

# **PROPOSAL FOR REDESIGN AND MODERNIZATION OF KIBO SEED COMPANY LTD WEBSITE**

**Development of a Modern Website and Progressive Web App (PWA)**

## Table of Contents

|  |   |
|--|---|
| PART I: TECHNICAL PROPOSAL.....  | 2 |
| Proposal to Modernize & Redevelop Kibo Seed Company Ltd Website as a Progressive Web App (Light mobile application)..... | 2 |
| 1. Introduction.....   | 2 |
| 2. Current Website Analysis & Identified Gaps.....   | 2 |
| 3. Project Objectives.....   | 3 |
| 4. Scope of Work & Features.....   | 3 |
| 4.1 Frontend Development.....  | 3 |
| 4.2 Backend Development.....   | 3 |
| Technology:.....   | 3 |
| Modules:.....  | 4 |
| Security:.....   | 4 |
| 5. Technology Stack Summary.....   | 4 |
| 6. Project Timeline (6 Weeks).....   | 4 |
| 7. Quality Assurance.....  | 4 |
| 8. Deliverables.....   | 5 |
| 9. Conclusion.....   | 5 |
| PART II: FINANCIAL PROPOSAL.....   | 6 |
| 1. Investment Summary.....   | 6 |
| 2. Cost Breakdown.....   | 6 |
| 3. Deliverables.....   | 6 |
| 4. Timeline & Payment.....   | 6 |
| 5. Conclusion.....   | 6 |
| PART III: ROOM FOR INPUT & DESIGN SUGGESTIONS.....   | 7 |

## PART I: TECHNICAL PROPOSAL

Proposal to Modernize & Redefine Kibo Seed Company Ltd Website as a Progressive Web App (Light mobile application).

### 1. Introduction

Kibo Seed Company Ltd's existing website is functional but outdated in design, lacks interactivity, and misses critical features expected by modern users. This proposal outlines a comprehensive technical proposal to redesign and redevelop the website into a modern, fast, and responsive Progressive Web Application (PWA).

A special kind of modern websites to reflect on the needs and demands of the digital business era. Using modern technologies and features to serve and make the website of more advanced and outstanding corporate website.

Here is the proposal Accombained with modern technologies such as PHP, Tailwind CSS, HTML5, and MySQL with PDO, delivering a seamless, engaging user experience and scalable digital platform within a 6-weeks timeframe.

### 2. Current Website Analysis & Identified Gaps

| Aspect                   | Current State                                | Missing / Needs Improvement   |
|--------------------------|--|---|
| Design & UI/UX           | Basic, outdated layout; static elements      | Modern, clean, mobile-first, visually appealing UI using Tailwind CSS |
| Responsiveness           | Desktop-first with minimal mobile adaptation | Fully responsive and touch-optimized across devices                   |
| Performance              | Moderate loading speed                       | Optimized for fast load times using PWA best practices                |
| Interactivity            | No dynamic or interactive features           | Real-time product filtering, user account management, inquiry forms   |
| Accessibility            | Limited accessibility considerations         | Compliance with WCAG standards for inclusivity                        |
| Content Structure        | Static pages with minimal hierarchy          | SEO-friendly structure with metadata, semantic HTML                   |
| User Engagement          | No user accounts or personalized content     | Farmer portal, inquiry system, newsletters                            |
| Social Media Integration | References but no active/social links        | Embedded live social feeds and sharing options                        |

|                  |                               |   |
|------------------|-------------------------------|---|
| Security         | Basic security measures       | Secure session management, input sanitization, HTTPS enforced                       |
| Backend System   | Minimal backend functionality | Admin CMS for content, order inquiries, farmer management                           |
| Technology Stack | Unknown / basic               | Modern PHP with PDO for secure DB access, Tailwind CSS for design, PWA architecture |

### 3. Project Objectives

- Rebuild the website as a Progressive Web App (PWA) to enable offline capabilities, push notifications, and app-like experience on all devices.
- Deliver a modern, attractive, and highly usable interface aligned with global UX/UI standards.
- Implement responsive design optimized for all screen sizes and touch inputs.
- Develop a secure, modular backend using PHP with PDO and MySQL.
- Integrate a Farmer Portal for registration, support, and order inquiries.
- Include admin management tools to manage content, products, and inquiries efficiently.
- Optimize for SEO and accessibility compliance to improve visibility and inclusiveness.
- Complete project delivery within 4 weeks (1 month).

### 4. Scope of Work & Features

#### 4.1 Frontend Development

- Design:
  - Use Tailwind CSS to build a clean, consistent, and visually appealing UI with intuitive navigation.
  - Mobile-first, fully responsive layouts with smooth animations and transitions.
  - Accessibility: keyboard navigation, ARIA roles, contrast checks.
- Core Pages:
  - Homepage with hero banner, latest products, and calls-to-action.
  - Products Catalog with dynamic filters (crop type, region, season).
  - Detailed product pages with images and downloadable resources.
  - News/Blog section for updates and agricultural tips.
  - Contact page with interactive form and Google Maps integration.
  - Farmer Portal login and registration pages.

- Progressive Web App Features:
  - Offline caching using Service Workers.
  - Add to Home Screen functionality.
  - Push notifications for news and order updates.
  - Fast loading and smooth navigation.

## 4.2 Backend Development

### Technology:

- PHP 8+ using secure, object-oriented programming practices.
- MySQL database accessed via PDO for secure and efficient queries.

### Modules:

- Content Management System (CMS): Manage products, news, and static pages.
- Farmer Management: User registration, profiles, support tickets, and history.
- Order Inquiry System: Customers submit seed inquiries; staff manage and respond via admin panel.
- Extension & Demo Plot Tracking: Staff can upload reports and photos via backend interface.
- Analytics: Basic dashboard showing visits, inquiries, and active users.

### Security:

- Input validation and sanitization to prevent SQL injection and XSS attacks.
- Password hashing and secure session handling.
- HTTPS enforcement and CSRF protection.

## 5. Technology Stack Summary

| Component           | Technology/Tool  |
|---------------------|--|
| Frontend            | HTML5, Tailwind CSS, JavaScript (Vanilla for PWA features) |
| Backend             | PHP 8+, MySQL (with PDO)                                   |
| Progressive Web App | Service Workers, Manifest.json                             |
| Hosting             | Linux-based server with PHP/MySQL support, SSL enabled     |
| Security            | HTTPS, CSRF tokens, Password Hashing (bcrypt),             |

| Component | Technology/Tool |
|-----------|-----------------|
|           | ReCAPTCHA       |

## 6. Project Timeline (6 Weeks)

| Week   | Activities   |
|--------|--|
| Week 1 | Requirements confirmation, wireframing, UI design prototypes                         |
| Week 2 | Frontend development (responsive pages, PWA setup), backend architecture setup       |
| Week 3 | Backend development (CMS, user management, inquiry system), integration & testing    |
| Week 4 | Final testing (performance, security, accessibility), deployment, and admin training |

## 7. Quality Assurance

- Cross-browser and device testing including major browsers (Chrome, Firefox, Safari) and mobile OS (iOS, Android).
- Performance optimization to keep load times under 3 seconds.
- Security testing to ensure no vulnerabilities.
- Accessibility testing for WCAG 2.1 compliance.

## 8. Deliverables

- Fully responsive, bilingual (English/Swahili) PWA website with offline capabilities.
- Secure backend CMS for content and user management.
- Farmer Portal with registration and support system.
- Order inquiry workflow with admin management tools.
- Documentation including user manuals and deployment guides.
- Staff training for content and system management.

## 9. Conclusion

Transforming Kibo Seed Company Ltd's website into a modern PWA using PHP, Tailwind CSS, and MySQL with PDO will dramatically improve user engagement, service delivery, and operational efficiency. This approach leverages cutting-edge web technology tailored to local needs, delivering a fast, accessible, and secure platform — all within a focused 1-month timeline.



## PART II: FINANCIAL PROPOSAL

Redevelopment & Expansion of Kibo Seed Company Ltd Website into a Web System & PWA

### 1. Investment Summary

The total cost for the redevelopment and expansion project is TZS 2,000,000. This covers the website, mobile-ready Progressive Web App (PWA), farmer portal, admin dashboard, and demo plot tracker.

### 2. Cost Breakdown

| Component                     | Cost (TZS)       |
|-------------------------------|------------------|
| Design & Prototyping          | 300,000          |
| Frontend (Website + PWA)      | 400,000          |
| Backend (CMS + APIs)          | 500,000          |
| Farmer Portal                 | 300,000          |
| Product Catalog & Inquiries   | 200,000          |
| Demo Plot & Extension Tracker | 150,000          |
| Testing & QA                  | 100,000          |
| Deployment & Training         | 50,000           |
| <b>Total</b>                  | <b>2,000,000</b> |

### 3. Deliverables

- Modern responsive website (English/Swahili)
- Farmer support portal (registration, resources, inquiries)
- Product catalog with inquiry system
- Extension & demo plot tracking dashboard
- Admin CMS & analytics tools
- Training & 3 months technical support

### 4. Timeline & Payment

- Timeline: 6–8 weeks total
- Payment Plan:
  - 60% upfront – 1,200,000

- 40% on development/testing – 800,000

## 5. Conclusion

This TZS 2,000,000 investment will give Kibo Seed Company Ltd a modern, secure, and scalable platform, improving farmer engagement, product visibility, and operational efficiency.

## PART III: ROOM FOR INPUT & DESIGN SUGGESTIONS

The redevelopment will be a collaborative process with Kibo Seed Company Ltd. The project plan allows full space for inputs, feedback, and design suggestions to ensure the system reflects the company's brand, goals, and farmer needs.

Kibo Seeds will have the opportunity to guide:

- Visual Identity – choice of colors, layouts, and imagery
- Content – product information, brochures.
- Features & Workflows – farmer portal functions, inquiry handling, demo plot reporting
- Validation – reviewing prototypes and providing feedback before final rollout

This approach ensures that the final solution is not only technically sound but also customized to Kibo Seeds' identity and vision.

***DISCLAIMER***

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