

International Mountain Explorers Connection (IMEC) Strategic Plan



**International Mountain
Explorers Connection**

Requirements Document for Kilimanjaro Porters Data Automation Database

1. Project Overview

The purpose of this project is to develop a secure, user-friendly online database system that automates the intake and management of forms and data for the Kilimanjaro Porters program. This system will provide a streamlined way to manage profiles of porters and the companies employing them, as well as facilitate tracking inventory, projects, and various office documents, including finance, marketing, and grants.

2. Functional Requirements

2.1 User Management

- **User Registration:** Allow users (porters, company representatives, and admin staff) to register and create a user profile with unique login credentials.
- **Role-based Access Control:** Implement different user roles (Admin, Company User, Porter, Finance, Marketing, etc.) with corresponding permissions:
 - **Admin:** Full access to all database functions.
 - **Company User:** Ability to upload, submit, and manage information for the porters they employ.
 - **Porter:** Ability to view their own profile and submit limited information (e.g., updates on employment or skills).
 - **Finance and Marketing Users:** Access to relevant finance, grants, and marketing documents.
- **Login Authentication:** Implement a secure login process using username and password, with options for multi-factor authentication (MFA) for enhanced security.

2.2 Porter Profile Management

- **Porter Profile Creation:** Enable users to create and update profiles for porters with the following fields:
 - Personal details (name, age, contact information)
 - Employment history and current employment status

- Skills, certifications, and training history
- Health and safety information (e.g., medical checks, fitness evaluations)
- **Employment Tracking:** Allow companies to update the employment status, start and end dates, and track additional employment-related details for each porter.
- **Porter Performance Tracking:** Optional fields for companies to record porter performance reviews or feedback.

2.3 Company Profile Management

- **Company Profile Creation:** Allow companies to create profiles with:
 - Company information (name, address, contact information)
 - Details of porter employment policies (e.g., wages, working conditions)
 - Track history of employment records and associated porters
- **Relationship Tracking:** Link each porter to their employing company for relationship mapping and data integrity.

2.4 Forms Intake and Data Submission

- **Online Forms Intake:** Enable users to fill and submit various forms online (e.g., intake forms for porter employment, skill updates, and incident reporting).
- **Form Validation:** Implement form field validation (e.g., required fields, format checks) to ensure data consistency.
- **Document Upload:** Allow users to upload scanned documents or images associated with forms, with a maximum file size limit.

2.5 Inventory Tracking

- **Inventory Database:** Maintain an inventory database with fields for:
 - Item descriptions, quantities, purchase dates, and suppliers
 - Assigned porter or company tracking (e.g., for distributed equipment)
- **Inventory Updates:** Track inventory issuance and return dates, condition assessments, and reorder alerts for low stock items.

2.6 Project Tracking

- **Project Management:** Create project records that track:
 - Project names, descriptions, start and end dates
 - Assigned staff or porters, project status, and key milestones
- **Progress and Outcome Reports:** Allow admins to update project progress and upload final outcome reports.

2.7 Document Management

- **File Storage and Retrieval:** Allow secure storage and retrieval of office documents, including finance documents, marketing plans, and grant information.
- **Category Organization:** Organize documents into categories (Finance, Marketing, Grants) with tagging capabilities for easier searching.
- **Version Control:** Track document versions to maintain history of updates and edits.

3. Technical Requirements

3.1 Database Specifications

- **Database Type:** Implement a relational database (e.g., MySQL, PostgreSQL) with the following main tables:
 - Users
 - Porters

- Companies
- Forms
- Inventory
- Projects
- Documents

- **Data Integrity Constraints:** Ensure data integrity through primary and foreign keys, cascading updates/deletes, and uniqueness constraints.

3.2 Frontend and User Interface

- **Web-Based Interface:** Design a web-based user interface accessible through standard browsers with responsive design for both desktop and mobile access.
- **Form Templates:** Create standardized form templates for data entry with an intuitive and user-friendly design.
- **Navigation and Search:** Implement easy-to-navigate menus and a search function for quick access to porter profiles, company data, inventory, projects, and documents.

3.3 Security

- **Data Encryption:** Encrypt sensitive data both in transit (TLS/SSL) and at rest.
- **Access Control:** Use role-based access control to restrict access to sensitive data based on user roles.
- **Audit Trail:** Implement logging to track data access, edits, and deletions for auditing purposes.
- **Backup and Recovery:** Enable regular automated backups with a recovery process in place for data restoration.

4. Performance Requirements

- **Data Load Capacity:** Database must support a minimum of 1,000 porters and 500 companies, with the potential for growth.
- **Concurrent Users:** Support up to 50 concurrent users with efficient load balancing to ensure seamless user experience.
- **Response Time:** Target response time of less than 2 seconds for form submissions and data retrieval.

5. Compliance and Documentation

- **GDPR Compliance:** Ensure the system complies with GDPR (or other relevant data protection laws) for data privacy, especially as it pertains to porter data.
- **User Documentation:** Provide comprehensive user manuals and training documentation for system users.
- **Developer Documentation:** Deliver developer documentation for system maintenance, updates, and troubleshooting.

6. Milestones and Timeline

- **Phase 1:** Requirements Gathering and System Design
- **Phase 2:** Database Development (User Management, Profiles, Forms Intake)
- **Phase 3:** Inventory and Project Management
- **Phase 4:** Document Management and Final Testing
- **Phase 5:** Deployment, User Training, and Documentation Handover

7. Budget Considerations

Outline any anticipated budget constraints or expected costs, such as licenses, server hosting, and maintenance.

