**Introduction to PFEPL**

29 years ago, Pioneer Foundation Engineers Pvt. Ltd. was started to bridge the gap for providing engineering solutions for disaster mitigation. Since then, we have dramatically changed the Geohazard and Civil Engineering Landscape in India.

We have a desire to find better solutions at every degree of latitude and longitude and innovate new cutting-edge solutions to achieve it. We take immense pride in the work we do by saving lives and averting disasters. When it comes to disaster mitigation and engineering solutions, our vast experience and excellent safety record make us the preferred solution providers.

### Project: Inventory Management System

The Inventory Management System for PFEPL is designed to streamline the process of managing and transferring items between various projects, ensuring efficient use of resources and maintaining a clear record of transactions. The system incorporates the following features:

#### Roles and Responsibilities

**Admin**

* Add or delete items in the inventory.
* View and manage the entire inventory across all projects.
* Generate and view comprehensive reports on inventory status and transaction history.

**Manager**

* View and manage item transfer requests.
* Approve or reject requests to send items from one project (source) to another project (destination).
* Monitor inventory levels within their assigned projects.

**Employee**

* Request the transfer of items from one project (source) to another (destination).
* Track the status of their item transfer requests.

#### Features

**Item Management**

* **Add/Delete Items:** Admin can add new items to the inventory and delete obsolete or unnecessary items.
* **Edit Item Details:** Admin can edit the details of existing items, such as description, quantity, and location.
* **Item Categories:** Items are categorized into three categories: 1. DGPS Equipment, 2. UAV, 3. IT.

**Item Transfer Requests**

* **Create Transfer Request:** Employees can create a request to transfer items from a source project to a destination project.
* **Request Approval:** Managers receive notifications of new transfer requests and can approve or reject them.
* **Access Request:** Once a transfer request is approved, the receiver at the destination project can request access to the transferred items.
* **Final Approval:** The project manager at the destination approves the access request, completing the transaction.

**Transaction History**

* **Detailed Records:** All completed transactions are logged in a transaction history table.
* **Audit Trail:** Each transaction includes details such as item description, source and destination projects, requestor, approvers, and timestamps.

**Inventory Monitoring**

* **Real-Time Updates:** Inventory levels are updated in real-time as items are added, deleted, or transferred.
* **Notifications:** Automatic notifications for low stock levels or critical shortages.
* **Reporting:** Generate reports on inventory status, transaction history, and usage patterns. Reports can be detailed with options for summary views and exportable in formats like PDF and Excel.

**User Management**

* **Role Assignment:** Admin can assign roles to users and manage their access levels.
* **User Profiles:** Maintain profiles for all users with relevant information and activity logs.

**Security and Permissions**

* **Role-Based Access Control:** Ensure that users can only access functionalities pertinent to their roles.
* **Data Encryption:** Protect sensitive data through encryption and secure communication channels.
* **User Notifications:** The system will send email notifications to users when their requests are approved or rejected.

**Dashboard**

* **Overview:** Admin, managers, and employees have access to a personalized dashboard summarizing their relevant information, such as pending requests, inventory status, and recent activities.

**Integration**

* The system will not integrate with other software, but all systems of PFEPL will have the same registration, allowing users to use the same ID and password to log in to all associated systems.

**Disaster Recovery**

* Recommended measures for disaster recovery include regular data backups, offsite storage of backups, and a disaster recovery plan outlining steps for data restoration and system recovery in case of a failure.