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About WEBMOB

Webmob has emerged as a service delivery pioneer in this dynamic fintech industry, serving a legion of laurelled clients in Europe and the Middle East. With AI/ML-powered, Cloud-native, and Blockchain in our stack, Webmob provides cutting-edge solutions to fulfill the customer's advanced and disruptive requirements.

Particularly for the FINTECH industry, Webmob offers unparalleled robust solutions in Trade Finance, Money Market, Fiduciary, Commercial Real Estate Loan Tokenization, and NFT Marketplaces on top Blockchains.

Webmob is, as of today, weaponed with a fully-equipped R&D lab, aka WikiDLT.com, and consulting certified professionals, especially to explore new possibilities for innovative Blockchain implementation.

Overview

Our platform changes how social projects get funded by making it easy for people and groups to raise money and manage grants. Users can create campaigns for essential causes, matching them with the sustainable goals for a better world. With a simple setup, campaign creators can share their stories, set fundraising goals, and connect with donors. Blockchain tech makes transactions safe and transparent, and funds are held securely until goals are met. This way, everyone can see where their money goes and track project progress.

Additionally, our reward-based model supports NFT rewards, offering unique incentives to backers for their contributions. The platform removes intermediaries, making fundraising more affordable than traditional methods. Donors can support projects aligning with their values, Corporate Social Responsibility (CSR) objectives, and Environmental, Social, and Governance (ESG) goals, empowering donors and recipients to drive community-driven social change. Every contribution helps move us towards a sustainable and fair future.



Business Needs

- Efficient fundraising for social impact projects.
- Transparent and accountable grant management.
- Alignment with CSR and ESG objectives.

Our Solution

- Decentralised crowdfunding for social impact initiatives.
- Streamlined grant management with milestone-based funding.
- Integration of blockchain technology for secure transactions.

Benefits

- Cost-effective alternative to traditional fundraising methods.
- Increased transparency and accountability in fund allocation.
- Access to a diverse pool of vetted projects aligned with CSR goals.
- Empowerment of donors and recipients through community-driven support.
- Accelerated progress towards achieving UN Sustainable Development Goals.

Crowd-Funding Platform

Blockchain-driven Social Impact Funding



Webmob Software Solutions

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Solution

Decentralised Crowdfunding:

We have created a way for people and organisations to easily raise money for essential projects without requiring any intermediaries. This means donors can directly support causes they care about, making the process more transparent and cost-effective.

Streamlined Grant Management:

We have made it easier for organisations to manage grants by providing a simple system for setting up programs, tracking progress, and releasing funds as projects reach milestones. This helps ensure that money is used effectively and projects stay on track.

Cost-Effective Alternative:

We have found a more affordable way for organisations to raise money and manage grants, eliminating the need for expensive consultants and intermediaries. This means more of the money raised goes directly to the causes it's meant to support.

Access to a Diverse Pool of Projects:

We have made it simple for donors to find and support various projects that align with their interests and values. This means they can easily contribute to causes they care about, making a real difference.

Reward-Based Model:

We have implemented a simple yet effective reward-based model where NFTs are rewarded to the top investor.

Alignment with ESG Objective:

We have implemented Environmental, Social and Governance (ESG) objectives into the platform to support projects that reflect sustainability goals and values.



Technology

Algorand Blockchain + Pera Wallet:

Algorand Blockchain, integrated with Pera Wallet, drives our platform by securing transactions and enabling smart contracts for decentralised crowdfunding.

Node.js:

Node.js enables scalable backend development, efficiently handling requests and facilitating seamless integration with other technologies.

React.js:

React drives front-end development, creating interactive and reusable UI components for a smooth user experience.

MongoDB:

Provides a flexible and scalable database solution for storing and managing data.

Express.js:

Streamlines backend development with a minimalist and flexible web application framework.



Challenges

Earlier traditional fundraising and grant management processes posed several challenges. Firstly, fundraising often relied heavily on intermediaries, such as consultants or fundraising agencies, resulting in high costs and inefficiencies. This made it difficult for smaller organisations or grassroots initiatives to access funding. Additionally, transparency and accountability were significant concerns, as donors often needed more visibility into how their contributions were utilised.

Grant management processes were typically cumbersome and time-consuming, involving manual paperwork and lengthy approval processes. This slowed down the disbursement of funds and hindered project progress. Moreover, existing platforms lacked alignment with emerging technologies such as blockchain, limiting their ability to provide secure and transparent transactions. Overall, these challenges created barriers to effective social impact initiatives, hindering the progress towards addressing pressing global issues.



QA Process

Our QA process involves a systematic approach encompassing various stages to thoroughly assess the platform's functionality, security, and user experience.

01 Test Planning:

We defined the scope of testing, identified objectives, allocated resources, and developed a comprehensive test plan outlining our approach, timelines, and deliverables.

02 Requirement Analysis:

We reviewed the requirements documentation to understand the platform's expected behaviour and ensured our team accurately captured all functional and non-functional requirements.

03 Test Environment Setup:

We established testing environments mirroring the production environment, installed the necessary software, configured databases, and ensured the availability of test data representing various marketplace scenarios.

04 Test Case Design:

We developed detailed test scenarios and cases covering functional workflows, boundary conditions, error handling, and exception scenarios, prioritising based on criticality and risk.

05 Functional Testing:

We executed test cases to verify the functionality of different modules and features, including various workflows, integration with external systems, and compliance with regulatory standards.

06 User Interface Testing:

We evaluated the user interface for usability, accessibility, and responsiveness, ensuring consistency in design elements, layouts, and navigation across different screens.

07 Security Testing:

We performed security assessments, testing authentication and authorisation mechanisms, data encryption, and secure communication protocols, and conducted penetration testing to assess resilience to security breaches.



08 Regression Testing:

We re-ran previously executed test cases to ensure new changes did not introduce any regressions, automating regression test cases where feasible and validating backward compatibility.

09 Integration Testing:

We tested data exchange mechanisms and validated data consistency and integrity across integrated systems, including file uploads, API calls, and message queues.

10 Documentation and Reporting:

We maintained a detailed documentation of test cases, results, and defects, generated test reports summarising test coverage and provided stakeholders with regular updates on testing progress and identified issues.

11 User Acceptance Testing (UAT):

We collaborated with end-users and stakeholders to conduct UAT, obtaining feedback on the platform's functionality, usability, and performance, ensuring alignment with user expectations.



Security Testing of the Platform:

1. API Testing:

Objective: Evaluate the functionality, reliability, security, and performance of APIs used in the platform.

Tools:

- **Postman:** Automated testing tool for API automation testing, enabling comprehensive testing of API endpoints and payloads.
- **SoapUI:** Another automated testing tool suitable for API testing, providing features for functional testing, load testing, and security testing.

2. Penetration Testing (PenTesting):

Objective: Identify and exploit vulnerabilities in the platform to assess its security posture.

Tools:

- **Burp Suite:** A comprehensive toolkit for web application security testing, including manual and automated vulnerability scanning, request interception, and exploitation of security flaws.
- **Metasploit:** A penetration testing framework offering various exploits and payloads for testing network and application security.

3. Patch Testing:

Objective: Verify the effectiveness of security patches applied to the platform.

Process:

- Testing patches on a sandbox or staging environment ensures they do not introduce regressions or new vulnerabilities.
- Automated and manually tested critical functionalities affected by the patch to ensure they operated as expected.

4. Third-Party Testing:

Objective: Gain independent verification and validation of the platform's security measures.

Process:

- Engaging external security firms or independent security researchers to conduct thorough security assessments, including penetration testing, code review, and vulnerability scanning.
- Utilising bug bounty programs to incentivise external security researchers to discover and responsibly disclose security vulnerabilities in the platform.

5. Source Code Testing:

Objective: Evaluate the security of the platform's source



code to identify and remediate vulnerabilities and ensure robust protection against potential threats.

Process:

- The source code testing process for the platform begins with configuring and integrating tools like SonarQube and Checkmarx into the development environment.

Tools:

- **SonarQube:** Analyzes the platform's source code for bugs, vulnerabilities, and code smells, providing insights into code quality and security.
- **Checkmarx:** A static application security testing (SAST) tool that identifies security vulnerabilities in the source code, helping developers remediate potential issues before deployment.

6. Network Testing

Objective: The primary objective of network testing is to assess the security and resilience of the platform's network infrastructure, ensuring protection against potential threats and vulnerabilities.

Process:

- Network testing begins by examining the network infrastructure's configuration and setup to identify any potential weaknesses or misconfigurations.
- Comprehensive scans are conducted using specialised tools to analyse server ports, configurations, versions, and subdomains within the network.

Tools:

- **Nessus:** A powerful scanning tool utilised for comprehensive network scans, providing detailed insights into potential security risks and vulnerabilities within the network infrastructure.
- **Nmap:** Another widely used scanning tool that enables thorough examination of network configurations and identifies potential security loopholes and weaknesses.



Development Phase

- 01 Requirement Gathering**
Requirements were gathered through meetings and discussions to understand the platform's functional and non-functional aspects.
- 02 System Design**
Based on the gathered requirements, system architecture and design were finalised. It included defining the database schema, application modules, and integrations with external systems.
- 03 Coding**
Our developers wrote code according to the design specifications using programming languages & frameworks suitable for the platform's requirements.
- 04 Quality Assurance**
Our QA engineers conducted comprehensive platform testing, including source code, functional, security, and performance testing, that helped us identify & resolve any defects or issues.
- 05 Review & Integration**
The platform has undergone thorough code reviews to ensure its stability and performance. Our team addressed any feedback or issues identified during testing and made necessary integrations.



Deployment Phase

- 01 Preparation**
The necessary infrastructure and environments were set up, including development, staging and production.
- 02 Deployment Planning:**
We have created a pitch-perfect deployment plan outlining the steps and procedures for deploying the platform to the production environment.
- 03 Release Management:**
Our team deployed the platform to the product environment following the deployment plan. It involved deploying code, configuring servers, and ensuring all dependencies were met.
- 04 Monitoring and Optimisation**
After deployment, our team continuously monitored the platform for performance, security & stability. We promptly addressed any issues or anomalies and made necessary changes.
- 05 Post-Deployment Review**
We conducted a post-deployment review to assess the deployment process's success and gather user feedback. Additionally, our team documented any lessons learned for future deployments.



Project Methodology

Our team adhered to an Agile methodology during this project, fostering efficient and iterative development. We structured our workflow around sprints, each lasting two weeks, allowing us to focus on specific features and functionalities. Regular feedback sessions with the client, occurring after every sprint, were integral to our process. It ensured our work aligned with the client's evolving requirements and expectations.



Additionally, we employed project management tools such as Trello and Jira to streamline collaboration and task management, facilitating transparent communication and real-time progress tracking. These practices enabled us to maintain a dynamic and responsive development approach, ultimately leading to successfully delivering a high-quality solution that effectively met the client's needs.

Timeline

- 01 Total months: **3 months**
- 02 No. of Resources: **4 Resources**
- 03 Experience of Resources: **Frontend: 4 Years**
Backend: 5.5 Years
Blockchain: 2 Years
QA - 1.5 years