

Vendor Onboarding Project Documentation

1. Project Overview

The **Vendor Onboarding Project** aims to streamline and automate the process of onboarding vendors by providing a dedicated web platform for vendors and a management system for internal teams. The goal is to create an efficient, transparent, and secure process for vendors to register, submit necessary documents, and track their verification status while enabling the commercial team to review and manage applications seamlessly.

2. System Architecture

The system will be composed of three primary components that ensure smooth interaction between vendors, the internal team, and the notification mechanisms.

1. Vendor Portal (Frontend):

- a. A self-service web platform where vendors can register, submit documents, and track the progress of their onboarding application.

2. Commercial Console (Backend):

- a. A web-based interface for the internal commercial team to manage and review vendor applications, verify documents, and approve/reject vendor onboarding requests.

3. Notification System:

- a. An automated email and SMS notification system that keeps vendors informed about their application status, document requirements, and next steps.

3. Functionality Breakdown

Vendor Portal:

1. Registration Form:

- a. Vendors submit key KYC (Know Your Customer) details including:
 - i. **Contact Information:** Name, phone number, email.
 - ii. **Company Details:** Organization name, contact email, registration number, and location.
 - iii. **Tax Information:** GSTIN, PAN.
 - iv. **Bank Details:** Account number, branch name, IFSC code.
- b. Vendors upload essential documents like company registration certificates, MSME registration, tax certificates, trade licenses, and bank statements.

2. Verification Status Tracking:

- a. Vendors can monitor the progress of their onboarding application.
- b. The portal will display the current verification status and indicate any pending documents or actions.
- c. Vendors can re-upload documents if needed and track updates.

Commercial Console:

1. Vendor Application Management:

- a. The commercial team can view and manage a list of submitted vendor applications with detailed vendor information.
- b. A secure section allows for downloading and reviewing uploaded documents.
- c. Documents can be marked as:
 - i. **Approved:** All necessary documents are validated.
 - ii. **Needs Revision:** Incomplete or incorrect documents require vendor updates.
 - iii. **Rejected with Remarks:** In cases where the application is rejected, comments are provided for clarity.

2. Communication Tools:

- a. The console enables sending **automated email/SMS notifications** to vendors, informing them of:
 - i. Registration confirmation.
 - ii. Request for additional documents or clarifications.
 - iii. Application approval or rejection.
 - iv. Document revision requests.

Notification System:

The **Notification System** automatically triggers notifications via email and SMS based on vendor application stages:

- **Confirmation of Registration Submission:** An automated confirmation is sent once the vendor submits their application.
- **Requests for Additional Documents or Clarifications:** If documentation is incomplete or needs revision, the system will notify the vendor.
- **Application Approval or Rejection:** Vendors are notified of the final decision, including reasons if the application was rejected.
- **Follow-up Notifications:** For applications under review or when vendors need to take action, reminders and status updates will be sent.

4. Onboarding Process Flow

1. Vendor Registration:

- a. Vendors access the **Vendor Portal** to register by filling in KYC details and uploading required documents.
- b. The system automatically confirms submission via email and SMS.

2. Document Submission and Tracking:

- a. The vendor uploads the necessary documents for verification.
- b. The **Notification System** alerts the commercial department of a new application submission.

3. Review and Verification:

- a. The commercial team reviews the vendor's application and submitted documents via the **Commercial Console**.
- b. The documents are marked as either **approved**, **requires revision**, or **rejected with remarks**.

4. Communication with Vendor:

- a. The vendor is informed of the status (approval, rejection, or revision request) via email/SMS notifications.

5. Document Re-Submission:

- a. If the commercial team requests document revision, the vendor can upload new documents through the portal.
- b. Notifications are sent to confirm receipt of re-submitted documents and initiate re-verification.

6. Final Onboarding:

- a. Once documents are verified, the vendor is marked as **onboarded** and is included in the list of approved vendors.
- b. The system generates a list of all approved vendors for internal reference and tracking.

5. Technical Considerations

To ensure seamless operation and a secure onboarding experience, the following technical considerations will be implemented:

1. Secure User Authentication & Authorization:

- a. Role-based access control (RBAC) for both vendors and commercial users ensures that sensitive data is accessible only to authorized personnel.
- b. Multi-factor authentication (MFA) may be implemented to enhance security for the commercial team.

2. Data Security & Encryption:

- a. Sensitive data (e.g., KYC information, bank details, and documents) will be securely encrypted both **in transit** and **at rest**.

- b. Integration of secure file storage solutions (e.g., AWS S3) for document handling.

3. Responsive Design:

- a. The platform will have a **mobile-responsive design**, ensuring vendors can access and interact with the portal from any device (desktop, tablet, smartphone).

4. Scalability & Performance:

- a. The system is designed to be scalable, leveraging cloud-based infrastructure (e.g., AWS EC2) to handle growing numbers of vendor applications efficiently.
- b. **Load balancing** and **auto-scaling** features will ensure consistent performance during peak submission periods.

5. Integration with Company Systems:

- a. The platform will integrate with existing **company databases and systems** to store vendor data, manage workflows, and facilitate seamless information flow.

6. Benefits

1. Streamlined Onboarding:

- a. Reduces manual intervention and speeds up the vendor registration and verification process, improving overall efficiency.

2. Improved Vendor Verification:

- a. Ensures accurate and thorough verification of vendor documents, reducing the risk of errors and fraud.

3. Enhanced Communication:

- a. Automated notifications ensure vendors are promptly informed of status changes and required actions, enhancing transparency and trust.

4. Centralized Data Management:

- a. All vendor data and documentation are stored in a central, secure database, making access and management easier for the commercial team.

5. Security & Compliance:

- a. The platform adheres to industry best practices in terms of **data security**, **user privacy**, and **compliance** with relevant regulations (e.g., GDPR, CCPA).

7. Tech Stack

The Vendor Onboarding System will be built using the following technologies:

- **Frontend:**

- **Angular** for building a dynamic, single-page application (SPA).
- **HTML5, CSS3** for the structure and styling of the platform.
- **Angular Material UI** for a modern and responsive user interface.

- **Backend:**

- **Node.js** for server-side logic, handling asynchronous requests and API interactions.
- **Express.js** for building RESTful APIs.
- **Sequelize** ORM for interacting with MySQL and MongoDB databases.
- **Database:**
 - **MySQL** for relational data management (vendor details, KYC, etc.).
 - **MongoDB** for storing unstructured data (audit logs, documents).
- **Cloud Services:**
 - **AWS S3** for document storage.
 - **AWS EC2** for hosting the backend services.
- **Containerization:**
 - **Docker** for packaging the application in containers for easy deployment and scalability.

8. Conclusion

The **Vendor Onboarding Project** aims to create a modern, secure, and efficient system for managing vendor registration and verification. By automating the vendor onboarding process and integrating communication systems, this solution will reduce manual overhead, increase operational efficiency, and enhance the vendor experience. The system's scalable design and use of modern technologies ensure it can accommodate future growth and enhancements.

By adopting this system, the company will foster better vendor relationships, reduce onboarding time, and ensure compliance with regulatory standards.