

# **Asset Movement Tracking System - Requirements Document**

## **Project Overview**

A Django web application to track valuable assets moving between Hong Kong and Shenzhen locations, providing real-time visibility and accountability for asset movements.

## **Core Requirements**

### **1. User Management**

The system shall support role-based access with different user types including administrators, location managers, and responsible personnel. Each user must authenticate before accessing the system and have permissions appropriate to their role.

### **2. Asset Management**

The system shall maintain a comprehensive asset registry where each asset has a unique identifier, description, category, value, and current status. Assets shall be marked as non-consumable valuable materials with detailed specifications and serial numbers where applicable.

### **3. Location Management**

The system shall support multiple locations with Hong Kong and Shenzhen as primary locations, but be extensible for additional venues. Each location shall have designated responsible personnel and contact information.

### **4. Movement Tracking**

The system shall log all asset movements between locations with mandatory fields including departure location, destination location, responsible person initiating the movement, expected arrival date, and actual arrival date. Each movement record shall have a unique tracking number and timestamp.

### **5. Asset Reception and Acknowledgement**

When assets arrive at a destination, the receiving personnel must acknowledge receipt through the system. The acknowledgement process shall capture the receiver's identity, actual arrival timestamp, condition of the asset upon arrival, and any discrepancies noted.

### **6. Remarks and Notes System**

The system shall allow authorized personnel to add timestamped remarks to any asset throughout its lifecycle. Remarks shall be traceable to the user who added them and support different categories such as maintenance notes, condition updates, or special handling instructions.

### **7. Stock Taking Functionality**

The system shall provide comprehensive stock-taking capabilities allowing designated personnel to conduct physical inventory counts. Stock-take sessions shall record the date, location, responsible person, and detailed asset verification results including any discrepancies found.

### **8. Real-time Status Tracking**

Account personnel and managers shall have dashboard access showing current asset locations, assets in transit, overdue arrivals, and pending acknowledgements. The system shall provide search and filter capabilities to quickly locate specific assets or groups of assets.

### **9. Reporting and Audit Trail**

The system shall generate reports for asset movements, location summaries, stock-take results, and complete audit trails. All actions shall be logged with user identification and timestamps to ensure accountability and traceability.

## **10. Notifications and Alerts**

The system shall send notifications for pending acknowledgements, overdue arrivals, and scheduled stock-takes. Alerts shall be configurable based on user roles and preferences.

## **Technical Requirements**

### **Platform and Framework**

The application shall be built using Django framework with PostgreSQL database for production deployment. The system shall be responsive and accessible via web browsers on desktop and mobile devices.

### **Data Security**

All asset information and movement data shall be securely stored with appropriate encryption. User authentication shall be mandatory with session management and password policies enforced.

### **Performance**

The system shall handle high-frequency asset movements efficiently with quick response times for queries and updates. Database optimization shall ensure smooth operation even with large volumes of historical data.

### **Integration Capability**

The system architecture shall allow for future integration with barcode scanning systems, email notifications, and potential ERP system connections.

### **User Interface Requirements**

The application shall provide intuitive interfaces for asset registration, movement logging, acknowledgement processing, and stock-taking operations. Dashboard views shall present clear summaries of asset status and pending actions. Mobile-responsive design shall ensure usability across different devices and screen sizes.

### **Data Management**

Asset data shall include comprehensive details such as asset name, unique identifier, category, description, purchase date, value, current location, and status. Movement records shall capture complete transaction details with automatic timestamp generation. The system shall maintain complete historical records while providing efficient access to current information.

This requirements document provides the foundation for developing a comprehensive asset tracking solution that addresses the specific needs of managing valuable materials moving between Hong Kong and Shenzhen locations.