

# Project Proposal

for

eAbkari

(Revamp)

Submitted to

Excise Department, Government of Sikkim

Gangtok, Sikkim

Submitted by:



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# **1. Project Background**

The existing system, a replica of eAbkari West Bengal with limited services such as License and Import Permit, is currently operational. Till date the development of the project was looked after by West Bengal as it was the customization of the existing eAbgari software of NIC West Bengal. However, there is a need to shift to the NIC Sikkim team for localization of the process and ensure that the working of the department is contained within the state. The technology used in the current system (ASP.NET, VBScript) is outdated and needs revamping. While the new service can be incorporated into the existing system, the revamping process will also be initiated to enable a complete replacement of the current system within one year.

# **2. Scope of Work**

## a. Requirements Analysis

- Engage with stakeholders to gather detailed requirements.
- Conduct a comprehensive analysis of current workflows and processes.
- Identify key challenges and areas for improvement.

## b. System Design

- Design the overall architecture of the web portal.
- Create detailed database schemas for storing various records.
- Develop user interface prototypes.

## c. Development

- Frontend development using Angular to create a responsive and intuitive user interface.
- Backend development using Django to handle core application logic and data management.

## d. Testing

- Perform unit testing on individual components.
- Conduct integration testing to ensure seamless interaction between components.
- Execute user acceptance testing (UAT) with end-users to validate functionality.

#### e. Deployment

- Deploy the web portal on a secure and scalable cloud infrastructure.
- Conduct post-deployment testing to ensure system stability.
- Provide training to end-users and administrators.

### 3. Description of the Work

#### a. Modules Development

- **Office Modules:** Admin panel for adding/modifying master data and facilitating the application processes.
- **License Module:** Manage and process requests for application of new licenses and license renewal.
- **Label/ Brand Module:** Enable brands/labels registration.
- **Company Module:** Handle the submission and processing of company registration and collaboration.
- **EVC Module:** Manage the processes for Excise Verification Certificate, ensuring compliance with the regulations.
- **IPFL Module:** Handle the application and issuance process for permits related to the import of foreign liquor.

#### b. Security and Privacy

- Implement robust authentication and authorization mechanisms.
- Ensure data encryption in transit and at rest.
- Compliance with relevant data protection regulations.

### 4. Deliverables

- Detailed Software Requirement Specification Document
- System Design Document, including architecture and database schemas
- Fully functional and tested web portal
- User Manual and Training Materials

## **5. Constraints**

- Development must be completed within the specified timeline of 12 months.
- Strict adherence to data security and privacy regulations.
- Integration with existing IT infrastructure may require additional time and resources.

## **6. Assumptions**

- Stakeholders will provide timely and detailed feedback during the project lifecycle.
- Access to existing records and data will be provided for initial data migration.
- Users will have basic digital literacy skills.

## **7. Inclusions**

- Complete development and deployment of the web portal.
- User training sessions and support documentation.
- Initial data migration from the manual system to the digital platform.

## **8. Exclusions**

- Ongoing data entry and record updates post-deployment.
- Procurement of hardware for end-users.
- Long-term maintenance and support beyond the initial warranty period.

## **9. Proposed Solution**

The proposed solution involves developing a secure, user-friendly web portal using Angular for the front end and Django for backend development. The system will facilitate comprehensive management of records with robust support for document uploads and efficient data retrieval.

## 10. Objective

To enhance the efficiency, accuracy, and accessibility of records by digitalizing the manual record-keeping system, license registration and renewal, supply chain etc. thereby providing better service delivery and data management.

## 11. System Overview

The system will comprise several modules for managing different aspects. Each module will have specific functionalities, including data entry, document uploads, and data retrieval. The web portal will be accessible to authorized personnel through a secure login system.

## 12. System Design

### a. Frontend

- Developed using Angular.
- Responsive design to ensure compatibility across devices.
- User-friendly interface with intuitive navigation.

### b. Backend

- Core services implemented using Django.
- RESTful APIs for seamless communication between frontend and backend.

### c. Database

- Relational database (PostgreSQL or MySQL) for structured data storage.
- Secure cloud storage for uploaded documents.

## 13. Features

- **User Authentication and Authorization:** Secure login system with role-based access control.

- **Document Upload:** Support for uploading and managing documents related to each record.
- **Search and Retrieval:** Advanced search functionality for easy data retrieval.
- **Audit Trails and Logging:** Track changes and maintain logs for security and accountability.

## 14. Derived Benefits

- **Efficiency:** Reduced time and effort in managing records.
- **Security:** Enhanced data protection and compliance with regulations.
- **Accessibility:** Easy access to records for authorized users from any location.
- **Accuracy:** Minimization of errors associated with manual record-keeping.
- **Scalability:** Ability to handle growing data and user base.

## 15. Detailed Architecture

- a. Frontend Architecture
  - Angular components and services.
  - Modular design for scalability and maintainability.
  - Responsive design using Bootstrap or a similar framework.
- b. Backend Architecture
  - Django for core application logic and data management.
  - Secure RESTful APIs for data exchange between frontend and backend.
- c. Database Design
  - Relational database schema designed for efficient data storage and retrieval.
  - Cloud storage solution (NIC cloud) for secure document storage.

## **16. Proposed Technology Stack**

- **Frontend:** Angular, HTML5, CSS3, Bootstrap
- **Backend:** Django
- **Database:** PostgreSQL
- **Cloud Storage:** Decide later
- **Development Tools:** Git for version control
- **Testing Tools:** Selenium, JUnit, pytest

## **17. Project Duration and Major Milestones**

### **Supply Chain Module**

- a. Duration: **3 months**
- b. Milestones:
  1. Design & Development: 2 months
  2. Deployment: 1 month

### **Existing Application Revamp**

- c. Duration: **11-12 months (concurrent with the above Supply Chain Module)**
- d. Milestones:
  1. Requirement Analysis: 1 month
  2. System Design: 1 month
  3. Development: 8 months
    - Frontend Development: 3 months
    - Backend Development: 3 months
    - Integration: 2 month
  3. Testing: 1 month
  4. Deployment: 1 month

## **18. Roles and Responsibilities**

- a. Frontend Developer
  - Develop and maintain the user interface.
  - Ensure responsive and user-friendly design.
  - Integrate frontend with backend APIs.
- b. Backend Developer
  - Implement server-side logic and core application functionality.
  - Develop and maintain RESTful APIs.
  - Ensure data security and integrity.

## **19. Resource Overview**

- **Team Composition:** Frontend Developer, Backend Developer.
- **Hardware/Software:** Development servers, cloud infrastructure, development tools (IDE, version control).

## **20. Project Cost**

### a. Development Costs

- Detailed costs:

### **Software Cost Estimation**

S. No.	Description	Total Cost (Rs)
1	Manpower (Software Developers)	
	1. 2 Nos (Level 5 (1 year) Programmers) @60,738.07/- 2. 2 Nos (Level 7 (5 years) Programmers) @80,984.76/-	17,00,673.96/-
2	Security Audit & SMS Charges etc.	1,25,000/-
3	Contingency, Logistics, Minor Travel etc.	70,000/-
A	<b>Project Cost</b>	<b>18,95,673.96/-</b>

The above rates are inclusive of Empanelled Agency, NCSI & GST Charges.

Total amount required to be transferred to NCSI, New Delhi is **Rs. 18,95,673.96/-**

Draft / Cheque to be payable in favor of “NCSI, New Delhi”.

Given that the technology used in the existing system is outdated, the revamping of the entire software using modern technology will also be initiated. Our goal is to complete the revamping process within a year, utilizing the proposed resources effectively.

As of now, the software is hosted on the NIC cloud, free of cost. However, if circumstances necessitate hosting the application on a different platform in the future, the associated hosting costs will need to be factored into the project budget as and when required.

Following the completion of the revamping process, the project will be reviewed in the next financial year. Based on this review, resource requirements for maintenance, further customizations, and the addition of new modules can be planned accordingly.

## **21. Conclusion**

This project aims to create a comprehensive online system for the Excise Department, focused on delivering citizen-centric services. Leveraging a well-structured plan, a modern technology stack, and an experienced team, the initiative will enhance efficiency, transparency, and accessibility of records, benefiting all stakeholders. By digitizing records, the system will streamline workflows, minimize errors, and enable effective management and regulation of excise-related services.