**User Requirements Document**

**for**

**BFSI Onboarding Software**

**Introduction**

**Project Overview:**

This document outlines the product requirements for a digital customer onboarding system in the banking sector. The system will streamline and modernize the onboarding process by enabling digital application submission, automating identity verification, ensuring compliance with KYC regulations, and enhancing the customer experience. It will cater to various banking products such as savings accounts, credit cards, and loans, aiming to reduce operational costs, minimize manual errors, and accelerate onboarding timelines while maintaining security and regulatory compliance.

**Project Goals:**

The primary goal of this project is to create a user-friendly, visually appealing, and high-performance eCommerce platform that:

* **Enhances Customer Experience:** Enables paperless, mobile-friendly onboarding with real-time support and communication.
* **Ensures Regulatory Compliance:** Incorporates RBI/KYC norms, automated verification, and audit logs.
* **Reduces Operational Costs:** Automates manual processes, reduces paperwork, and minimizes in-branch efforts.
* **Improves Processing Speed**: Accelerates onboarding through integrations (Aadhaar, PAN, CKYC, etc.) and workflow automation.
* **Increases Conversion Rates:** Offers a guided, transparent onboarding journey that reduces drop-offs and delays.

**Target Audience:**

The target audience for this banking customer onboarding system includes individuals and entities looking to open accounts or access financial services in a seamless and efficient manner. This includes:

* **Retail Banking Customers:** Individuals seeking to open savings, current, or salary accounts with minimal friction.
* **Bank Employees**: Frontline staff responsible for handling customer queries, providing onboarding support, and guiding users through product selection.
* **Digital-First Users:** Tech-savvy customers who prefer completing the onboarding process online without visiting a branch.

By understanding the needs of these audience segments, the system aims to deliver a fast, secure, and user-friendly onboarding experience tailored to each customer profile.

**Key Features:**

The Banking Customer Onboarding System will incorporate the following key features to ensure a seamless, secure, and efficient onboarding experience:

* **Online Application Forms** – Customers can apply for savings, credit, or loan products digitally through a simple, guided interface.
* **Digital Identity Verification** – Verifies customer identity using uploaded documents, facial recognition, and liveness detection.
* **Automated KYC Compliance** – Validates customer data against regulatory databases to ensure compliance.
* **Secure Document Management** – Stores documents safely with OCR to auto-extract and validate information.
* **Risk Profiling** – Assesses the risk level of applicants based on personal and financial data.
* **Instant Account Setup** – Automatically creates and activates accounts once verification is complete.
* **Personalized User Journeys** – Customizes onboarding steps and recommendations based on customer profile.
* **Omnichannel Support** – Offers help through chat, email, or phone, with a unified view of customer interactions.
* **Core Banking Integration** – Syncs data in real time with the bank’s core systems for seamless processing.
* **Reporting and Analytics** – Provides dashboards to monitor onboarding metrics and improve decision-making.

**Problems**

1. **Manual and Paper-Heavy Processes:** Traditional onboarding involves physical forms and in-person visits, causing delays.
2. **High Drop-Off Rates:** Customers often abandon onboarding due to complexity and lack of real-time support.
3. **Regulatory Risk Exposure:** Manual verifications may lead to incomplete or incorrect compliance checks.
4. **Fragmented Systems:** Disconnected tools and channels lead to poor tracking and user experience.
5. **Limited Accessibility:** Customers in rural or remote areas face challenges with branch-based onboarding**.**

**Opportunities**

1. Expand market reach by onboarding remote and unbanked customers.
2. Increase conversions through simplified and guided digital processes.
3. Improve compliance with automated KYC/AML workflows and audit trails.
4. Enhance customer experience with real-time onboarding, status tracking, and personalization.
5. Gain business insights through analytics on onboarding trends and customer behavior.
6. Boost operational efficiency by reducing manual labor and paperwork.
7. **User Personas**

**Persona 1: The Digital Native**

* **Needs:**
  + Quick and paperless onboarding.
  + 24/7 access to digital banking
  + Integration with mobile wallets and UPI
* **Behaviors:**
  + Comfortable with apps and self-service portals
  + Prefers eKYC and Aadhaar-based verification
  + Expects real-time notifications and updates
* **Pain Points:**
  + Frustrated with lengthy or redundant forms
  + Avoids physical visits to the branch
  + Drops off if digital process is slow or buggy

**Persona 2: The First-Time Account Holder**

* **Needs:** 
  + Basic account features and guidance
  + Educational resources on banking usage
  + Simple documentation requirements
* **Behaviors:**
  + May need help understanding banking terms
  + Relies on parents or peers for advice
  + Prefers in-person support during onboarding
* **Pain Points:**
  + Confused by banking jargon
  + Overwhelmed by documentation or choices
  + Hesitant about digital-only interactions

**Persona 3: The Working Professional**

* **Needs:**
  + Salary account setup with benefits
  + Seamless integration with existing services
  + Corporate account or joint account options
* **Behaviors:**
  + Compares offers across banks
  + Prioritizes speed and service quality
  + Prefers scheduled callbacks or live agent chat
* **Pain Points:**
  + Delays in document processing
  + Lack of clarity about salary-linked benefits
  + Repetition in KYC for multiple services

**User list from the User Persona**

**Primary Users:**

1. **Digital Native:**
   * **Needs:** Instant digital onboarding, seamless mobile experience, biometric/eKYC login..
   * **Behaviors:** Tech-savvy, uses mobile apps regularly, prefers chat support and digital self-service.
2. **First-Time Account Holder:**
   * **Needs:**Step-by-step guidance, simplified onboarding, minimal documentation
   * **Behaviors:** May need education on banking terms, responds well to visual cues and help content, seeks trust and clarity.
3. **Working Professional:**
   * **Needs:** Quick salary account setup, integration with benefits, mobile banking access.
   * **Behaviors:**Values time, expects responsive service, prefers digital-first but accepts hybrid experiences.

**Secondary Users:**

* **Banking Agents / Relationship Managers:**
  + **Needs:** Tools for assisted onboarding, real-time KYC verification, document uploads.
* **Customer Support Executives:**
  + **Needs:** Access to onboarding status, FAQs, and escalation paths for technical or document issues.
* **Compliance Officers:** 
  + **Needs:** KYC/AML validation tools, red-flag detection, and auditing mechanisms.
* **IT/Admin Teams:**
  + **Needs:** Secure infrastructure for onboarding workflows, user data protection, and API integrations.
* **Third-Party Verifiers (e.g., UIDAI, DigiLocker):**
  + **Needs:** Reliable API access, standardized document format, authentication logs.

## User Stories

### Banking Agent / Relationship Manager

* As a banking agent, I want to assist customers with partially completed applications so I can help them complete the onboarding faster.
* As a relationship manager, I want access to a dashboard of my leads so I can track and follow up efficiently.
* As a branch representative, I want real-time alerts about failed verifications so I can intervene and resolve issues proactively.

### Customer Support Executive

* As a support executive, I want to search by customer ID and view onboarding status so I can assist with specific queries quickly.
* As a support agent, I want access to document upload errors so I can guide users to resolve issues.
* As a support representative, I want to log notes during customer interaction to maintain continuity in case of escalations.

### Compliance Officer

* As a compliance officer, I want to receive alerts for red-flagged applications based on risk score or document anomalies.
* As a compliance manager, I want to audit the history of each onboarding case to ensure adherence to KYC/AML guidelines.
* As a reviewer, I want to approve or reject edge cases that automated systems could not classify.

### IT/Admin Team

* As an admin, I want to configure workflows (e.g., salary account vs. loan onboarding) so I can streamline operations for each product.
* As an IT team member, I want to monitor system load and uptime metrics so I can ensure system availability.
* As an infrastructure admin, I want to manage user permissions across departments and ensure secure data access.

**Use Cases**

### Customer Use Cases

* Register and submit onboarding applications through web or mobile apps.
* Upload and validate KYC documents (Aadhaar, PAN, passport, utility bill, etc.)
* Perform Aadhaar-based eKYC using OTP or biometric.
* Get application status updates via email, SMS, or app notifications.
* Schedule a call or chat with customer support from within the onboarding interface.
* Switch device mid-process and resume onboarding from where they left off.

### Admin Use Cases

* Manage user roles and access control for different departments (compliance, support, sales).
* View metrics such as daily onboarding count, average processing time, rejection rates, etc.
* Approve flagged accounts or escalate to the compliance team.
* Generate reports for regulatory audits (monthly, quarterly, yearly).
* Manage third-party API keys (UIDAI, DigiLocker, CKYC, etc.) and monitor integration uptime.

## Functional Requirements

* **Account Type Selection:** Customers should be able to select product type (savings, salary, NRI, joint account, credit card, or loan).
* **eKYC Integration:** System should integrate with UIDAI for Aadhaar OTP and biometric verification.
* **Dynamic Form Filling:** Form fields should change dynamically based on selected product and user profile.
* **Document Upload with OCR:** Uploaded documents should be scanned, and text fields auto-filled where possible.
* **Risk Engine:** A scoring engine that calculates user risk based on address, income, document consistency, etc.
* **Status Tracker:** Real-time progress bar with stages like “Application Submitted,” “KYC Verification,” “Approval Pending,” “Account Created.”
* **Multi-Language Support:** System should be available in regional languages (e.g., Hindi, Marathi, Tamil, etc.).
* **Retry Mechanism:** Failed document uploads or API errors should have a retry option and clear error messaging.
* **Audit Trail:** Every user action and decision should be logged for compliance purposes.

## Non-Functional Requirements

* **Scalability:** System should scale to handle 1 million+ users during peak campaigns.
* **Security:** Must comply with ISO 27001 and RBI cybersecurity guidelines.
* **Performance:** Each API call should return in under 2 seconds.
* **Backup & Recovery:** Automated backups with RTO < 1 hour and RPO < 15 minutes.
* **Maintainability:** Codebase should follow modular architecture with reusable components and services.
* **Accessibility:** System should comply with WCAG 2.1 AA standards to support users with disabilities.
* **Localization:** UI text, form validations, and support content should adapt based on the user's regional preferences.

## Technical Requirements

### Technology Stack

* **Frontend:** React.js (Web), React Native or Flutter (Mobile)
* **Backend:** Node.js with Express or Java Spring Boot
* **Database:** PostgreSQL (Transactional), MongoDB (Logs & unstructured data)
* **AI/ML Integration:** Python microservices for OCR, fraud detection, and sentiment analysis on chat
* **Third-party APIs:** Aadhaar API, PAN NSDL API, DigiLocker, CKYC, Razorpay for ID payments
* **Authentication:** OAuth 2.0, JWT, biometric login options
* **Monitoring:** AWS CloudWatch

### Infrastructure

* **Cloud:** AWS or Azure (Gov-compliant zone if required)
* **CI/CD Pipeline:** GitHub Actions, Jenkins, Docker containers
* **Load Balancing:** NGINX or AWS ELB
* **Storage:** Amazon S3 (for documents), RDS (for relational data), EFS (for shared storage)
* **Disaster Recovery:** Multi-region deployment with failover strategy
* **Firewall & Security Layers:** WAF, DDoS Protection, VPN access for internal systems

## Open Questions and Risks

### Open Questions

* Will the app support assisted onboarding in rural areas via banking agents using tablets?
* Are we integrating video KYC, or restricting only to Aadhaar-based eKYC?
* Should users be allowed to pause onboarding and resume later across devices?
* Will salary accounts have automated HR integration for verification of employment?
* How much of the onboarding process will be common across different bank products?

### Risks

* **API Downtime:** Third-party APIs may be unavailable or rate-limited, halting onboarding process.
* **User Drop-off:** If onboarding exceeds a certain time threshold, users may abandon the process.
* **Security Breach:** Any vulnerability could expose sensitive documents and personal data.
* **Fraud:** Forged documents or stolen identities could bypass automated checks if the system lacks proper AI-powered validation.
* **Regulatory Shifts:** Sudden RBI policy changes may require urgent product changes and retesting.

**Glossary**

**Key Terms and Definitions**

* **KYC (Know Your Customer)**: A regulatory process to verify the identity of customers before providing financial services.
* **eKYC:** Electronic Know Your Customer – a digital method for verifying a customer's identity using Aadhaar or other online verification systems.
* **AML (Anti-Money Laundering):** Regulations and procedures to prevent illegally obtained money from being processed through financial systems.
* **Customer Onboarding:** The process through which new customers are introduced, verified, and registered into the banking system.
* **UI (User Interface):** The visual layer of the system where users interact, including forms, buttons, and status indicators.
* **UX (User Experience):** The overall experience of a user during the onboarding journey, focusing on ease, clarity, and satisfaction.
* **API:** Application Programming Interface – a set of protocols that allow different software systems to communicate with each other.
* **OTP (One-Time Password):** A temporary password used to authenticate user identity during onboarding or transactions.
* **CRM:** Customer Relationship Management – a tool or system used to manage customer data and interactions.
* **Compliance:** Adhering to laws and regulations governing banking activities, such as RBI guidelines and data privacy laws.
* **Encryption**: The process of converting data into a secure format to prevent unauthorized access.
* **Biometric Authentication:** User identity verification using biological data such as fingerprints or facial recognition.
* **Audit Trail:** A secure log of user actions and system events to ensure transparency and traceability.