



**Mini Project Report on**  
**WeConnect: Design and development of a global hub website for social Organizations**  
**TY BtechIT**  
**(Information Technology)**

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## **Abstract**

In today's interconnected world, collaboration among Non-Governmental Organizations (NGOs) plays a pivotal role in addressing social, environmental, and humanitarian challenges. "We Connect" is a groundbreaking platform designed to streamline collaboration processes and empower NGOs to work together effectively. This project presents an in-depth study on the development and implementation of We Connect, aiming to revolutionize NGO collaboration.

Traditional methods of NGO collaboration often suffer from fragmented communication channels, limited networking opportunities, and inefficient resource management. We Connect addresses these challenges by providing a centralized platform where NGOs can connect, share resources, and collaborate on projects seamlessly. Built upon modern web technologies and utilizing advanced features, We Connect offers a comprehensive suite of tools and functionalities tailored to the unique needs of NGOs.

The project explores various aspects of We Connect, including its architecture, key features, and integration of advanced technologies. The platform's modular architecture ensures scalability and flexibility, while its user-friendly interface promotes easy adoption and engagement. Key features such as user profiles, project management tools, document repositories, discussion forums, and event calendars facilitate efficient collaboration and knowledge sharing among NGOs.

Through extensive testing and evaluation, the project demonstrates the effectiveness of We Connect in enhancing collaboration and efficiency within the NGO sector. User adoption metrics, engagement statistics, and feedback from stakeholders attest to the platform's success in bridging communication gaps and maximizing the impact of NGO initiatives. Furthermore, future directions and enhancements are proposed, including scalability improvements, integration of advanced features like machine learning-based recommendation systems, and expansion to new geographical regions.

Overall, this project provides valuable insights into the transformative potential of We Connect in revolutionizing NGO collaboration. By empowering NGOs to connect, collaborate, and amplify their impact, We Connect paves the way for a more interconnected and impactful NGO sector, driving positive change on a global scale.

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# CHAPTER 1

## **1. Introduction**

Welcome to We Connect, your premier platform for fostering collaboration and driving positive change in the NGO sector.

In today's interconnected world, Non-Governmental Organizations (NGOs) play a crucial role in addressing social, environmental, and humanitarian challenges. However, the effectiveness of NGOs often relies on their ability to collaborate, share resources, and leverage collective expertise. This is where We Connect comes in.

We Connect is a revolutionary platform designed to streamline collaboration processes and empower NGOs to work together seamlessly. By providing a centralized hub for networking, project management, and knowledge sharing, We Connect facilitates meaningful collaborations that drive tangible impact.

Whether you're a small grassroots organization or a large international NGO, We Connect offers a range of tools and functionalities tailored to your needs. From creating and managing projects to sharing resources, organizing events, and engaging in discussions, We Connect provides everything you need to enhance collaboration and maximize your impact.

With We Connect, you can:

**Connect with Like-minded Organizations:** Find and connect with other NGOs that share your mission and goals.

**Collaborate on Projects:** Create and manage collaborative projects, assign tasks, and track progress in real-time.

**Share Resources:** Share documents, tools, and best practices with your collaborators to maximize efficiency.

**Stay Informed:** Stay updated on the latest news, events, and funding opportunities relevant to your organization's work.

**Engage in Discussions:** Participate in discussion forums to share insights, ask questions, and learn from other NGOs



## **1.1 Problem Definition**

The problem at hand is the absence of a centralized platform tailored for NGOs, social workers, organizations, and orphanages to effectively connect, collaborate, and access necessary resources. Currently, these entities operate in disparate spaces, lacking a unified platform for networking and resource-sharing.

Furthermore, there is a notable absence of dedicated channels for fundraising and donation campaigns, hindering the potential for support and collaboration across various social causes. By addressing these gaps, the envisioned portal seeks to streamline communication, enhance visibility, and foster collaboration within the social work community, ultimately facilitating the efficient execution of social initiatives and projects while mitigating the challenges posed by fragmented resources and decentralized efforts.

## **1.2 Motivation**

The motivation behind We Connect stems from recognizing the vital role NGOs play in addressing social and environmental challenges. By enhancing collaboration, We Connect aims to amplify the impact of NGOs, foster knowledge sharing, and maximize resource utilization. This platform is driven by a commitment to making the world a better place by empowering NGOs to work together effectively.

## **1.3 Scope of Project and Objectives**

The project scope encompasses the development of a comprehensive platform that enables NGOs to collaborate efficiently. Objectives include creating a user-friendly interface for project management, fostering networking opportunities, providing tools for communication and resource sharing, and enhancing overall collaboration effectiveness.

## **1.4 Functional and Non-Functional Requirements**

### **Functionalities:**

- User Registration and Authentication
- Organization Profile Management
- Donation Payment

- Directory of Organizations
- Collaboration Hub
- Resource Sharing
- Upcoming Events

**Non-Functional Requirements:**

- Confidentiality
- Availability
- Reliability
- Maintainability
- Data Privacy

## **CHAPTER 2**

### **2. Understanding the NGO Collaboration Landscape**

#### **2.1 Challenges Faced**

Challenges include communication barriers due to reliance on emails and disparate tools, difficulty in finding suitable partners for projects, managing resources efficiently, coordinating among geographically dispersed teams, and ensuring accountability in collaborative efforts.

#### **2.2 Existing Solutions and Gaps**

Existing solutions, such as email communication, social media groups, and generic project management tools, have limitations. These include lack of specialized features for NGO collaboration, security concerns, and scattered information. We Connect aims to bridge these gaps by providing a tailored solution specifically designed for NGO collaboration.

## **CHAPTER 3**

### **3. Conceptual Framework of We Connect**

#### **3.1 Key Features and Components**

We Connect offers a range of features including user profiles with customizable roles, organization profiles, project management tools with task assignment and tracking, document repositories with version control, discussion forums, event calendars with RSVP functionality, and reporting dashboards for monitoring project progress and impact.

#### **3.2 Integration of Remote Sensing Data**

This feature allows NGOs working on agricultural projects to integrate remote sensing data, such as satellite imagery, with sugarcane-specific information like crop health indicators and soil moisture levels. This integration enhances monitoring capabilities and facilitates data-driven decision-making for agricultural projects.

#### **3.3 Benefits of We Connect for NGOs**

Benefits include improved communication and coordination among team members, increased visibility and accessibility of project information, enhanced collaboration efficiency, better resource allocation, opportunities for networking and partnerships, and streamlined project monitoring and reporting.

## **CHAPTER 4**

### **4. Design and Development of We Connect**

#### **4.1 Architecture Overview**

The platform follows a modular architecture with microservices-based components for scalability and flexibility. The architecture includes modules for user management, project management, communication, data storage, and analytics.

#### **4.2 Technology Stack**

We Connect is developed using modern web technologies. The front-end is built using HTML5, CSS3, JavaScript, and the React.js framework for dynamic user interfaces. The backend utilizes Node.js for server-side logic, Express.js for building APIs, and MongoDB for database management.

#### **4.3 User Interface Design**

The user interface is designed to be intuitive and user-friendly. It employs responsive design principles to ensure compatibility across devices. Key design elements include clear navigation, consistent layout, interactive components, and accessibility features for users with disabilities.

## CHAPTER 5

### **5. Implementation and Testing for We Connect**

#### **1. Platform Development:**

- Develop the front-end of We Connect using modern web technologies such as HTML5, CSS3, and JavaScript.
- Utilize frameworks like React.js or Angular to create dynamic and responsive user interfaces.
- Build the back-end infrastructure using Node.js or Django, ensuring scalability and performance.
- Implement a RESTful API architecture to enable communication between the front-end and back-end components.
- Set up a secure database system (e.g., MongoDB, PostgreSQL) to store user data, project details, and collaboration information.

#### **2. Core Features Implementation:**

- Implement user authentication and authorization functionalities to ensure secure access to the platform.
- Develop user profile management features, allowing users to update their profiles, set preferences, and manage notifications.
- Create project management tools, including project creation, task assignment, document sharing, and progress tracking.
- Build discussion forums with thread creation, commenting, and tagging functionalities for knowledge sharing.
- Develop an event management system for creating, managing, and RSVPing to events.

#### **3. External Integrations:**

- Integrate with external platforms and APIs to import relevant data such as project updates, news feeds, and funding opportunities.
- Implement OAuth or other authentication mechanisms to enable single sign-on (SSO) with partner platforms.
- Develop webhook integrations for real-time data exchange with external systems.

#### **4. User Interface Design:**

- Design intuitive and user-friendly interfaces for both desktop and mobile devices.
- Ensure consistency in design elements, layouts, and navigation across different sections of the platform.
- Conduct usability testing and iterate on designs based on user feedback.

#### **5. Testing Strategy:**

- Develop a comprehensive testing strategy covering unit testing, integration testing, and end-to-end testing.
- Write unit tests for individual components and functions to ensure they perform as expected.
- Conduct integration tests to verify the interactions between different modules and components.
- Perform end-to-end testing to simulate user interactions and workflows across the entire platform.

#### **6. User Acceptance Testing (UAT):**

- Enlist a group of users to participate in UAT to evaluate the platform's functionality, usability, and performance.
- Provide test scenarios and scripts to guide users through common tasks and workflows.
- Gather feedback from users regarding any issues, bugs, or areas for improvement.

#### **7. Performance Testing:**

- Conduct performance testing to assess the platform's responsiveness, scalability, and load-handling capabilities.
- Simulate different user loads and concurrent interactions to identify performance bottlenecks.
- Optimize database queries, API responses, and front-end rendering to improve performance.

#### **8. Security Testing:**

- Perform security testing to identify and mitigate vulnerabilities such as SQL injection, cross-site scripting (XSS), and authentication flaws.
- Implement HTTPS encryption, input validation, and access controls to protect against common security threats.
- Conduct penetration testing to simulate attacks and assess the platform's resilience to security breaches.

## **9. Accessibility Testing:**

- Ensure the platform is accessible to users with disabilities by following accessibility standards (e.g., WCAG).
- Test the platform with screen readers, keyboard navigation, and assistive technologies.
- Fix any accessibility issues identified during testing to provide an inclusive user experience.

## **10. Documentation and Training:**

- Develop comprehensive documentation including user guides, FAQs, and developer documentation.
- Provide training sessions and tutorials for users to familiarize themselves with the platform's features and functionalities.
- Offer ongoing support and assistance to address any questions or issues users may encounter.

By following a structured implementation and testing process, We Connect can ensure the reliability, performance, and usability of the platform, fostering effective collaboration and knowledge sharing among NGOs.

## **5.1 Data Collection and Integration**

### **1. User Profiles and Organizational Data:**

- Collect user registration information including name, email, organization, role, and areas of expertise.
- Integrate data from existing organizational databases to prepopulate user profiles and organizational details.



- Allow users to update and manage their profiles, including adding skills, interests, and contact information.

## **2. Project Details and Documentation:**

- Enable users to create project profiles with details such as project name, description, objectives, and target beneficiaries.

- Allow for the upload and storage of project-related documents, including proposals, reports, and presentations.

- Implement version control to track document revisions and ensure access to the latest versions.

## **3. Collaboration Activities and Interactions:**

- Track user interactions within the platform, including project contributions, forum posts, document downloads, and event registrations.

- Capture communication logs such as messages sent, replies received, and meeting schedules.

- Record collaboration metrics such as team member assignments, task completions, and project milestones achieved.

## **4. Event Management and RSVPs:**

- Collect data on upcoming events, including event name, date, time, location, and agenda.

- Allow users to RSVP for events and track attendance records.

- Capture feedback from event participants through post-event surveys and evaluations.

## **5. Discussion Forums and Knowledge Sharing:**

- Record forum discussions, including topics, threads, replies, and user engagement metrics.

- Collect user-generated content such as questions, answers, and shared resources.

- Implement keyword tagging and categorization to organize discussions and make them searchable.

## **6. External Data Integration:**

- Integrate with external platforms to import data such as project updates, news articles, and funding opportunities.

- Utilize APIs to connect with partner platforms for seamless data exchange and synchronization.
- Aggregate relevant external data sources such as research papers, policy documents, and industry reports.

## **7. Analytics and Reporting Data:**

- Capture usage statistics and platform metrics, including user logins, page views, and session durations.
- Collect feedback data from users through surveys, feedback forms, and user satisfaction ratings.
- Record performance indicators such as project outcomes, collaboration success rates, and resource utilization metrics.

## **8. Security and Privacy Measures:**

- Ensure compliance with data protection regulations and implement robust security measures to protect user data.
- Encrypt sensitive information such as passwords, personal identifiers, and confidential documents.
- Provide granular access controls to limit data access based on user roles and permissions.

## **9. Data Quality Assurance:**

- Implement data validation checks to ensure the accuracy and completeness of collected data.
- Perform regular data audits to identify and correct inconsistencies, duplicates, and errors.
- Establish data governance policies and procedures to maintain data integrity and reliability.

## **10. Continuous Data Monitoring and Improvement:**

- Monitor data usage patterns and user feedback to identify areas for data enrichment and enhancement.
- Continuously update and expand data sources to provide users with the most relevant and up-to-date information.
- Conduct periodic reviews and assessments of data collection processes to optimize efficiency and effectiveness.

By implementing robust data collection and integration processes, We Connect can ensure that users have access to comprehensive and reliable information, fostering effective collaboration and knowledge sharing among NGOs.

## **5.2 Platform Development and Integration**

The platform is developed iteratively following Agile methodologies. Features are implemented incrementally, starting from core functionalities and expanding to advanced features. Continuous integration and deployment practices are followed to ensure rapid development and deployment cycles.

### **5.3 Testing and Quality Assurance**

Comprehensive testing is carried out at different stages of development. Unit tests, integration tests, and end-to-end tests are performed to identify and fix any issues. User acceptance testing is conducted to ensure that the platform meets user requirements and expectations.

# CHAPTER 6

## **6. Results and Impact Assessment of We Connect**

### **1. User Adoption and Engagement:**

- Measure the number of registered users on We Connect over time to assess user adoption.
- Analyse user engagement metrics such as the frequency of logins, active participation in projects, and contributions to discussions.
- Evaluate the growth rate of user interactions, including document uploads, event RSVPs, and forum posts.
- Conduct surveys and user interviews to gather qualitative feedback on user experience, satisfaction, and suggestions for improvement.

### **2. Collaboration Effectiveness:**

- Track the number of projects initiated, completed, and ongoing on We Connect to gauge collaboration effectiveness.
- Measure the diversity of collaborations by analyzing the types of projects, organizations involved, and geographical spread.
- Assess the impact of collaborations by tracking key performance indicators (KPIs) such as project outcomes, deliverables achieved, and beneficiaries served.
- Compare project success rates and outcomes between collaborations facilitated through We Connect and those conducted using traditional methods.

### **3. Efficiency and Resource Utilization:**

- Quantify the time saved in communication and coordination using We Connect compared to traditional methods.

- Evaluate the efficiency of resource allocation by tracking the utilization of shared resources such as documents, tools, and expertise.
- Measure the reduction in redundant efforts and duplication of work by using We Connect's centralized repository and project management tools.
- Assess the cost savings achieved through reduced travel expenses, overhead costs, and time spent on administrative tasks.

#### **4. Impact on Organizational Objectives:**

- Align We Connect usage with organizational objectives and assess its contribution towards achieving them.
- Evaluate the alignment between We Connect activities and organizational mission, vision, and strategic goals.
- Measure the increase in organizational capacity, effectiveness, and reach as a result of using We Connect.
- Identify success stories and case studies showcasing the tangible impact of collaborations facilitated through We Connect.

#### **5. User Feedback and Satisfaction:**

- Collect feedback from users through surveys, focus groups, and one-on-one interviews to understand their perception of We Connect.
- Assess user satisfaction levels based on ease of use, usefulness of features, reliability, and overall experience.
- Identify areas for improvement based on user suggestions and concerns raised during feedback sessions.
- Monitor changes in user sentiment over time to gauge the platform's evolving reputation and perceived value.

#### **6. Organizational Learning and Adaptation:**

- Evaluate the extent to which organizations adapt their practices and strategies based on insights gained from We Connect collaborations.
- Measure the learning outcomes achieved through knowledge sharing, best practice exchange, and capacity building initiatives.
- Identify areas of organizational growth and development resulting from participation in We Connect activities.

## **7. Long-Term Impact and Sustainability:**

- Track the sustainability of collaborations initiated on We Connect over the long term.
- Measure the lasting impact of projects facilitated through We Connect on target communities, environments, and societal issues.
- Evaluate the scalability and replicability of successful collaboration models developed on We Connect.
- Assess the platform's contribution to building networks, partnerships, and ecosystems that support ongoing collaboration and social impact initiatives.

By conducting a thorough assessment across these dimensions, We Connect can gain valuable insights into its effectiveness, impact, and areas for improvement. This information can inform strategic decision-making, guide future development efforts, and demonstrate the platform's value in facilitating meaningful collaborations among NGOs.

## **6.1 User Adoption and Engagement**

User adoption metrics, such as the number of registered users, active users, and frequency of logins, are analyzed. Additionally, user engagement metrics, such as the number of projects created, documents shared, discussions participated in, and events attended, are evaluated. Feedback from users regarding their experience with the platform is also collected and analyzed.

## **6.2 Impact on Collaboration and Efficiency**

The impact of We Connect on collaboration effectiveness and operational efficiency within NGOs is assessed. This includes improvements in project management, communication, resource sharing, and overall productivity. Key performance indicators (KPIs) such as project completion rates, time saved in communication and document sharing, and increased project outcomes are measured and analyzed.

# CHAPTER 7

## **7. Future Directions and Enhancement for WeConnect**

### **1. Scalability and Performance Optimization:**

- Enhance the platform's scalability to accommodate a growing user base and increasing data volume.
- Implement optimizations for better performance, including database indexing, caching mechanisms, and load balancing strategies.
- Explore cloud-based solutions to handle peak loads and ensure uninterrupted service availability.

### **2. Integration with External Platforms:**

- Integrate We Connect with other relevant platforms such as fundraising websites, volunteer management systems, and government databases.
- Enable seamless data exchange between We Connect and external platforms to streamline workflows and enhance data accuracy.

### **3. Advanced Collaboration Features:**

- Incorporate advanced collaboration features such as real-time document editing, task dependencies, and project timelines.
- Integrate video conferencing and virtual meeting capabilities to facilitate remote collaboration among distributed teams.
- Implement project management methodologies such as Agile or Scrum directly within the platform to enhance project coordination.

### **4. Machine Learning-Based Recommendation Systems:**



- Develop machine learning algorithms to suggest potential project partners based on organizational profiles, project interests, and past collaborations.
- Utilize natural language processing techniques to analyze project descriptions and match them with relevant organizations or resources.
- Provide personalized recommendations for events, funding opportunities, and best practices based on user behavior and interests.

## **5. Enhanced Analytics and Reporting:**

- Expand the reporting capabilities of We Connect to provide detailed analytics on project outcomes, impact metrics, and resource utilization.
- Develop customizable dashboards for organizations to track key performance indicators (KPIs) and measure the effectiveness of their collaborations.
- Implement predictive analytics to forecast project success rates, identify potential risks, and optimize resource allocation.

## **6. Blockchain Integration for Transparency and Security:**

- Integrate blockchain technology to ensure data integrity, transparency, and immutability within We Connect.
- Use smart contracts to automate trust-based processes such as fund disbursement, contract management, and project verification.
- Provide a secure and tamper-proof ledger for tracking donations, resource allocations, and project contributions.

## **7. Enhanced User Experience and Accessibility:**

- Improve the user interface and navigation to enhance user experience and streamline workflows.
- Ensure accessibility compliance to accommodate users with disabilities and enhance inclusivity.
- Develop mobile applications for iOS and Android devices to provide access to We Connect on the go.

## **8. Global Expansion and Localization:**

- Expand We Connect to new geographical regions and languages to cater to a diverse user base.
- Partner with local NGOs and organizations to customize the platform according to regional needs and preferences.
- Provide multilingual support and cultural adaptations to ensure usability and relevance across different regions.

## **9. Community Building and Engagement:**

- Foster a sense of community within We Connect by introducing discussion forums, interest groups, and knowledge sharing initiatives.
- Organize virtual events, webinars, and workshops to promote networking opportunities and collaboration.
- Implement gamification elements such as badges, leaderboards, and challenges to incentivize engagement and participation.

## **10. Continuous Feedback and Iterative Development:**

- Establish channels for collecting feedback from users and stakeholders to identify areas for improvement.
- Adopt an iterative development approach to regularly release updates and new features based on user feedback and evolving needs.
- Encourage user involvement in the platform's development through beta testing, focus groups, and user-driven feature requests.

By focusing on these future directions and enhancements, We Connect can continue to evolve as a powerful platform for facilitating collaboration among NGOs, driving positive social impact, and fostering a more connected and resilient global community.

## **7.1 Scalability and Expansion Plans**

Future plans involve scaling up the platform to accommodate a larger user base and expanding its features to cater to evolving needs. This may include adding support for additional languages, integration with other platforms (such as fundraising platforms or government databases), and expanding to new geographical regions. The platform architecture will be optimized for scalability, with provisions for horizontal scaling and load balancing.

**7.2 Incorporation of Advanced Features** We propose the integration of advanced features such as machine learning-based recommendation systems for project partnerships, AI-driven analytics for decision-making, sentiment analysis for user feedback, and blockchain technology for secure data sharing and transparency. Additionally, features like automated project reporting, integration with IoT devices for real-time data collection, and gamification elements to encourage user engagement could be explored.

## CHAPTER 8

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## CHAPTER 9

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