
- The system must integrate with MetaMask for wallet transactions.

Dashboards

- Entrepreneurs must have a dashboard showing project funding progress and repayment obligations.
 - Investors must have a dashboard showing their investments and expected returns.
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Non-Functional Requirements

Security

- Wallet connections must use secure protocols (e.g., WalletConnect, MetaMask).
- Smart contracts must follow Solidity best practices to avoid basic vulnerabilities.

Performance

- The system must handle at least 100 concurrent users during the hackathon demo.
- Smart contract transactions should be confirmed within normal Ethereum testnet limits (<30 seconds average).

Scalability

- The backend must be deployed in containers, orchestrated with Red Hat OpenShift for easy scaling.
- The architecture must allow new modules to be added without major redesign.

Transparency & Compliance

- All project and transaction data must be publicly available on the blockchain.

- The MVP will not implement full KYC/AML, but the design should allow for future compliance.

Usability

- The user interface must be mobile-first and responsive.
- The system must support English and Spanish for initial launch.
- Onboarding must be simple and require minimal technical knowledge.